| Breeder's Reference: SUR 97271/10                          | <b>AFP No:</b> 1/1573         |             |
|--|-------------------------------|-------------|
| Breeder: Saaten Union Recherche SARL                       | Translated from: German       |             |
| Origin:  | Date: 19 November 2003        |             |
| Code: ARDN   |                               |             |
| Coleoptile-anthocyanin colouration:                        | medium                        |             |
| *Plant - growth habit:                                     | semi-prostrate to prostrate   |             |
| *Time ear emergence:                                       | medium                        |             |
| Flag leaf - Anthocyanin colouration of auricles:           |                               |             |
| Frequency of plants with recurved flag leaves:             | absent or very low            |             |
| *Flag leaf - Glaucosity of sheath:                         | strong                        |             |
| Flag leaf - Glaucosity of leaf blade:                      | strong                        |             |
| Anthers - anthocyanin colouration:                         |                               |             |
| Glaucosity of neck:  | strong to very strong         |             |
| Hairiness of uppermost node:                               |                               |             |
| *Plant - height:   | short                         |             |
| *Straw - wall thickness @ 20cms below ear:                 | very thin                     |             |
| *Ear - Glaucosity:   | strong                        |             |
| Ear - Supernumerary spikelets - frequency:                 |                               |             |
| *Ear - Colour:   | white                         |             |
| *Ear - Shape (side profile):                               | tapering                      |             |
| Ear - Length:  | medium                        |             |
| *Ear - Density:  | medium                        |             |
| *Awns or scurs - presence:                                 | scurs present                 |             |
| Awns or scurs - distibution:                               |                               |             |
| *Scurs at tip of ear - length:                             | short                         |             |
| *Awns at tip of ear - length:                              |                               |             |
| Lower glume - Beak length:                                 |                               |             |
| Lower glume - Beak shape (curvature):                      |                               |             |
| Lower glume - Beak tip:                                    |                               |             |
| Lower glume - Shoulder width:                              |                               |             |
| Lower glume - Shoulder type:                               |                               |             |
| Lower glume - External surface roughness:                  |                               |             |
| Lower glume - Extent of internal hairs:                    |                               |             |
| Lower glume - Internal imprint:                            |                               |             |
| Lower lemma - Beak shape:                                  |                               |             |
| Lower lemma - Beak length-:                                |                               |             |
| Lower lemma - Beak swelling:                               |                               |             |
| Apical rachis segement - convex face hairiness:            |                               |             |
| *Grain - colour:   | red                           |             |
| Grain - Shape:   |                               |             |
| Grain - Brush hair length in dorsal view:                  |                               |             |
| Grain - Colouration with phenol:                           | medium                        |             |
| *Seasonal type:  | winter                        |             |
| Extra characters:  |                               |             |
| * = Characteristics which should always be included in the | e description of the variety. | 06 May 2020 |

NIAB

## **AEROBIC**

### **CHARACTERS IN DETAIL**

Ear Colour: white Length: Density: dense Shape (side profile) Awns or scurs - presence: Awns or scurs - distribution: Awns or Scurs - length: Apical rachis segment - convex face hairiness: weak Anthers - anthocyanin Lower Glume External surface roughness: Extent of internal hairs: Beak length: Beak shape (curvature): Shoulder Shoulder Lower Lemma Beak shape: Grain Colour red Colouration with phenol: Straw short Length: Wall thickness @ 20cms below ear: Glaucosity Flag leaf - sheath: Flag leaf - blade (lower side): Culm neck: weak Ear - Glaucosity: Plant growth characters Coleoptile-anthocyanin Plant - growth habit: Time ear emergence: early Flag leaf - Anthocyanin colouration of auricles:

medium to long parallel sided awns present

very long

weak to medium - group 1 to 2 medium to long slightly curved narrow slightly sloping

medium

very thick

weak to medium very weak to weak

absent or very weak

absent or very weak semi-prostrate



### AFP 1/1564 ALCHEMY

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short weak to medium absent

smooth medium - Group 2 medium moderately curved narrow elevated

moderately curved

red light to medium

medium thin

strong to very strong

strong strong

absent or very weak intermed. to semi-prostrate late to very late absent or very weak



### AFP 1/3111 ALMARA

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 3/4 long medium to large absent
- smooth weak to medium (group 1+) medium to long moderate to strongly curved medium slightly elevated to strongly elevated

strongly curved to geniculate

reddish medium to dark

very short to short thin

strong to very strong strong to very strong medium to strong

medium to strong semi-prostrate medium to late absent or very weak



### AFP 1/2533

### AMBOISE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 medium absent or very weak absent

smooth medium (group 2) medium slight to moderately curved narrow elevated

slightly to moderately curved

red dark to very dark

very short very thick or filled

medium to strong medium medium medium

weak to medium intermediate medium



### AFP 1/1462 AMBROSIA

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/2 medium to long weak absent

smooth weak to medium (1+) medium to long moderately curved narrow straight

moderately curved

red medium

short to medium absent or very thin

strong medium to strong strong medium

strong intermediate medium to late absent or very weak



### AFP 1/2278 AMPLIFY

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense tapering scurs present upper 1/2 short to medium weak to medium

smooth medium to strong (2+) short to medium slightly curved narrow to medium elevated

moderately curved

red dark to very dark

short absent or very thin

strong medium to strong medium to strong medium to strong

weak to medium semi-erect to intermediate late



# Variety Name: ANAPOLIS

Crop: Winter wheat

| Breeder's Reference:                             | <b>AFP No:</b> 1/2 | 2148         |
|--|--------------------|--------------|
| Breeder: NORDSAAT                                | Translated         | from: German |
| Origin:  | Date:              | 23 July 2013 |
| Code: ANAP                                       |                    |              |
| Coleoptile-anthocyanin colouration:              | Medium to          | o strong     |
| *Plant - growth habit:                           | Semi pros          | trate        |
| *Time ear emergence:                             | Medium to          | o late       |
| Flag leaf - Anthocyanin colouration of auricles: |                    |              |
| Frequency of plants with recurved flag leaves:   | Very low           | to low       |
| *Flag leaf - Glaucosity of sheath:               | Strong to          | very strong  |
| Flag leaf - Glaucosity of leaf blade:            | Strong             |              |
| Anthers - anthocyanin colouration:               |                    |              |
| Glaucosity of neck:                              | Strong to          | very strong  |
| Hairiness of uppermost node:                     |                    |              |
| *Plant - height:                                 | Short to m         | edium        |
| *Straw - wall thickness @ 20cms below ear:       | Absent or          | very thin.   |
| *Ear - Glaucosity:                               | Strong to          | very strong  |
| Ear - Supernumerary spikelets - frequency:       | -                  |              |
| *Ear - Colour:                                   | White              |              |
| *Ear - Shape (side profile):                     | Tapering           |              |
| Ear - Length:                                    | Medium             |              |
| *Ear - Density:                                  | Lax to me          | dium         |
| *Awns or scurs - presence:                       | Present            |              |
| Awns or scurs - distibution:                     |                    |              |
| *Scurs at tip of ear - length:                   | Very short         | t to short   |
| *Awns at tip of ear - length:                    | 2                  |              |
| Lower glume - Beak length:                       | Very short         | t to short   |
| Lower glume - Beak shape (curvature):            | Slightly cu        |              |
| Lower glume - Beak tip:                          | 0.                 |              |
| Lower glume - Shoulder width:                    | Narrow             |              |
| Lower glume - Shoulder type:                     | Straight           |              |
| Lower glume - External surface roughness:        | e                  |              |
| Lower glume - Extent of internal hairs:          | Medium             |              |
| Lower glume - Internal imprint:                  |                    |              |
| Lower lemma - Beak shape:                        | Slightly cu        | irved        |
| Lower lemma - Beak length-:                      | 0,                 |              |
| Lower lemma - Beak swelling:                     |                    |              |
| Apical rachis segement - convex face hairiness:  | Strong             |              |
| *Grain - colour:                                 | Red                |              |
| Grain - Shape:                                   |                    |              |
| Grain - Brush hair length in dorsal view:        |                    |              |
| Grain - Colouration with phenol:                 | Medium to          | o dark       |
| *Seasonal type:                                  | Winter             |              |
| Extra characters:                                |                    |              |
|  |                    |              |

\* = Characteristics which should always be included in the description of the variety. 31 March 2015



#### AFP 1/1928

# ARARAT

### **CHARACTERS IN DETAIL**

Ear Colour: white Length: medium to long Density: lax Shape (side profile) tapering Awns or scurs - presence: scurs present Awns or scurs - distribution: Awns or scurs - length: short Apical rachis segment - convex face hairiness: very weak to weak Anthers - anthocyanin colouration Lower Glume External surface roughness: Extent of internal hairs: medium - group 2 Beak length: medium Beak shape (curvature): moderately curved Shoulder medium Shoulder elevated Lower Lemma Beak shape: slightly curved Grain Colour red Colouration with phenol: medium Straw medium Length: Wall thickness @ 20cms below ear: thin Glaucosity Flag leaf - sheath: medium to strong Flag leaf - blade (lower side): medium to strong Culm neck: strong Ear - Glaucosity: strong to very strong Plant growth characters Coleoptile-anthocyanin medium Plant - growth habit: intermediate to semi-prostrate Time ear emergence: medium Flag leaf - Anthocyanin colouration of auricles: absent or very weak



Crop:

| Breeder's Reference:                             | AFP No:                      |
|--|------------------------------|
| Breeder: Nickerson International Research        | Translated from:             |
| Origin:  | <b>Date:</b> 26 January 2015 |
| Code: ARKE                                       |                              |
| Coleoptile-anthocyanin colouration:              | Medium                       |
| *Plant - growth habit:                           | Semi- prostrate to prostrate |
| *Time ear emergence:                             | Early                        |
| Flag leaf - Anthocyanin colouration of auricles: |                              |
| Frequency of plants with recurved flag leaves:   |                              |
| *Flag leaf - Glaucosity of sheath:               | Strong to very strong        |
| Flag leaf - Glaucosity of leaf blade:            | Strong to very strong        |
| Anthers - anthocyanin colouration:               |                              |
| Glaucosity of neck:                              |                              |
| Hairiness of uppermost node:                     |                              |
| *Plant - height:                                 | Short to medium              |
| *Straw - wall thickness @ 20cms below ear:       | Very thin                    |
| *Ear - Glaucosity:                               | Medium                       |
| Ear - Supernumerary spikelets - frequency:       |                              |
| *Ear - Colour:                                   | White                        |
| *Ear - Shape (side profile):                     |                              |
| Ear - Length:                                    | Long                         |
| *Ear - Density:                                  | Lax to medium                |
| *Awns or scurs - presence:                       | Present                      |
| Awns or scurs - distibution:                     |                              |
| *Scurs at tip of ear - length:                   | Short to medium              |
| *Awns at tip of ear - length:                    |                              |
| Lower glume - Beak length:                       | Short to medium              |
| Lower glume - Beak shape (curvature):            |                              |
| Lower glume - Beak tip:                          |                              |
| Lower glume - Shoulder width:                    | Narrow                       |
| Lower glume - Shoulder type:                     | Straight to slightly sloping |
| Lower glume - External surface roughness:        |                              |
| Lower glume - Extent of internal hairs:          |                              |
| Lower glume - Internal imprint:                  | Medium to strong             |
| Lower lemma - Beak shape:                        | Slightly curved              |
| Lower lemma - Beak length-:                      | Short to medium              |
| Lower lemma - Beak swelling:                     |                              |
| Apical rachis segement - convex face hairiness:  | Medium                       |
| <sup>*</sup> Grain - colour:                     | Red                          |
| Grain - Shape:                                   |                              |
| Grain - Brush hair length in dorsal view:        |                              |
| Grain - Colouration with phenol:                 | Mdium to dark                |
| *Seasonal type:                                  | Winter                       |
| Extra characters:                                |                              |

\* = Characteristics which should always be included in the description of the variety. 30 March 2015



### AFP 1/2796 ASTOUND

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long dense parallel sided scurs present upper 1/4 long medium to strong absent
- entire external surface rough medium to strong (group 2+) long strongly curved medium elev. to strongly elevated

#### geniculate

red very dark

medium absent or very thin

very strong very strong strong to very strong medium to strong

weak intermed. to semi-prostrate late absent or very weak



### AFP 1/2016 AVATAR

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long weak

slightly rough medium - Group 2 medium moderately curved narrow elevated

### moderately to strongly curved

red dark to very dark

short to medium thin

strong strong strong strong

weak semi-erect medium to late



Crop: Wheat

| Breeder's Reference: SEC 228-02-4                              | AFP No:                       |
|--|-------------------------------|
| Breeder: Secobra Rechereches                                   | Translated from: German       |
| Origin:  | <b>Date:</b> 19 November 2018 |
| Code: Axio   |                               |
| Coleoptile-anthocyanin colouration:                            | Medium                        |
| *Plant - growth habit:   | Intermediate                  |
| *Time ear emergence:   | Medium to late                |
| Flag leaf - Anthocyanin colouration of auricles:               | XX 1 . 1                      |
| Frequency of plants with recurved flag leaves:                 | Very low to low               |
| *Flag leaf - Glaucosity of sheath:                             | Srong                         |
| Flag leaf - Glaucosity of leaf blade:                          | Strong                        |
| Anthers - anthocyanin colouration:                             | <u>C</u>                      |
| Glaucosity of neck:  | Strong                        |
| Hairiness of uppermost node:                                   | Short to medium               |
| *Plant - height:<br>*Straw - wall thickness @ 20cms below ear: | Medium                        |
| *Ear - Glaucosity:   |                               |
| Ear - Supernumerary spikelets - frequency:                     | Strong                        |
| *Ear - Colour:   |                               |
| *Ear - Shape (side profile):                                   | Tapering                      |
| Ear - Length:  | Short to medium               |
| *Ear - Density:  | Dense                         |
| *Awns or scurs - presence:                                     | Scurs present                 |
| Awns or scurs - distibution:                                   | Seurs present                 |
| *Scurs at tip of ear - length:                                 | Very short to short           |
| *Awns at tip of ear - length:                                  |                               |
| Lower glume - Beak length:                                     | Short                         |
| Lower glume - Beak shape (curvature):                          | Moderately curved             |
| Lower glume - Beak tip:  | ,                             |
| Lower glume - Shoulder width:                                  | Narrow to medium              |
| Lower glume - Shoulder type:                                   | Straight                      |
| Lower glume - External surface roughness:                      | ç                             |
| Lower glume - Extent of internal hairs:                        |                               |
| Lower glume - Internal imprint:                                |                               |
| Lower lemma - Beak shape:                                      |                               |
| Lower lemma - Beak length-:                                    |                               |
| Lower lemma - Beak swelling:                                   |                               |
| Apical rachis segement - convex face hairiness:                | Weak                          |
| *Grain - colour:   | Red                           |
| Grain - Shape:   |                               |
| Grain - Brush hair length in dorsal view:                      |                               |
| Grain - Colouration with phenol:                               | Very dark                     |
| *Seasonal type:  | Winter                        |
| Extra characters:  |                               |
|  |                               |

\* = Characteristics which should always be included in the description of the variety.

20 March 2019



### AFP 1/2487 BAHAMAS CS

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper 1/2 medium to long medium to strong absent

smooth medium to strong (group 2+) medium slightly curved narrow straight to elevated

slightly curved

red medium to dark

short absent or very thin

medium to strong medium to strong strong strong

absent to weak semi-erect to intermediate medium



# AFP 1/3099 **BAMFORD**

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/2 long medium absent

smooth medium (group 2) medium moderately curved narrow to medium slightly elevated

strongly curved

reddish dark

short thin

strong to very strong strong to very strong strong medium to strong

weak intermediate medium to late absent or very weak



AFP 1/3058 **BANJO** 

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/4 long medium to large absent
- smooth weak to medium (group 1+) medium moderate to strongly curved narrow to medium slightly elevated

strongly curved to geniculate

reddish dark to very dark

very short to short thin

strong medium to strong strong medium

strong to very strong semi-prostrate late to very late absent or very weak



### AFP 1/2825 BANQUO

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

Deak cuiv

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 long to very long medium to strong absent
- smooth medium (group 2) medium moderately curved medium straight to elevated

moderately curved

red medium to dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

weak to medium intermed. to semi-prostrate late absent or very weak



### AFP 1/2387 BARKSTON

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/2 long to very long strong

smooth strong (group 3) medium slightly curved narrow elevated

slightly to moderately curved

red dark to very dark

short absent or very thin

medium medium to strong medium medium

absent or very weak intermed. to semi-prostrate very late



### AFP 1/1753 BATSMAN

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 short to medium strong absent
- smooth medium (group 2) medium slightly curved narrow elevated

moderately curved

red dark

medium absent or very thin

strong medium medium to strong medium to strong

absent or very weak intermediate late to very late



### AFP 1/1599 BATTALION

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### **Grain** Colour

Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> medium medium to strong absent

rough medium - Group 2 medium to long slight to moderately curved medium elevated

### moderately to strongly curved

red medium

medium thin

strong to very strong medium to strong strong strong

weak to medium intermediate early to medium



# **BELENUS**

### **CHARACTERS IN DETAIL**

| Ear |
|-----|
|-----|

| Ear  |                                |
|--|--------------------------------|
| Colour:  | coloured                       |
| Length:  | short                          |
| Density:   | medium                         |
| Shape (side profile)                                 | parallel sided                 |
| Awns or scurs - presence:                            | scurs present                  |
| Awns or scurs - distribution:                        |                                |
| Awns or scurs - length:                              | medium                         |
| Apical rachis segment - convex face hairiness:       | weak                           |
| Anthers - anthocyanin colouration <b>Lower Glume</b> |                                |
| External surface roughness:                          |                                |
| Extent of internal hairs:                            | weak - group 1                 |
| Beak length:   | very short                     |
| Beak shape (curvature):                              | slightly curved                |
| Shoulder   | narrow                         |
| Shoulder   | slightly sloping               |
| Lower Lemma  |                                |
| Beak shape:  | slightly curved                |
| Grain  |                                |
| Colour   | red                            |
| Colouration with phenol:                             | medium                         |
| Straw  |                                |
| Length:  | short                          |
| Wall thickness @ 20cms below ear:<br>Glaucosity      | very thin                      |
| Flag leaf - sheath:                                  | weak                           |
| Flag leaf - blade (lower side):                      | absent or very weak            |
| Culm neck:   | absent or very weak            |
| Ear - Glaucosity:                                    | absent or very weak            |
| Plant growth characters                              |                                |
| Coleoptile-anthocyanin                               | absent or very weak            |
| Plant - growth habit:                                | intermediate<br>medium to late |
| Time ear emergence:                                  |                                |
| Flag leaf - Anthocyanin colouration of auricles:     | absent or very weak            |
|  |                                |



# BELEPI

### **CHARACTERS IN DETAIL**

| Ear  |                                |
|--|--------------------------------|
| Colour:  | white                          |
| Length:  | long to very long              |
| Density:   | medium                         |
| Shape (side profile)                             | parallel                       |
| Awns or scurs - presence:                        | scurs present                  |
| Awns or scurs - distribution:                    |                                |
| Awns or scurs - length:                          | medium                         |
| Apical rachis segment - convex face hairiness:   | weak                           |
| Anthers - anthocyanin colouration<br>Lower Glume |                                |
| External surface roughness:                      |                                |
| Extent of internal hairs:                        | strong - group 3               |
| Beak length:                                     |                                |
| Beak shape (curvature):                          |                                |
| Shoulder   | straight                       |
| Shoulder   |                                |
| Lower Lemma                                      |                                |
| Beak shape:                                      | straight to slightly curved    |
| Grain  |                                |
| Colour   | red                            |
| Colouration with phenol:                         | dark to very dark              |
| Straw  |                                |
| Length:  | medium                         |
| Wall thickness @ 20cms below ear:<br>Glaucosity  | thin                           |
| Flag leaf - sheath:                              | strong to very strong          |
| Flag leaf - blade (lower side):                  | strong to very strong          |
| Culm neck:                                       | strong to very strong          |
| Ear - Glaucosity:                                | strong to very strong          |
| Plant growth characters                          |                                |
| Coleoptile-anthocyanin                           | weak                           |
| Plant - growth habit:                            | intermediate to semi-prostrate |
| Time ear emergence:                              | medium                         |
| Flag leaf - Anthocyanin colouration of auricles: |                                |



### AFP 1/2293 BELGRADE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 3/4 long to very long medium to strong

rough strong (3) medium to long moderately curved narrow elevated

moderately to strongly curved

red medium

short to medium absent or very thin

medium to strong medium to strong medium medium

weak to medium semi-erect to intermediate late



### AFP 1/1885 BELUGA

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> short to medium medium to strong absent

rough medium - Group 2 medium moderately curved narrow elevated

moderately curved

red medium

very short thin

strong medium to strong strong strong

weak semi-erect medium



### AFP 1/2386 BENNINGTON

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/4 long strong

smooth strong (group 3) medium moderately curved medium elevated

moderately to strongly curved

red dark to very dark

short to medium absent or very thin

medium medium medium medium

absent or very weak intermediate very late



### AFP 1/1227 **BISCAY**

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

white medium lax tapering scurs present upper<sup>1</sup>/<sub>4</sub> medium weak absent

rough weak to medium - Group 1+ medium moderately curved narrow elevated

### moderately to strongly curved

red light to medium

short thin

### strong to very strong

strong to very strong strong

strong semi-prostrate late very weak



### AFP 1/3074 BLACKSMITH

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 medium to long absent or very small present
- smooth weak (group 1) short to medium slightly curved very narrow to narrow slightly elevated

moderately to strongly curved

purple very dark

medium to long thin

medium to strong medium to strong medium to strong medium to strong

very strong intermediate medium to late absent or very weak



### AFP 1/3106 BLACKSTONE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 3/4 medium to long small to medium absent
- smooth medium (group 2) medium moderate to strongly curved narrow to medium slightly elevated

#### geniculate

reddish dark

short to medium thin

strong to very strong medium to strong strong to very strong strong

strong intermed. to semi-prostrate late absent or very weak



### AFP 1/3142 BOLINDER

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 medium to long

absent

entire external surface rough weak to medium (group 1+) short to medium moderate to strongly curved narrow slightly elevated

moderately curved

reddish dark

short thin

strong to very strong strong medium to strong

medium to strong intermed. to semi-prostrate late absent or very weak



# BOOMER

### **CHARACTERS IN DETAIL**

| Ear  |                   |
|--|-------------------|
| Colour:  | white             |
| Length:  | medium            |
| Density:   | medium            |
| Shape (side profile)                             | tapering          |
| Awns or scurs - presence:                        | scurs present     |
| Awns or scurs - distribution:                    |                   |
| Awns or scurs - length:                          | short             |
| Apical rachis segment - convex face hairiness:   | medium            |
| Anthers - anthocyanin colouration                |                   |
| Lower Glume                                      |                   |
| External surface roughness:                      | _                 |
| Extent of internal hairs:                        | strong -group 3   |
| Beak length:                                     | short             |
| Beak shape (curvature):                          | moderately curved |
| Shoulder   | narrow            |
| Shoulder   | elevated          |
| Lower Lemma                                      |                   |
| Beak shape:                                      |                   |
| Grain  |                   |
| Colour   | red               |
| Colouration with phenol:                         | dark              |
| Straw  |                   |
| Length:  | short             |
| Wall thickness @ 20cms below ear:                | very thin         |
| Glaucosity                                       |                   |
| Flag leaf - sheath:                              | strong            |
| Flag leaf - blade (lower side):                  | strong            |
| Culm neck:                                       | strong            |
| Ear - Glaucosity:                                | medium to strong  |
| Plant growth characters                          |                   |
| Coleoptile-anthocyanin                           | strong            |
| Plant - growth habit:                            | semi-prostrate    |
| Time ear emergence:                              | medium            |
| Flag leaf - Anthocyanin colouration of auricles: |                   |
|  |                   |



### AFP 1/2325 BRIDGEHEAD

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium lax to medium tapering scurs present upper 3/4 long weak to medium
- smooth strong (3) medium moderately curved narrow to medium elevated

moderately curved

red dark

short to medium absent or very thin

medium to strong medium medium medium

weak intermediate late to very late



### AFP 1/2200 BRITANNIA

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax parallel sided scurs present upper 3/4 very long strong absent

slightly rough weak to medium (1+) medium to long strongly curved narrow to medium elevated

strongly curved

red dark to very dark

medium absent or very thin

medium to strong medium to strong medium medium

weak intermediate late to very late



### AFP 1/1502 BROMPTON

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium weak to medium absent

smooth weak to medium - Group 1+ short to medium slightly curved narrow to medium elevated

moderately curved

red dark

short thin

medium to strong medium medium to strong medium to strong

absent to weak intermed. to semi-prostrate late absent or very weak



### AFP 1/2284 BUTLER

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/2 medium strong
- smooth strong (3) short slightly curved medium elevated

moderately curved

red medium to dark

short absent or very thin

absent or very weak absent or very weak absent or very weak absent or very weak

weak to medium semi-erect to intermediate late



# **BYSTRA**

### **CHARACTERS IN DETAIL**

| Ear  |                     |
|--|---------------------|
| Colour:  | white               |
| Length:  | short to medium     |
| Density:   | medium to dense     |
| Shape (side profile)                             | parallel sided      |
| Awns or scurs - presence:                        | scurs present       |
| Awns or scurs - distribution:                    |                     |
| Awns or scurs - length:                          | short to medium     |
| Apical rachis segment - convex face hairiness:   | strong              |
| Anthers - anthocyanin colouration                |                     |
| Lower Glume                                      |                     |
| External surface roughness:                      |                     |
| Extent of internal hairs:                        | weak - group 1      |
| Beak length:                                     | very short          |
| Beak shape (curvature):                          | slightly curved     |
| Shoulder   | narrow              |
| Shoulder   | slightly sloping    |
| Lower Lemma                                      |                     |
| Beak shape:                                      | slightly curved     |
| Grain  |                     |
| Colour   | red                 |
| Colouration with phenol:                         | light to medium     |
| Straw  |                     |
| Length:  | short               |
| Wall thickness @ 20cms below ear:                | thin                |
| Glaucosity                                       |                     |
| Flag leaf - sheath:                              | strong              |
| Flag leaf - blade (lower side):                  | strong              |
| Culm neck:                                       | strong              |
| Ear - Glaucosity:                                | medium to strong    |
| Plant growth characters                          |                     |
| Coleoptile-anthocyanin                           | weak                |
| Plant - growth habit:                            | semi-erect          |
| Time ear emergence:                              | medium to late      |
| Flag leaf - Anthocyanin colouration of auricles: | absent or very weak |
|  |                     |



### AFP 1/2160 CAMBRIDGE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium lax to medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> medium to long medium to strong absent

smooth medium - Group 2 short to medium moderately curved narrow elevated

strongly curved

red very dark

short to medium thin

medium to strong medium medium medium

weak to medium intermediate medium



# AFP 1/1798 CASSIUS

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### **Grain** Colour Colouration with pher

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long to very long medium to strong absent
- smooth weak to medium - Group 1+ medium to long moderate to strongly curved narrow elevated

## moderately curved

red medium

medium thin

medium to strong medium medium to strong medium

medium intermediate late to very late



# AFP 1/2795 CATALYST

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/4 long to very long medium to strong absent

rough medium (group 2) medium moderately curved narrow elevated

strongly curved to geniculate

red dark to very dark

medium absent or very thin

very strong very strong strong to very strong strong

very weak to weak intermed. to semi-prostrate late absent or very weak



# Variety Name: CELLULE

| Breeder's Reference: fd08114/Cellule             | AFP No:                        |             |
|--|--------------------------------|-------------|
| Breeder: Florimond Desprez Veuve et Fils         | Translated from:               |             |
| Origin:  | Date:                          | 15 May 2018 |
| Code: CELL                                       |                                |             |
| Coleoptile-anthocyanin colouration:              | Very strong                    |             |
| *Plant - growth habit:                           | Intermediate to semi prostrate |             |
| *Time ear emergence:                             | Early                          |             |
| Flag leaf - Anthocyanin colouration of auricles: |                                |             |
| Frequency of plants with recurved flag leaves:   | Low                            |             |
| *Flag leaf - Glaucosity of sheath:               | Very strong                    |             |
| Flag leaf - Glaucosity of leaf blade:            | Strong ot very strong          |             |
| Anthers - anthocyanin colouration:               |                                |             |
| Glaucosity of neck:                              | Strong to very strong          |             |
| Hairiness of uppermost node:                     |                                |             |
| *Plant - height:                                 | Short to medium                |             |
| *Straw - wall thickness @ 20cms below ear:       | Very thin                      |             |
| *Ear - Glaucosity:                               | Strong to very strong          |             |
| Ear - Supernumerary spikelets - frequency:       |                                |             |
| *Ear - Colour:                                   | White                          |             |
| *Ear - Shape (side profile):                     | Parallel sided                 |             |
| Ear - Length:                                    | Medium to long                 |             |
| *Ear - Density:                                  | Dense                          |             |
| *Awns or scurs - presence:                       |                                |             |
| Awns or scurs - distibution:                     | Awns present                   |             |
| *Scurs at tip of ear - length:                   | Very long                      |             |
| *Awns at tip of ear - length:                    |                                |             |
| Lower glume - Beak length:                       | Short to medium                |             |
| Lower glume - Beak shape (curvature):            | Slightly curved                |             |
| Lower glume - Beak tip:                          |                                |             |
| Lower glume - Shoulder width:                    | Narrow ot medium               |             |
| Lower glume - Shoulder type:                     | Slightly sloping or straight   |             |
| Lower glume - External surface roughness:        |                                |             |
| Lower glume - Extent of internal hairs:          | Weak to a                      | medium      |
| Lower glume - Internal imprint:                  |                                |             |
| Lower lemma - Beak shape:                        |                                |             |
| Lower lemma - Beak length-:                      |                                |             |
| Lower lemma - Beak swelling:                     |                                |             |
| Apical rachis segement - convex face hairiness:  | Weak                           |             |
| *Grain - colour:                                 | Red                            |             |
| Grain - Shape:                                   |                                |             |
| Grain - Brush hair length in dorsal view:        |                                |             |
| Grain - Colouration with phenol:                 | Medium                         |             |
| *Seasonal type:                                  | Alternativ                     | ve          |
| Extra characters:                                |                                |             |
|  |                                |             |

\* = Characteristics which should always be included in the description of the variety.

16 May 2018



# AFP 1/2895 CHAMPION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 long very weak to weak absent
- smooth strong to whole surface medium to long moderate to strongly curved narrow to medium straight to elevated

moderately to strongly curved

red dark to very dark

very short to short absent or very thin

strong to very strong strong to very strong strong

weak intermediate late absent or very weak



# AFP 1/1827 CHEVRON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/4 short to medium strong absent

smooth weak to medium (group 1+) medium slightly curved narrow to medium elevated

slightly to moderately curved

red medium to dark

short to medium absent or very thin

strong to very strong strong medium to strong strong

absent or very weak semi-erect to intermediate early to medium



# AFP 1/1980 CHILTON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present tip only long medium

slightly rough medium - Group 2 medium to long moderately curved medium elevated

strongly curved

red dark to very dark

short thin

strong medium to strong medium

medium to strong intermediate medium



# AFP 1/2036 CHRONICLE

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium strong

slightly rough medium - Group 2 medium to long slightly curved very narrow to narrow strongly elevated with 2nd pt.

moderately curved

red very dark

short thin

strong strong strong strong

medium to strong intermediate medium



# AFP 1/1070 CLAIRE

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax tapering scurs present upper <sup>1</sup>/<sub>2</sub> short medium to strong absent

slightly rough medium - Group 2 medium slightly curved narrow straight to elevated

## slightly to moderately curved

red very dark

medium thin

## strong to very strong

strong to very strong strong

medium intermed. to semi-prostrate medium to late absent or very weak



# AFP 1/1922

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma Beak curvature

### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 medium medium absent

slightly rough strong - Group 3 medium moderately curved narrow elevated

moderately curved

red dark to very dark

medium thin

strong strong to very strong medium to strong medium to strong

medium semi-erect to intermediate late



# AFP 1/2486 COMOROS CS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

Straw Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 3/4 long to very long weak to medium absent
- smooth medium (group 2) medium slight to moderately curved narrow elevated

moderately curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium to strong

weak to medium intermed. to semi-prostrate medium to late



# AFP 1/1813 CONQUEROR

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium weak absent

smooth medium - Group 2 medium moderate to strongly curved medium elevated

strongly curved

red medium to dark

short to medium thin

strong medium medium medium

medium semi-erect to intermediate medium



# AFP 1/882 CONSORT

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma Beak curvature

### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium weak absent

smooth weak to medium - Group 1+ short to medium slight to moderately curved narrow to medium elevated

strongly curved

red very dark

short to medium thin

medium to strong medium medium to strong strong

absent or very weak intermediate medium to late absent or very weak



# AFP 1/1388 CORDIALE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 1/4 medium weak to medium absent
- smooth medium (group 2) short slight to moderately curved medium elevated

slightly to moderately curved

red medium

very short to short absent or very thin

strong

strong medium

medium semi-erect very early to early absent or very weak



# AFP 1/2058

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma Beak curvature

### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long medium absent

slightly rough medium to strong - Group 2+ medium slight to moderately curved medium elevated

moderately to strongly curved

red medium to dark

short to medium thin

strong medium to strong medium to strong medium

absent to weak intermediate medium to late



# AFP 1/2363 COSTELLO

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering scurs present upper 1/4 short to medium weak

slightly rough weak to medium (1+) short strongly curved very narrow to narrow elevated

## strongly curved

red light to medium

very short to short absent or very thin

strong medium to strong medium medium to strong

medium semi-erect to intermediate late to very late



# AFP 1/2040 COUGAR

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short dense parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> long to very long weak to medium
- smooth weak to medium - Group 1+ medium strongly curved narrow elevated

strongly curved

red very dark

short thin

strong to very strong strong to very strong strong to very strong strong

medium semi-erect to intermediate medium to late



# AFP 1/2210

# **CREEK**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 3/4 medium to long weak to medium absent
- smooth medium (2) short slightly curved narrow straight

slightly curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong

absent to weak semi-erect medium to late



# AFP 1/2009 CRUSOE

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/4 medium medium to strong

smooth medium to strong - Group 2+ short to medium slight to moderately curved medium to broad elevated

## slightly to moderately curved

red dark to very dark

short thin

absent or very weak absent or very weak absent or very weak

medium to strong semi-erect medium to late



# AFP 1/2101 CUBANITA

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper ½ long absent to weak absent

smooth strong - Group 3 short to medium slightly curved narrow elevated

## slightly to moderately curved

red medium to dark

short to medium thin

medium to strong medium medium to strong medium

medium intermediate medium to late



# AFP 1/1220 **DEBEN**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax tapering scurs present upper <sup>1</sup>/<sub>2</sub> medium medium to strong absent

smooth strong - Group 3 short to medium moderately curved narrow to medium elevated

### slightly to moderately curved

red dark to very dark

short to medium thin

### strong

medium to strong strong

weak to medium intermediate medium to late absent or very weak



# AFP 1/2023 **DELPHI**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long weak to medium

smooth medium to strong - Group 2+ medium to long moderate to strongly curved narrow to medium elevated

### moderately to strongly curved

red medium

short thin

strong strong strong strong

medium to strong semi-erect to intermediate medium to late



# AFP 1/1895 DENMAN

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense tapering scurs present upper <sup>1</sup>/<sub>4</sub> short absent to weak absent

smooth strong - Group 3 short to medium slightly curved narrow to medium elevated

slightly curved

red medium

short thin

strong medium to strong medium to strong

absent or very weak semi-erect to intermediate medium to late



AFP 1/2180 DEXTER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium to long medium to strong absent
- rough weak to medium medium strongly curved narrow to medium elevated

#### geniculate

red dark to very dark

medium absent or very thin

strong medium to strong medium medium

absent to weak semi-erect to intermediate late



# AFP 1/2031 DICKENS

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium strong
- smooth strong - Group 3 medium slightly curved narrow elevated

moderately curved

red medium to dark

short thin

strong to very strong strong strong

medium to strong semi-erect medium



# AFP 1/2462 DRUMLIN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short medium to dense tapering scurs present upper 1/4 short to medium medium
- smooth medium (group 2) medium moderately curved narrow elevated

# strongly curved

red dark

very short absent or very thin

medium to strong medium to strong medium to strong

absent to weak semi-erect to intermediate late



# AFP 1/2382 DUNSTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 long medium
- smooth strong (group 3) medium slightly curved narrow elevated

slightly curved

red dark to very dark

short absent or very thin

medium to strong medium to strong medium medium

weak to medium intermed. to semi-prostrate very late



# AFP 1/1725 DUXFORD

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium strong absent

smooth medium - Group 2 short to medium slightly curved narrow strongly elevated with 2nd pt.

slightly curved

red light to medium

short thin

medium to strong weak medium medium to strong

weak semi-erect early to medium



# **EDGAR**

# **CHARACTERS IN DETAIL**

| Ear  |                       |
|--|-----------------------|
| Colour:  | white                 |
| Length:  | long                  |
| Density:   | lax .                 |
| Shape (side profile)                             | tapering              |
| Awns or scurs - presence:                        | scurs present         |
| Awns or scurs - distribution:                    |                       |
| Awns or scurs - length:                          | short                 |
| Apical rachis segment - convex face hairiness:   | weak to medium        |
| Anthers - anthocyanin colouration                |                       |
| Lower Glume<br>External surface roughness:       |                       |
| -  | male another 1        |
| Extent of internal hairs:                        | weak - group 1        |
| Beak length:                                     | very short to short   |
| Beak shape (curvature):                          | strongly curved       |
| Shoulder   | narrow                |
| Shoulder   | straight to elevated  |
| Lower Lemma                                      |                       |
| Beak shape:                                      |                       |
| Grain  |                       |
| Colour   | red                   |
| Colouration with phenol:                         | dark                  |
| Straw  |                       |
| Length:  | medium                |
| Wall thickness @ 20cms below ear:<br>Glaucosity  | very thin             |
| Flag leaf - sheath:                              | strong                |
| Flag leaf - blade (lower side):                  | strong                |
| Culm neck:                                       | strong to very strong |
| Ear - Glaucosity:                                | medium to strong      |
| Plant growth characters                          |                       |
| Coleoptile-anthocyanin                           | very weak to weak     |
| Plant - growth habit:                            | intermediate          |
| Time ear emergence:                              | medium to late        |
| Flag leaf - Anthocyanin colouration of auricles: |                       |
|  |                       |



# AFP 1/1860 EDMUNDS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 short to medium strong absent
- slightly rough strong (3) medium slightly curved narrow elevated

slightly to moderately curved

red very dark

very short to short absent or very thin

strong medium to strong medium weak to medium

strong semi-erect medium to late



# AFP 1/1376 EINSTEIN

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma Beak curvature

### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> short weak to medium absent

slightly rough weak to medium - Group 1+ short slight to moderately curved narrow to medium elevated

## moderately to strongly curved

red medium to dark

short to medium medium

## strong

medium to strong weak to medium

absent to weak semi-erect early to medium absent or very weak



# AFP 1/2489 ELABORATE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long lax to medium tapering scurs present upper 1/2 medium to long strong absent

smooth weak to medium (group 1+) medium moderately curved narrow elevated

slightly to moderately curved

red medium to dark

short absent or very thin

weak to medium weak to medium medium

absent to weak intermed. to semi-prostrate late



# AFP 1/2490 ELATION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/2 medium to long medium absent

smooth weak to medium (group 1+) medium moderately curved medium straight to elevated

## moderately curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium to strong

weak to medium intermed. to semi-prostrate late



# AFP 1/2492 ELICIT

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/2 very long weak to medium absent
- slightly rough weak (group 1) medium slight to moderately curved narrow straight to elevated

### moderately curved

red medium to dark

short absent or very thin

strong medium to strong medium to strong medium to strong

weak intermediate late



# AFP 1/2488 ELOQUENCE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium tapering scurs present upper 1/2 long medium to strong absent
- smooth strong (group 3) medium slight to moderately curved narrow elevated

slightly to moderately curved

red dark to very dark

short absent or very thin

medium to strong medium to strong medium to strong

absent to weak intermediate medium



# AFP 1/2641 ELWELL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium parallel sided scurs present upper 1/4 long weak to medium
- rough weak to medium (group 1+) short to medium slightly curved narrow to medium straight to elevated

moderately curved

red dark

short to medium absent or very thin

strong strong strong strong

medium intermediate late



# AFP 1/2718 ELYSIUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/4 long medium to strong

slightly rough medium to strong (group 2+) medium slightly curved very narrow to narrow elev. to strongly elevated

slightly to moderately curved

red dark

medium absent or very thin

strong strong medium to strong

medium intermediate late



# AFP 1/2199 ENERGISE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium parallel sided scurs present upper 1/2 long to very long weak to medium absent
- smooth medium moderate to strongly curved narrow to medium elevated

#### strongly curved

red dark to very dark

short absent or very thin

strong to very strong medium to strong medium to strong medium to strong

weak to medium intermediate late



# AFP 1/2162 EVOLUTION

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> long to very long weak to medium absent

rough weak to medium - Group 1+ medium strongly curved medium elevated

# strongly curved to geniculate

red medium to dark

short to medium thin

medium medium medium

weak intermediate medium to late



# AFP 1/1213 EXSEPT

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present tip only short weak to medium absent

smooth medium - Group 2 medium moderately curved narrow to medium straight

moderately curved

red very dark

short thin

strong

strong strong

medium semi-prostrate late to very late absent or very weak



# AFP 1/1890

# FAIRWAY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present

very short to short medium to strong

weak to medium (group 1+) short slightly curved narrow slightly sloping

red dark to very dark

short absent or very thin

strong to very strong strong to very strong strong strong

absent or very weak semi-prostrate to prostrate medium to late



# AFP 1/2961 FITZROY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 1/4 long to very long medium to strong absent
- entire external surface rough weak to medium (group 1+) medium strongly curved medium to broad straight to elevated

#### geniculate

red medium

short to medium absent or very thin

very strong very strong strong to very strong weak to medium

very weak to weak intermediate late to very late absent or very weak



# FLORETT

# **CHARACTERS IN DETAIL**

| Ear  |                                  |
|--|----------------------------------|
| Colour:  | white                            |
| Length:  | short to medium                  |
| Density:   | medium to dense                  |
| Shape (side profile)                             | tapering                         |
| Awns or scurs - presence:                        | scurs present                    |
| Awns or scurs - distribution:                    |                                  |
| Awns or scurs - length:                          | short to medium                  |
| Apical rachis segment - convex face hairiness:   | medium                           |
| Anthers - anthocyanin colouration<br>Lower Glume |                                  |
| External surface roughness:                      |                                  |
| Extent of internal hairs:                        | weak to medium - group 1 to 2    |
| Beak length:                                     | very short to short              |
| Beak shape (curvature):                          | moderately curved                |
| Shoulder   | narrow                           |
| Shoulder   | slightly sloping to straight     |
| Lower Lemma                                      |                                  |
| Beak shape:                                      |                                  |
| Grain  |                                  |
| Colour   | red                              |
| Colouration with phenol:                         | dark                             |
| Straw  |                                  |
| Length:  | short                            |
| Wall thickness @ 20cms below ear:                | very thin                        |
| Glaucosity                                       |                                  |
| Flag leaf - sheath:                              | strong                           |
| Flag leaf - blade (lower side):                  | weak to medium                   |
| Culm neck:                                       | medium to strong                 |
| Ear - Glaucosity:                                | medium                           |
| Plant growth characters                          |                                  |
| Coleoptile-anthocyanin<br>Plant - growth habit:  | absent or very weak intermediate |
| Time ear emergence:                              | medium                           |
| Flag leaf - Anthocyanin colouration of auricles: |                                  |
|  |                                  |



# AFP 1/2100 FOREST

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense parallel sided scurs present upper 1/4 medium to long weak absent
- smooth weak to medium (1+) medium slightly curved narrow elevated

# slightly curved

red dark to very dark

short very thick or filled

medium medium to strong medium to strong medium

absent or very weak semi-erect to intermediate medium



# AFP 1/2111 FORZOR

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper 1/4 short weak to medium absent

smooth medium (2) short to medium slightly curved narrow to medium elevated

moderately curved

red very dark

short to medium absent or very thin

medium weak to medium weak to medium medium

weak intermediate medium to late



# AFP 1/2383 FREISTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white long lax to medium tapering scurs present upper 1/4 long strong
- smooth strong (group 3) medium to long moderately curved narrow elevated

moderately curved

red dark

short absent or very thin

medium medium medium

absent or very weak intermed. to semi-prostrate very late



Crop:

| Breeder's Reference:                             | AFP No:                        |  |
|--|--------------------------------|--|
| Breeder:   | Translated from: Dutch         |  |
| Origin:  | <b>Date:</b> 24 March 2015     |  |
| Code: FRNT                                       |                                |  |
| Coleoptile-anthocyanin colouration:              | Absent or very weak            |  |
| *Plant - growth habit:                           | Intermediate to semi prostrate |  |
| *Time ear emergence:                             | Medium                         |  |
| Flag leaf - Anthocyanin colouration of auricles: |                                |  |
| Frequency of plants with recurved flag leaves:   | Low to medium                  |  |
| *Flag leaf - Glaucosity of sheath:               | Strong to very strong          |  |
| Flag leaf - Glaucosity of leaf blade:            | Strong                         |  |
| Anthers - anthocyanin colouration:               | -                              |  |
| Glaucosity of neck:                              | Strong to very strong          |  |
| Hairiness of uppermost node:                     |                                |  |
| *Plant - height:                                 | Medium                         |  |
| *Straw - wall thickness @ 20cms below ear:       | Very thin                      |  |
| *Ear - Glaucosity:                               | Strong to very strong          |  |
| Ear - Supernumerary spikelets - frequency:       |                                |  |
| *Ear - Colour:                                   | White                          |  |
| *Ear - Shape (side profile):                     | Tapering                       |  |
| Ear - Length:                                    | Short to medium                |  |
| *Ear - Density:                                  | Medium to dense                |  |
| *Awns or scurs - presence:                       | Present                        |  |
| Awns or scurs - distibution:                     |                                |  |
| *Scurs at tip of ear - length:                   |                                |  |
| *Awns at tip of ear - length:                    | Medium                         |  |
| Lower glume - Beak length:                       | Medium                         |  |
| Lower glume - Beak shape (curvature):            |                                |  |
| Lower glume - Beak tip:                          |                                |  |
| Lower glume - Shoulder width:                    | Medium                         |  |
| Lower glume - Shoulder type:                     | Elevated                       |  |
| Lower glume - External surface roughness:        |                                |  |
| Lower glume - Extent of internal hairs:          |                                |  |
| Lower glume - Internal imprint:                  |                                |  |
| Lower lemma - Beak shape:                        | Moderately curved              |  |
| Lower lemma - Beak length-:                      | Medium                         |  |
| Lower lemma - Beak swelling:                     |                                |  |
| Apical rachis segement - convex face hairiness:  | Medium to strong               |  |
| *Grain - colour:                                 | Red                            |  |
| Grain - Shape:                                   | 1.04                           |  |
| Grain - Brush hair length in dorsal view:        |                                |  |
| Grain - Colouration with phenol:                 | Medium to dark                 |  |
| *Seasonal type:                                  | Winter                         |  |
| Extra characters:                                | vv miter                       |  |
| LAU a Unal aUULS.                                |                                |  |

\* = Characteristics which should always be included in the description of the variety. 30 March 2015



# AFP 1/2345 FURLONG

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium tapering scurs present upper 3/4 medium to long weak to medium
- smooth strong (group 3) medium moderately curved narrow elevated

# moderately curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium

medium to strong semi-erect to intermediate late to very late



# AFP 1/1769 GALLANT

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

# Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium medium to strong absent

smooth strong - Group 3 short - medium slightly curved medium elevated

straight

red dark

short to medium thin

strong medium medium to strong medium

strong semi-erect medium



#### AFP 1/3107

# GANDALF

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles coloured short to medium medium parallel sided awns present whole length very long medium to large absent

entire external surface rough medium (group 2) very long moderate to strongly curved very narrow to narrow strongly elevated

moderately to strongly curved

reddish medium to dark

short thin

strong to very strong strong to very strong weak

weak semi-prostrate medium to late very weak



# AFP 1/2959 GARIBALDI

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 1/2 long medium to strong absent
- rough medium (group 2) long strongly curved to geniculate medium elevated

# geniculate

red dark to very dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

very weak to weak intermediate late to very late absent or very weak



AFP 1/3052 GEFION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 1/2 long large absent

smooth medium (group 2) medium moderately curved narrow slightly elevated

strongly curved

reddish medium to dark

short thin

strong strong medium to strong

very weak to weak intermediate medium to late absent or very weak



# Variety Name: Genius

# Crop: Winter Wheat

| Breeder's Reference:                             | AFP No:                      |  |  |
|--|------------------------------|--|--|
| Breeder: Nordsaat Saatzuchtgesellschaft          | Translated from: German      |  |  |
| Origin:  | <b>Date:</b> 08 October 2010 |  |  |
| Code: GENI                                       |                              |  |  |
| Coleoptile-anthocyanin colouration:              | absent or very weak          |  |  |
| *Plant - growth habit:                           | intermediate                 |  |  |
| *Time ear emergence:                             | medium                       |  |  |
| Flag leaf - Anthocyanin colouration of auricles: |                              |  |  |
| Frequency of plants with recurved flag leaves:   | very low to low              |  |  |
| *Flag leaf - Glaucosity of sheath:               | strong                       |  |  |
| Flag leaf - Glaucosity of leaf blade:            | medium to strong             |  |  |
| Anthers - anthocyanin colouration:               | -                            |  |  |
| Glaucosity of neck:                              | medium to strong             |  |  |
| Hairiness of uppermost node:                     | -                            |  |  |
| *Plant - height:                                 | short to medium              |  |  |
| *Straw - wall thickness @ 20cms below ear:       | very thin                    |  |  |
| *Ear - Glaucosity:                               | weak to medium               |  |  |
| Ear - Supernumerary spikelets - frequency:       |                              |  |  |
| *Ear - Colour:                                   | white                        |  |  |
| *Ear - Shape (side profile):                     | tapering                     |  |  |
| Ear - Length:                                    | medium to long               |  |  |
| *Ear - Density:                                  | lax to medium                |  |  |
| *Awns or scurs - presence:                       | scurs present                |  |  |
| Awns or scurs - distibution:                     | r                            |  |  |
| *Scurs at tip of ear - length:                   | short                        |  |  |
| *Awns at tip of ear - length:                    |                              |  |  |
| Lower glume - Beak length:                       | short                        |  |  |
| Lower glume - Beak shape (curvature):            | moderately curved            |  |  |
| Lower glume - Beak tip:                          |                              |  |  |
| Lower glume - Shoulder width:                    | narrow                       |  |  |
| Lower glume - Shoulder type:                     | straight to elevated         |  |  |
| Lower glume - External surface roughness:        |                              |  |  |
| Lower glume - Extent of internal hairs:          | weak - group 1               |  |  |
| Lower glume - Internal imprint:                  | See F                        |  |  |
| Lower lemma - Beak shape:                        |                              |  |  |
| Lower lemma - Beak length-:                      |                              |  |  |
| Lower lemma - Beak swelling:                     |                              |  |  |
| Apical rachis segement - convex face hairiness:  | strong                       |  |  |
| *Grain - colour:                                 | red                          |  |  |
| Grain - Shape:                                   |                              |  |  |
| Grain - Brush hair length in dorsal view:        |                              |  |  |
| Grain - Colouration with phenol:                 | medium to dark               |  |  |
| *Seasonal type:                                  | winter                       |  |  |
| Extra characters:                                |                              |  |  |
| LAU a chai actul 5.                              |                              |  |  |

\* = Characteristics which should always be included in the description of the variety.

30 March 2015



# AFP 1/1442 GLADIATOR

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma Beak curvature

Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

Glaucosity Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> short to medium medium absent

medium - Group 2 short moderately curved narrow straight to elevated

strongly curved

red light to medium

short to medium thin

strong to very strong

strong to very strong strong

medium intermediate early absent or very weak



# AFP 1/1482 GLASGOW

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/4 short to medium weak to medium absent

smooth strong - Group 3 short to medium slightly curved narrow straight

slightly curved

red medium to dark

medium thin

medium to strong

medium to strong medium

medium intermed. to semi-prostrate very early to early absent or very weak



# AFP 1/2546 GLEAM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 3/4 long to very long weak absent
- smooth strong (group 3) short to medium v.slightly curved very narrow to narrow straight to elevated

#### slightly curved

red dark to very dark

very short absent or very thin

strong medium to strong strong strong

weak intermediate medium



# AFP 1/2135 GOLDENGUN

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/2 medium to long weak to medium absent

smooth strong - Group 3 medium slightly curved narrow elev. to elev with 2nd point

# moderately curved

red dark

short to medium thin

medium to strong medium medium medium

strong to very strong intermed. to semi-prostrate late



# AFP 1/1811 GRAFTON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> medium to long strong absent

rough weak to medium - Group 1+ short to medium moderate to strongly curved medium elevated

moderately curved

red medium

short thin

strong medium to strong medium to strong medium to strong

strong intermediate medium



# Variety Name: Graham

Crop:

| Breeder's Reference:                             | AFP No:                        |  |
|--|--------------------------------|--|
| Breeder: Syngenta Seeds SAS                      | Translated from: French        |  |
| Origin:  | Date: 03 November 2014         |  |
| Code: GRAH                                       |                                |  |
| Coleoptile-anthocyanin colouration:              | Absent or very weak            |  |
| *Plant - growth habit:                           | Intermediate to semi prostrate |  |
| *Time ear emergence:                             | Medium to late                 |  |
| Flag leaf - Anthocyanin colouration of auricles: |                                |  |
| Frequency of plants with recurved flag leaves:   |                                |  |
| *Flag leaf - Glaucosity of sheath:               | Strong to very strong          |  |
| Flag leaf - Glaucosity of leaf blade:            | Strong to very strong          |  |
| Anthers - anthocyanin colouration:               |                                |  |
| Glaucosity of neck:                              |                                |  |
| Hairiness of uppermost node:                     |                                |  |
| *Plant - height:                                 | Short to medium                |  |
| *Straw - wall thickness @ 20cms below ear:       | Very thin                      |  |
| *Ear - Glaucosity:                               | Strong to very strong          |  |
| Ear - Supernumerary spikelets - frequency:       |                                |  |
| *Ear - Colour:                                   | White                          |  |
| *Ear - Shape (side profile):                     | Parallel sided                 |  |
| Ear - Length:                                    | Long to very long              |  |
| *Ear - Density:                                  | Medium to dense                |  |
| *Awns or scurs - presence:                       | Present                        |  |
| Awns or scurs - distibution:                     |                                |  |
| *Scurs at tip of ear - length:                   | Very short                     |  |
| *Awns at tip of ear - length:                    | ·                              |  |
| Lower glume - Beak length:                       | Short                          |  |
| Lower glume - Beak shape (curvature):            | Slightly curved                |  |
| Lower glume - Beak tip:                          |                                |  |
| Lower glume - Shoulder width:                    | Narrow                         |  |
| Lower glume - Shoulder type:                     | Straight or elevated           |  |
| Lower glume - External surface roughness:        | 6                              |  |
| Lower glume - Extent of internal hairs:          | Weak                           |  |
| Lower glume - Internal imprint:                  |                                |  |
| Lower lemma - Beak shape:                        | Slightly curved                |  |
| Lower lemma - Beak length-:                      | Short                          |  |
| Lower lemma - Beak swelling:                     |                                |  |
| Apical rachis segement - convex face hairiness:  | Weak                           |  |
| *Grain - colour:                                 | Red                            |  |
| Grain - Shape:                                   |                                |  |
| Grain - Brush hair length in dorsal view:        |                                |  |
| Grain - Colouration with phenol:                 | Medium                         |  |
| *Seasonal type:                                  | Winter                         |  |
| Extra characters:                                | Winter                         |  |
| LAG u Chalactely.                                |                                |  |
|  |                                |  |

\* = Characteristics which should always be included in the description of the variety. 31 March 2015



# AFP 1/1940 GRAVITAS

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

Beak curvature

#### **Grain** Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short medium to strong absent
- smooth weak to medium - Group 1+ medium slightly curved narrow to medium elevated

#### moderately curved

red medium

short to medium thin

strong medium to strong medium to strong

absent or very weak semi-erect to intermediate medium to late



# AFP 1/2198 HAMPDEN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium parallel sided scurs present upper 3/4 long weak to medium absent
- slightly rough medium medium to long moderately curved medium elevated

moderately curved

red dark to very dark

short absent or very thin

strong medium to strong medium medium to strong

weak intermediate late



# AFP 1/2433 HARDWICKE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/2 medium to long medium to strong absent

smooth medium (group 2) short to medium moderately curved narrow to medium elevated

moderately curved

red medium to dark

very short to short absent or very thin

medium weak to medium weak to medium

absent to weak intermediate medium to late



# AFP 1/2085 HAVANA

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> medium to long weak to medium

slightly rough weak to medium - Group 1+ short to medium moderately curved narrow to medium elevated

moderately curved

red very dark

short thin

strong strong strong strong

medium semi-erect medium



AFP 1/1731

# HEREFORD

# **CHARACTERS IN DETAIL**

| Ear  |                       |
|--|-----------------------|
| Colour:  | white                 |
| Length:  | short to medium       |
| Density:   | medium to dense       |
| Shape (side profile)                             | tapering              |
| Awns or scurs - presence:                        | scurs present         |
| Awns or scurs - distribution:                    |                       |
| Awns or Scurs - length:                          | long to very long     |
| Apical rachis segment - convex face hairiness:   | strong                |
| Anthers - anthocyanin                            |                       |
| Lower Glume                                      |                       |
| External surface roughness:                      |                       |
| Extent of internal hairs:                        | strong - group 3      |
| Beak length:                                     | medium                |
| Beak shape (curvature):                          | strongly curved       |
| Shoulder   | medium                |
| Shoulder   | elevated              |
| Lower Lemma                                      |                       |
| Beak shape:                                      | strongly curved       |
| Grain  |                       |
| Colour   | red                   |
| Colouration with phenol:                         | medium to dark        |
| Straw  |                       |
| Length:  | medium                |
| Wall thickness @ 20cms below ear:                | thin                  |
| Glaucosity                                       |                       |
| Flag leaf - sheath:                              | strong                |
| Flag leaf - blade (lower side):                  | strong to very strong |
| Culm neck:                                       | strong                |
| Ear - Glaucosity:                                | strong                |
| Plant growth characters                          |                       |
| Coleoptile-anthocyanin                           | absent or very weak   |
| Plant - growth habit:                            | intermediate          |
| Time ear emergence:                              | medium to late        |
| Flag leaf - Anthocyanin colouration of auricles: |                       |



# AFP 1/736 HEREWARD

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> very short to short medium absent

entire external surface rough weak to medium - Group 1+ medium slightly curved broad to very broad elevated

moderately curved

red very dark

very short to short thin

medium to strong medium to strong medium to strong medium

medium intermed. to semi-prostrate medium absent or very weak



# **HEROLDO**

| CHARACTERS IN DETAIL                             |                       |
|--|-----------------------|
| Ear  |                       |
| Colour:  | white                 |
| Length:<br>Density:                              | medium to long medium |
| Shape (side profile)                             | tapering              |
| Awns or scurs - presence:                        | scurs present         |
| Awns or scurs - distribution:                    |                       |
| Awns or scurs - length:                          | short                 |
| Apical rachis segment - convex face hairiness:   | medium                |
| Anthers - anthocyanin colouration<br>Lower Glume |                       |
| External surface roughness:                      |                       |
| Extent of internal hairs:                        | strong - group 3      |
| Beak length:                                     | short to medium       |
| Beak shape (curvature):                          | straight              |
| Shoulder   | narrow                |
| Shoulder   | straight to eleva     |
| Lower Lemma                                      |                       |
| Beak shape:                                      |                       |
| Grain  |                       |
| Colour   | white                 |
| Colouration with phenol:                         | light to medium       |
| Straw  |                       |
| Length:  | short to mediun       |
| Wall thickness @ 20cms below ear:<br>Glaucosity  | very thin             |
| Flag leaf - sheath:                              | strong to very s      |
| Flag leaf - blade (lower side):                  | strong to very st     |
| Culm neck:                                       | strong to very s      |
| Ear - Glaucosity:                                | medium to stron       |
| Plant growth characters                          |                       |
| Coleoptile-anthocyanin                           | absent or very v      |
| Plant - growth habit:                            | semi-prostrate        |
| Time ear emergence:                              | medium to late        |
| Flag leaf - Anthocyanin colouration of auricles: |                       |
|  |                       |

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# AFP 1/2018 HORATIO

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper 1/2 long medium absent

smooth medium - Group 2 medium to long moderately curved narrow to medium elevated

moderately curved

red dark to very dark

short to medium thin

strong strong strong strong

weak semi-erect to intermediate medium to late



# AFP 1/1652 HUMBER

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long medium absent

medium - Group 2 short to medium slightly curved medium to broad elevated

#### moderately to strongly curved

red dark to very dark

short thin

strong medium medium to strong medium

weak to medium intermediate early to medium



| Breeder's Reference: surh.3628-164               | AFP No:                        |  |
|--|--------------------------------|--|
| Breeder: Syngenta seeds Ltd                      | Translated from:               |  |
| Origin:  | <b>Date:</b> 15 May 2018       |  |
| Code: HYBE                                       |                                |  |
| Coleoptile-anthocyanin colouration:              | Weak                           |  |
| *Plant - growth habit:                           | Intermediate to semi prostrate |  |
| *Time ear emergence:                             | Medium to late                 |  |
| Flag leaf - Anthocyanin colouration of auricles: |                                |  |
| Frequency of plants with recurved flag leaves:   | Low to medium                  |  |
| *Flag leaf - Glaucosity of sheath:               | Strong                         |  |
| Flag leaf - Glaucosity of leaf blade:            | Strong                         |  |
| Anthers - anthocyanin colouration:               |                                |  |
| Glaucosity of neck:                              | Medium to strong               |  |
| Hairiness of uppermost node:                     | -                              |  |
| *Plant - height:                                 | Short to medium                |  |
| *Straw - wall thickness @ 20cms below ear:       | Very thyin                     |  |
| *Ear - Glaucosity:                               | Medium to strong               |  |
| Ear - Supernumerary spikelets - frequency:       | C                              |  |
| *Ear - Colour:                                   | White                          |  |
| *Ear - Shape (side profile):                     | Parallel sided                 |  |
| Ear - Length:                                    | Long                           |  |
| *Ear - Density:                                  | Medium to dense                |  |
| *Awns or scurs - presence:                       | Scurs present                  |  |
| Awns or scurs - distibution:                     | I                              |  |
| *Scurs at tip of ear - length:                   |                                |  |
| *Awns at tip of ear - length:                    |                                |  |
| Lower glume - Beak length:                       | Very short to short            |  |
| Lower glume - Beak shape (curvature):            | Straight to slightly curved    |  |
| Lower glume - Beak tip:                          | Straight to slightly builted   |  |
| Lower glume - Shoulder width:                    | Narrow                         |  |
| Lower glume - Shoulder type:                     | Straight                       |  |
| Lower glume - External surface roughness:        | Straight                       |  |
| Lower glume - Extent of internal hairs:          | Weak to medium                 |  |
| Lower glume - Internal imprint:                  | weak to incutuin               |  |
| Lower lemma - Beak shape:                        |                                |  |
| Lower lemma - Beak length-:                      |                                |  |
| 5  |                                |  |
| Lower lemma - Beak swelling:                     | Voru wook                      |  |
| Apical rachis segement - convex face hairiness:  | Very weak                      |  |
| *Grain - colour:                                 | Red                            |  |
| Grain - Shape:                                   |                                |  |
| Grain - Brush hair length in dorsal view:        | X7                             |  |
| Grain - Colouration with phenol:                 | Very dark                      |  |
| *Seasonal type:                                  | Winter                         |  |
| Extra characters:                                |                                |  |
|  |                                |  |

\* = Characteristics which should always be included in the description of the variety. 16 May 2018



# AFP 1/1561 HYPERION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper 1/2 short weak to medium absent

rough medium (2) short to medium slightly curved medium elevated

slightly to moderately curved

red medium

short to medium absent or very thin

#### medium to strong

strong medium to strong

medium semi-erect to intermediate early to medium absent or very weak



Variety Name: HYTECK

| Breeder's Reference: hyteck                      | AFP No:                     | AFP No:             |  |
|--|-----------------------------|---------------------|--|
| Breeder: Saaten Union Recherche                  | Translated fr               | Translated from:    |  |
| Origin:  | Date: 1                     | 5 May 2018          |  |
| Code: HYTE                                       |                             |                     |  |
| Coleoptile-anthocyanin colouration:              | Very weak t                 |                     |  |
| *Plant - growth habit:                           |                             | e to semi prostrate |  |
| *Time ear emergence:                             | Early to medium             |                     |  |
| Flag leaf - Anthocyanin colouration of auricles: |                             |                     |  |
| Frequency of plants with recurved flag leaves:   | Low                         |                     |  |
| *Flag leaf - Glaucosity of sheath:               | Strong to very strong       |                     |  |
| Flag leaf - Glaucosity of leaf blade:            | Medium to s                 | strong              |  |
| Anthers - anthocyanin colouration:               |                             |                     |  |
| Glaucosity of neck:                              | Medium to strong            |                     |  |
| Hairiness of uppermost node:                     |                             |                     |  |
| *Plant - height:                                 | Short to medium             |                     |  |
| *Straw - wall thickness @ 20cms below ear:       | Thin to medium              |                     |  |
| *Ear - Glaucosity:                               | Medium to strong            |                     |  |
| Ear - Supernumerary spikelets - frequency:       |                             |                     |  |
| *Ear - Colour:                                   | White                       |                     |  |
| *Ear - Shape (side profile):                     | Parallel side               | d                   |  |
| Ear - Length:                                    | Long to very long           |                     |  |
| *Ear - Density:                                  | Dense                       |                     |  |
| *Awns or scurs - presence:                       | Scurs present               |                     |  |
| Awns or scurs - distibution:                     |                             |                     |  |
| *Scurs at tip of ear - length:                   | Very short to short         |                     |  |
| *Awns at tip of ear - length:                    |                             |                     |  |
| Lower glume - Beak length:                       | Very short to short         |                     |  |
| Lower glume - Beak shape (curvature):            | Straight to slightly curved |                     |  |
| Lower glume - Beak tip:                          |                             |                     |  |
| Lower glume - Shoulder width:                    | Narrow                      |                     |  |
| Lower glume - Shoulder type:                     | Sloping or slightly sloping |                     |  |
| Lower glume - External surface roughness:        |                             |                     |  |
| Lower glume - Extent of internal hairs:          | Weak                        |                     |  |
| Lower glume - Internal imprint:                  |                             |                     |  |
| Lower lemma - Beak shape:                        |                             |                     |  |
| Lower lemma - Beak length-:                      |                             |                     |  |
| Lower lemma - Beak swelling:                     |                             |                     |  |
| Apical rachis segement - convex face hairiness:  | Very weak                   |                     |  |
| *Grain - colour:                                 | Red                         |                     |  |
| Grain - Shape:                                   |                             |                     |  |
| Grain - Brush hair length in dorsal view:        |                             |                     |  |
| Grain - Colouration with phenol:                 | Dark to very                | v dark              |  |
| *Seasonal type:                                  | Alternative                 |                     |  |
| Extra characters:                                |                             |                     |  |
|  |                             |                     |  |

\* = Characteristics which should always be included in the description of the variety. 16 May 2018



# AFP 1/2136 ICEBREAKER

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

# Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium strong absent

slightly rough medium - Group 2 medium slightly curved medium straight to elevated

moderately curved

red very dark

short to medium thin

medium to strong medium medium medium

medium intermed. to semi-prostrate late



# AFP 1/2129 ICON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper <sup>3</sup>/<sub>4</sub> medium to long weak to medium absent

slightly rough weak to medium - Group 1+ medium to long moderately curved medium elevated

moderately curved

red dark

short to medium thin

medium to strong medium to strong medium weak to medium

absent or very weak intermed. to semi-prostrate medium to late



# AFP 1/1853 INVICTA

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present tip only short to medium weak to medium absent
- smooth medium - Group 2 medium moderately curved medium elevated

moderately curved

red very dark

medium thin

strong medium medium medium

medium to strong intermediate late



# AFP 1/1388 ISTABRAQ

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium weak to medium absent

smooth medium - Group 2 short slight to moderately curved medium elevated

### slightly to moderately curved

red medium

very short to short thin

#### strong

strong medium

medium semi-erect very early to early absent or very weak



# AFP 1/1737 **JB DIEGO**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present tip only short to medium medium to strong absent

slightly rough weak to medium - Group 1+ short slight to moderately curved medium elevated

#### moderately to strongly curved

red dark

short thin

medium to strong medium to strong medium to strong weak to medium

strong semi-erect to intermediate medium



# AFP 1/2329 JELLICOE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense tapering scurs present upper 1/2 medium to long weak
- smooth medium (2) medium slight to moderately curved narrow elevated

#### moderately curved

red medium to dark

short absent or very thin

strong medium to strong medium medium

absent to weak semi-erect to intermediate late to very late



# AFP 1/2202

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 1/2 long medium to strong absent
- smooth medium strongly curved narrow straight

#### geniculate

red medium to dark

medium absent or very thin

medium to strong medium medium medium

absent to weak intermed. to semi-prostrate late to very late



# AFP 1/2922 JOYFUL

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long medium parallel sided scurs present upper 1/4 medium to long strong absent

slightly rough medium to strong (group 2+) medium moderately curved narrow elevated

#### strongly curved

red very dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

very weak to weak intermediate late to very late absent or very weak



# Variety Name: Juniper

Breeder's Reference: SjP0579

Breeder: Limagrain UK Ltd

**Origin:** 

Code: JUNP

**Coleoptile-anthocyanin colouration:** \*Plant - growth habit: \*Time ear emergence: Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: \*Flag leaf - Glaucosity of sheath: Flag leaf - Glaucosity of leaf blade: Anthers - anthocyanin colouration: **Glaucosity of neck:** Hairiness of uppermost node: \*Plant - height: \*Straw - wall thickness @ 20cms below ear: \*Ear - Glaucosity: Ear - Supernumerary spikelets - frequency: \*Ear - Colour: \*Ear - Shape (side profile): Ear - Length: \*Ear - Density: \*Awns or scurs - presence: Awns or scurs - distibution: \*Scurs at tip of ear - length: \*Awns at tip of ear - length: Lower glume - Beak length: Lower glume - Beak shape (curvature): Lower glume - Beak tip: Lower glume - Shoulder width: Lower glume - Shoulder type: Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: \*Grain - colour: Reddish Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: \*Seasonal type: **Extra characters:** 

**Crop:** Wheat

AFP No:

Translated from: Danish

06 April 2023 Date:

Medium Intermediate to semi-prostrate Medium Absent or very weak Low to medium Strong Strong Medium to strong Medium Thin Strong White Parallel sided Short to medium Medium Scurs present hort to medium Long Slightly curved to moderately curved Narrow to medium Horizontal to slightly elevated

Winter type

\* = Characteristics which should always be included in the description of the variety. 19 April 2023



# AFP 1/1765 **KETCHUM**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> short to medium medium absent

smooth strong - Group 3 short to medium slightly curved narrow elevated

slightly curved

red dark

medium to long thin

strong medium to strong medium to strong medium

medium semi-erect to intermediate medium to late



# AFP 1/1837 KINGDOM

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

# **Grain** Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present tip only short medium absent

smooth medium - Group 2 short to medium slightly curved narrow to medium elevated

slightly curved

red medium to dark

medium to long thin

strong medium medium to strong

medium to strong semi-erect medium to late



# AFP 1/2868 KINGFISHER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/4 medium weak to medium absent
- smooth medium to strong (group 2+) medium to long slightly curved medium elevated

moderately curved

red dark

short to medium absent or very thin

strong to very strong strong to very strong strong to very strong strong

very weak to weak intermed. to semi-prostrate late absent or very weak



# AFP 1/1578 **KIPLING**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense to very dense parallel sided scurs present upper  $\frac{1}{2}$ short to medium weak to medium absent
- smooth medium - Group 2 medium slightly curved medium elevated

slightly curved

red light to medium

medium thin

#### medium

medium weak

strong semi-erect to intermediate medium to late absent or very weak



# KRIS

# **CHARACTERS IN DETAIL**

# Ear

| Ear  |                             |
|--|-----------------------------|
| Colour:  | white                       |
| Length:  | short to medium             |
| Density:   | medium                      |
| Shape (side profile)                             | tapering                    |
| Awns or scurs - presence:                        | scurs present               |
| Awns or scurs - distribution:                    |                             |
| Awns or scurs - length:                          | short                       |
| Apical rachis segment - convex face hairiness:   | medium                      |
| Anthers - anthocyanin colouration                |                             |
| Lower Glume                                      |                             |
| External surface roughness:                      |                             |
| Extent of internal hairs:                        | strong - group 3            |
| Beak length:                                     | short to medium             |
| Beak shape (curvature):                          | slightly curved             |
| Shoulder   | medium                      |
| Shoulder   | straight to elevated        |
| Lower Lemma                                      |                             |
| Beak shape:                                      | slightly curved             |
| Grain  |                             |
| Colour   | red                         |
| Colouration with phenol:                         | medium to dark              |
| Straw  |                             |
| Length:  | short                       |
| Wall thickness @ 20cms below ear:<br>Glaucosity  | very thin                   |
| Flag leaf - sheath:                              | strong to very strong       |
| Flag leaf - blade (lower side):                  | medium to strong            |
| Culm neck:                                       | strong                      |
| Ear - Glaucosity:                                | strong                      |
| Plant growth characters                          |                             |
| Coleoptile-anthocyanin                           | medium to strong            |
| Plant - growth habit:                            | semi-prostrate to prostrate |
| Time ear emergence:                              | late                        |
| Flag leaf - Anthocyanin colouration of auricles: | absent or very weak         |
|  |                             |



# AFP 1/2567 KWS ALABASTER

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense parallel sided scurs present upper 1/4 medium to long weak absent
- rough medium (group 2) short slightly curved narrow straight to elevated

slightly to moderately curved

white medium to dark

short to medium absent or very thin

strong medium to strong medium to strong medium to strong

strong intermediate early to medium



# AFP 1/2311 KWS BARREL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/2 medium medium to strong
- smooth strong (3) medium moderate to strongly curved medium elevated

moderately to strongly curved

red medium

very short to short absent or very thin

medium to strong medium medium medium

weak to medium intermediate late to very late



# AFP 1/2307 KWS BASSET

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 long to very long medium to strong
- smooth weak to medium (group 1+) long moderately curved narrow to medium elevated

#### moderately curved

red dark to very dark

very short to short absent or very thin

medium weak to medium medium medium

absent to weak intermediate late to very late



# AFP 1/3025 KWS BIELSUM

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 1/4 medium medium to large absent
- smooth strong (group 3) short to medium slight to moderately curved narrow to medium slightly elevated to strongly elevated

#### strongly curved

reddish medium to dark

very short to short thin

strong to very strong strong strong to very strong

strong semi-erect to intermediate medium to late absent or very weak



# AFP 1/3155 KWS BOATUM

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/2 long small to medium absent

smooth medium (group 2) medium to long strongly curved narrow to medium slightly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong strong medium to strong

weak semi-prostrate late to very late absent or very weak



# AFP 1/2115 KWS BONHAM

# **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long strong absent

smooth medium - Group 2 medium moderately curved narrow to medium elevated

moderately curved

red dark

short to medium thin

medium to strong weak to medium medium medium

medium intermediate medium to late



# AFP 1/3145 KWS BRENNUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long lax to medium tapering scurs present upper 1/4 medium

absent

entire external surface rough weak to medium (group 1+) short slight to moderately curved medium slightly elevated

#### strongly curved

reddish light to medium

#### short

strong to very strong strong to very strong strong

strong semi-prostrate late absent or very weak



# AFP 1/2969 KWS BRIUM

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium parallel sided scurs present upper 1/2 long strong to very strong absent
- smooth medium (group 2) medium to long moderate to strongly curved narrow elevated

strongly curved to geniculate

red very dark

very short to short absent or very thin

strong medium to strong medium to strong

very weak to weak intermediate late absent or very weak



# AFP 1/2766 KWS BURGHLEY

# **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium tapering scurs present upper 1/4 medium to long weak to medium

smooth weak to medium (group 1+) medium moderate to strongly curved narrow to medium elevated

moderately to strongly curved

red medium

very short to short absent or very thin

strong to very strong strong strong strong

strong intermediate medium to late



# AFP 1/2122 KWS CASHEL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense tapering awns present whole length very long absent to weak absent
- smooth strong medium to long slight to moderately curved medium elevated

#### slightly curved

red medium to dark

short absent or very thin

weak very weak to weak weak weak

weak intermed. to semi-prostrate late



# AFP 1/2080 **KWS CHILOE**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering awns present whole length very long weak
- smooth strong - Group 3 long to very long slightly curved very narrow to narrow elevated

slightly curved

red very light to light

short to medium thin

medium medium to strong strong strong

medium semi-erect to intermediate medium



# AFP 1/2079 KWS CLEVELAND

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns of scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long medium to strong
- slightly rough medium - Group 2 medium strongly curved medium elevated

strongly curved

red very dark

short thin

strong strong medium to strong

weak to medium semi-erect medium



# Variety Name: KWS COLOSSEUM

**Crop:** Wheat

Breeder's KWS W370

#### Breeder: KWS UK LTD

**Origin:** 

Code: KCOL

**Coleoptile-anthocyanin colouration:** \*Plant - growth habit: \*Time ear emergence: Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: \*Flag leaf - Glaucosity of sheath: Flag leaf - Glaucosity of leaf blade: Anthers - anthocyanin colouration: **Glaucosity of neck:** Hairiness of uppermost node: \*Plant - height: \*Straw - wall thickness @ 20cms below ear: \*Ear - Glaucosity: Ear - Supernumerary spikelets - frequency: \*Ear - Colour: \*Ear - Shape (side profile): Ear - Length: \*Ear - Density: \*Awns or scurs - presence: Awns or scurs - distibution: \*Scurs at tip of ear - length: \*Awns at tip of ear - length: Lower glume - Beak length: Lower glume - Beak shape (curvature): Lower glume - Beak tip: Lower glume - Shoulder width: Lower glume - Shoulder type: Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: \*Grain - colour: Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: \*Seasonal type: Extra characters:

AFP No:

# Translated from:

**Date:** 28 June 2021

Medium to strong Intermediate to semi-prostrate Medium to late

Low Strong to very strong Strong to very strong

Strong to very strong

Short to medium Absent or very thin Strong to very strong

White Parallel sided Medium Medium to dense Scur present

Medium to long Medium Slightly curved to moderately curved

Medium to broad Slightly sloping to straight

Medium Slightly curved to moderately curved Strongly curved to geniculate

Medium Red

Dark to very dark Winter

\* = Characteristics which should always be included in the description of the variety.





# AFP 1/2416 KWS CONROS

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering scurs present upper 1/4 medium weak to medium

rough weak to medium (group 1+) short to medium slightly curved narrow elevated

slightly to moderately curved

red dark

short absent or very thin

medium to strong medium to strong medium medium to strong

weak to medium intermediate very late



# AFP 1/2763 KWS COYNE

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/4 long medium

slightly rough medium to strong (group 2+) medium to long strongly curved narrow to medium elevated

### strongly curved

red medium

short absent or very thin

strong medium to strong strong medium to strong

very weak to weak intermediate late



# AFP 1/2858

# **KWS CRANIUM**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/4 long weak to medium absent

slightly rough medium to strong (group 2+) medium slightly curved narrow elevated

moderately to strongly curved

red dark to very dark

short to medium absent or very thin

strong to very strong strong to very strong strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/2305 KWS CRISPIN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 short to medium medium to strong
- smooth medium (2) medium moderately curved narrow to medium elevated

strongly curved

red medium

short absent or very thin

strong medium to strong medium to strong medium to strong

weak semi-erect to intermediate late



# AFP 1/2072 KWS CROFT

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns of scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long weak
- smooth strong - Group 3 medium slightly curved narrow elevated

moderately curved

red very dark

short thin

strong strong to very strong strong

weak semi-erect to intermediate medium



# AFP 1/1976 KWS CROSBY

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### **Grain** Colour

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper ½ long weak

smooth medium - Group 2 medium to long moderately curved narrow to medium elevated

#### slightly to moderately curved

red medium to dark

short to medium thin

strong strong to very strong strong to very strong

weak semi-erect to intermediate medium to late



# AFP 1/2114 KWS DALI

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

#### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper <sup>1</sup>/<sub>2</sub> medium weak to medium absent

slightly rough medium - Group 2 medium moderately curved narrow to medium elevated

moderately curved

red very dark

short to medium thin

medium to strong weak to medium medium to strong medium

weak intermediate medium to late



# AFP 1/2972 KWS DAWSUM

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense tapering scurs present upper 1/4 long weak to medium absent
- smooth weak to medium (group 1+) medium strongly curved narrow to medium elevated

strongly curved to geniculate

red dark

very short to short absent or very thin

strong to very strong strong to very strong medium

medium to strong intermediate late to very late absent or very weak



# AFP 1/2854 KWS DELUXUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 long medium to strong absent
- rough medium (group 2) short to medium moderately curved narrow straight to elevated

moderately to strongly curved

red medium to dark

very short to short absent or very thin

strong to very strong strong to very strong strong medium to strong

strong intermediate late to very late absent or very weak



# AFP 1/2860 KWS DINKUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/4 medium to long strong absent

entire external surface rough medium (group 2) medium moderately curved medium elevated

moderately to strongly curved

red dark

very short to short absent or very thin

very strong very strong very strong strong

strong intermed. to semi-prostrate late absent or very weak



# AFP 1/3147 KWS DRAGUM

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense parallel sided scurs present upper 1/4 medium small to medium absent
- slightly rough weak to medium (group 1+) medium moderately curved narrow slightly elevated

strongly curved

reddish dark

short thin

strong to very strong medium to strong strong to very strong medium to strong

strong semi-prostrate late absent or very weak



# AFP 1/2120 KWS EVOKE

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns of scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium absent to weak absent
- smooth medium - Group 2 short moderately curved medium elevated

strongly curved

red dark

short to medium thin

strong strong strong strong

medium to strong intermediate medium



# AFP 1/2246 KWS EVOLVE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white long medium parallel sided scurs present upper 1/4 medium medium absent
- slightly rough weak to medium medium strongly curved narrow elevated

strongly curved

red medium to dark

very short to short absent or very thin

strong medium to strong medium to strong medium to strong

absent to weak intermediate late



# AFP 1/2672 KWS EXTASE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium tapering scurs present upper 1/2 long to very long weak to medium
- smooth medium (group 2) short slightly curved narrow to medium elevated

red medium to dark

short to medium absent or very thin

medium medium medium to strong

absent or very weak intermediate medium



# AFP 1/2421 KWS FENWAY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper 1/2 long weak to medium

smooth medium (group 2) medium to long moderate to strongly curved narrow elevated

# INVALID CHARACTER STATE!

red medium to dark

very short absent or very thin

medium to strong medium medium medium

absent or very weak intermediate very late



# AFP 1/2664 KWS FIREFLY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/4 medium to long medium

slightly rough medium (group 2) short to medium slight to moderately curved narrow to medium elevated

red medium to dark

very short to short absent or very thin

strong strong strong strong

absent or very weak intermediate late



# AFP 1/3034 KWS FOXTUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/2 long medium to large absent

entire external surface rough weak (group 1) medium moderately curved narrow to medium slightly elevated

moderately curved

reddish medium to dark

very short to short thin

strong strong strong medium

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2861 KWS FULCRUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/4 medium weak absent

smooth medium to strong (group 2+) medium moderately curved narrow elevated

moderately to strongly curved

red very dark

short to medium absent or very thin

very strong strong to very strong strong to very strong strong to very strong

weak intermed. to semi-prostrate late absent or very weak



# AFP 1/1977 KWS GATOR

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper ½ long weak to medium

smooth medium - Group 2 medium moderately curved narrow straight to elevated

# slightly to moderately curved

red medium to dark

short to medium thin

strong strong medium to strong

weak to medium intermediate medium to late



# AFP 1/3035 KWS GIGANTUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/4 medium large absent
- rough medium (group 2) medium to long moderate to strongly curved narrow slightly elevated

strongly curved

reddish medium to dark

short thin

strong strong medium to strong

very weak to weak intermed. to semi-prostrate late absent or very weak



# AFP 1/2965 KWS GUIUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long medium tapering scurs present upper 3/4 medium to long weak to medium absent

#### rough medium to strong (group 2+) short to medium strongly curved narrow elevated

geniculate

red dark

very short to short absent or very thin

strong to very strong medium to strong strong to very strong medium

strong intermediate late to very late absent or very weak



# AFP 1/2316 KWS HARLYN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/2 medium very weak to weak
- rough medium (2) short to medium slight to moderately curved narrow straight to elevated

#### moderately curved

red light to medium

very short absent or very thin

medium to strong medium medium to strong

weak semi-erect to intermediate late to very late



# AFP 1/2978 KWS HENUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/2 long strong to very strong absent
- smooth medium (group 2) long strongly curved medium to broad elev. to strongly elevated

strongly curved to geniculate

red very dark

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong medium

weak to medium intermediate late to very late absent or very weak



# AFP 1/1882 KWS HORIZON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper ½ medium to long absent to weak absent

smooth medium - Group 2 medium slightly curved narrow elevated

# slightly to moderately curved

red medium to dark

short thin

strong strong medium medium to strong

strong semi-erect medium to late



# AFP 1/2565 KWS JACKAL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering scurs present upper 1/2 long to very long weak to medium absent

smooth medium (group 2) medium moderately curved narrow to medium elevated

moderately curved

red medium to dark

short absent or very thin

medium to strong strong medium to strong strong

absent to weak intermediate medium to late



# AFP 1/2764 KWS JUBILATION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper 1/4 medium weak

smooth weak to medium (group 1+) short to medium strongly curved narrow elevated

# strongly curved

red light to medium

short absent or very thin

strong medium to strong strong medium to strong

weak intermediate medium to late



# AFP 1/2865 KWS JUGUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium tapering scurs present upper 1/2 long to very long medium to strong absent
- smooth medium to strong (group 2+) long moderate to strongly curved narrow to medium elevated

#### strongly curved

red medium to dark

short to medium absent or very thin

strong to very strong strong to very strong strong to very strong medium to strong

weak intermediate late absent or very weak



# AFP 1/3149 KWS KARTUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 1/2 long to very long large absent
- smooth medium (group 2) short to medium moderately curved narrow slightly elevated

strongly curved

reddish medium to dark

very short to short thin

strong medium to strong strong weak to medium

weak semi-prostrate late absent or very weak



# AFP 1/2116 KWS KENTON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> medium to long medium to strong absent

slightly rough weak to medium - Group 1+ medium moderately curved narrow to medium elevated

# moderately to strongly curved

red dark

short to medium thin

medium to strong weak to medium weak to medium medium

medium to strong intermediate medium to late



# AFP 1/2857 KWS KERANKUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium weak to medium absent
- smooth medium (group 2) medium slight to moderately curved narrow straight to elevated

#### moderately curved

red medium

very short to short absent or very thin

very strong strong very strong medium to strong

medium intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2420 KWS KERRIN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/4 medium to long medium to strong

slightly rough medium (group 2) medium moderately curved narrow to medium straight to elevated

moderately to strongly curved

red medium to dark

very short absent or very thin

medium weak to medium weak to medium

absent or very weak intermediate very late



# AFP 1/2076 KWS KIELDER

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns of scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper <sup>1</sup>/<sub>2</sub> long weak to medium

slightly rough medium - Group 2 medium to long slightly curved very narrow to narrow elevated

slightly curved

red very dark

short thin

strong strong strong strong

weak to medium semi-prostrate medium to late



# AFP 1/2770 KWS KINETIC

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 long weak

smooth strong to whole surface short to medium slight to moderately curved narrow elevated

moderately to strongly curved

red light to medium

short absent or very thin

strong strong medium to strong

medium intermediate medium to late



# AFP 1/2853 KWS KINNELLUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/2 medium to long medium to strong absent
- smooth medium to strong (group 2+) medium moderately curved narrow straight to elevated

strongly curved

red medium

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong strong

weak to medium intermediate medium to late absent or very weak



# AFP 1/2236 KWS LEON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper 1/2 medium to long medium absent

slightly rough weak to medium (1+) short to medium moderately curved narrow elevated

moderately curved

red dark to very dark

short absent or very thin

strong medium to strong medium medium

medium intermediate late to very late



# AFP 1/2245 **KWS LILI**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper 1/4 medium weak absent

slightly rough medium short to medium slightly curved narrow elevated

moderately curved

red medium to dark

short absent or very thin

medium to strong medium medium to strong

medium semi-erect to intermediate late



# AFP 1/1972 KWS LUMOS

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium medium

rough weak to medium - Group 1+ short to medium strongly curved narrow elevated

strongly curved

red medium

short to medium thin

medium to strong strong strong strong

strong semi-erect medium



# AFP 1/2561 KWS LUTHER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 3/4 long to very long weak to medium absent
- smooth medium (group 2) medium moderately curved narrow straight to elevated

strongly curved

red light to medium

short absent or very thin

strong strong strong strong

weak intermediate medium



# AFP 1/1908 KWS MADRYN

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns of scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper ½ medium weak to medium

slightly rough weak to medium - Group 1+ medium strongly curved medium elevated

moderately curved

red medium

short thin

strong strong strong strong

strong semi-erect to intermediate medium



# AFP 1/2967 KWS MCGUGUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium lax to medium tapering scurs present upper 1/2 medium to long strong to very strong absent
- slightly rough medium to strong (group 2+) short to medium moderate to strongly curved narrow to medium straight to elevated

#### strongly curved

red medium to dark

very short absent or very thin

very strong very strong very strong strong to very strong

strong intermediate medium to late absent or very weak



# AFP 1/3153 KWS MODELLUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 3/4 very long large absent
- smooth weak to medium (group 1+) medium to long moderate to strongly curved narrow slightly elevated

#### strongly curved

reddish dark to very dark

short thin

strong strong strong strong

weak semi-prostrate medium to late absent or very weak



# AFP 1/2244 KWS MOJITO

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper 3/4 long to very long weak to medium absent

smooth weak to medium medium moderately curved narrow to medium elevated

moderately curved

red medium to dark

short absent or very thin

medium weak to medium medium medium

absent to weak intermediate late



Variety Name: KWS Montana **Crop:** Winter wheat Breeder's Reference: KW 8027-3-08 AFP No: Breeder: KWS LOCHOW GMBH Translated from: German Date: 22 March 2016 **Origin:** Code: KWMON **Coleoptile-anthocyanin colouration:** Medium \*Plant - growth habit: Semi prostrate \*Time ear emergence: Late Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: Absent or very low \*Flag leaf - Glaucosity of sheath: Strong Flag leaf - Glaucosity of leaf blade: Strong Anthers - anthocyanin colouration: **Glaucosity of neck:** Strong to very strong Hairiness of uppermost node: \*Plant - height: Short to medium \*Straw - wall thickness @ 20cms below ear: Absent or very thin \*Ear - Glaucosity: Strong Ear - Supernumerary spikelets - frequency: \*Ear - Colour: White Parallel sided \*Ear - Shape (side profile): Ear - Length: Medium \*Ear - Density: Medium \*Awns or scurs - presence: Scurs present Awns or scurs - distibution: \*Scurs at tip of ear - length: Very short \*Awns at tip of ear - length: Lower glume - Beak length: Very short to short Lower glume - Beak shape (curvature): Straight to slightly curved Lower glume - Beak tip: Lower glume - Shoulder width: Medium Lower glume - Shoulder type: Slightly sloping to straight Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Very weak to weak Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: Strong to very strong \*Grain - colour: Red Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: Medium to dark \*Seasonal type: Winter **Extra characters:** 

\* = Characteristics which should always be included in the description of the variety.



23 March 2016

# AFP 1/2240 KWS MOZART

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/2 short to medium medium absent
- smooth medium moderate to strongly curved narrow to medium elevated

#### moderately curved

red medium

very short to short absent or very thin

strong medium medium to strong medium to strong

weak semi-erect to intermediate late to very late



# AFP 1/2977 KWS PALLADIUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 1/2 long medium absent
- rough strong to whole surface medium moderately curved very narrow to narrow elevated

strongly curved to geniculate

red dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium to strong

strong intermediate late absent or very weak



# AFP 1/2769

# **KWS PARKIN**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short dense parallel sided scurs present upper 1/4 long absent or very weak

entire external surface rough strong to whole surface medium moderately curved very narrow to narrow elevated

#### strongly curved to geniculate

red light to medium

# very short to short absent or very thin

strong medium to strong strong weak to medium

weak intermediate medium to late



# AFP 1/2856 KWS PLECTRUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long dense parallel sided scurs present upper 1/4 medium to long strong absent
- smooth medium (group 2) short to medium v.slightly curved narrow to medium straight to elevated

slightly curved

red dark to very dark

very short medium

very strong very strong very strong

weak intermed. to semi-prostrate late absent or very weak



# AFP 1/1907 KWS PODIUM

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### **Grain** Colour

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to dense tapering scurs present upper <sup>1</sup>/<sub>4</sub> medium weak to medium absent

smooth medium - Group 2 medium slight to moderately curved narrow to medium elevated

# slightly curved

red dark

very short to short thin

strong medium to strong medium to strong strong to very strong

medium semi-erect medium



# AFP 1/2864 KWS RACKUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/4 medium to long absent or very weak absent
- smooth medium (group 2) medium to long moderately curved narrow straight to elevated

moderately curved

red medium to dark

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong strong

weak intermediate late absent or very weak



# AFP 1/3028 KWS ROADUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense tapering scurs present upper 1/2 long small to medium absent
- rough medium (group 2) medium moderate to strongly curved narrow to medium horizontal to slightly elevated

strongly curved

reddish medium

short thin

strong medium to strong strong strong

strong intermediate late absent or very weak



# AFP 1/2078 KWS ROWAN

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

#### Grain Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper <sup>1</sup>/<sub>2</sub> medium to long absent to weak
- smooth medium - Group 2 medium moderately curved medium elevated

moderately curved

red dark to very dark

short to medium thin

strong medium to strong strong medium to strong

medium intermediate medium



# AFP 1/2975 KWS SABRUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short dense parallel sided scurs present upper 1/4 medium weak to medium absent
- slightly rough strong (group 3) short to medium slight to moderately curved narrow straight to elevated

#### strongly curved

red dark

very short to short absent or very thin

very strong strong to very strong very strong medium

medium intermediate medium absent or very weak



# AFP 1/1916 KWS SANTIAGO

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long medium absent

slightly rough medium - Group 2 medium moderately curved narrow to medium elevated

## moderately to strongly curved

red medium

very short to short thin

strong strong medium to strong

strong semi-erect to intermediate medium to late



# AFP 1/1971 KWS SAXTEAD

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium tapering awns present whole length long medium
- slightly rough strong - Group 3 long strongly curved narrow elevated

# moderately to strongly curved

red dark

short to medium thin

strong strong to very strong strong to very strong

strong semi-erect medium



# AFP 1/2668 KWS SCIMITAR

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present

long to very long weak to medium

smooth medium (group 2) medium moderate to strongly curved broad straight to elevated

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium to strong

absent or very weak intermediate late



# AFP 1/2309 KWS SILVERSTONE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/2 medium to long medium to strong
- smooth medium (2) medium slight to moderately curved narrow elevated

slightly to moderately curved

red light to medium

very short to short absent or very thin

strong medium to strong medium to strong medium to strong

weak to medium semi-erect to intermediate late to very late



# AFP 1/2970 KWS SILVUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 medium to long weak to medium absent
- smooth medium to strong (group 2+) medium moderate to strongly curved narrow elevated

#### geniculate

red dark

very short to short absent or very thin

very strong strong to very strong strong to very strong medium to strong

medium to strong intermediate late to very late absent or very weak



# AFP 1/2315 KWS SISKIN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 1/2 medium weak

rough weak to medium (1+) short to medium slight to moderately curved very narrow to narrow elevated

moderately curved

red light to medium

short absent or very thin

medium to strong medium to strong medium to strong strong

medium semi-erect to intermediate late



# AFP 1/3158 KWS SKATEUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper 1/2 medium to long

absent

smooth medium (group 2) medium to long strongly curved narrow to medium slightly elevated to strongly elevated

geniculate

reddish medium to dark

very short to short thin

strong medium to strong strong strong

weak semi-prostrate medium to late absent or very weak



# AFP 1/2761 KWS SKOMER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/4 medium to long weak

smooth weak to medium (group 1+) medium to long strongly curved narrow to medium elevated

strongly curved to geniculate

red light to medium

short to medium absent or very thin

strong to very strong strong to very strong strong to very strong strong to very strong

weak intermediate early



# AFP 1/1975 KWS SOLO

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long medium

smooth weak to medium - Group 1+ medium medium elevated

moderately curved

red dark to very dark

short thin

medium to strong medium to strong strong strong

absent to weak intermediate medium to late



# AFP 1/1880 KWS STERLING

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns of scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long weak absent

smooth weak to medium - Group 1+ medium moderately curved very narrow to narrow elevated

## slightly to moderately curved

red medium to dark

very short to short thin

strong medium to strong strong

medium to strong semi-erect medium to late



# AFP 1/1911 KWS TARGET

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium absent to weak absent

slightly rough medium - Group 2 medium slight to moderately curved medium elevated

#### moderately curved

red very dark

short thin

strong medium to strong strong

strong semi-erect medium



# AFP 1/2241 KWS TEMPO

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 medium to long weak to medium absent
- rough weak to medium short to medium strongly curved narrow elevated

geniculate

red medium

short absent or very thin

strong medium to strong strong medium to strong

medium to strong intermediate very late



# AFP 1/3154 KWS TRAINUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 3/4 long small to medium absent
- smooth medium (group 2) long strongly curved to geniculate medium slightly elevated

geniculate

reddish medium to dark

short thin

strong medium to strong strong medium to strong

weak semi-prostrate medium to late absent or very weak



# AFP 1/2235 KWS TRINITY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 1/2 medium weak absent
- slightly rough weak to medium medium strongly curved medium elevated

strongly curved

red dark to very dark

short absent or very thin

strong medium to strong medium to strong strong

absent to weak intermediate late



# AFP 1/2427 KWS TROMMEL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/2 long to very long medium to strong
- smooth medium (group 2) medium strongly curved narrow to medium straight to elevated

strongly curved

red medium to dark

very short to short absent or very thin

medium to strong medium medium medium

weak intermediate very late



# AFP 1/3026 KWS ULTIMATUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 long medium to large absent
- slightly rough strong (group 3) medium strongly curved very narrow to narrow slightly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong to very strong strong medium

medium to strong semi-prostrate late absent or very weak



# AFP 1/3032 KWS WEBBUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 1/2 long to very long medium to large absent
- smooth medium to strong (group 2+) medium to long strongly curved narrow to medium slightly elevated

strongly curved to geniculate

reddish medium to dark

short to medium thin

strong strong medium to strong

very weak to weak intermediate late absent or very weak



# AFP 1/3033 KWS WRENUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 1/4 medium to long large to very large absent
- smooth weak to medium (group 1+) medium to long moderately curved narrow slightly elevated

strongly curved

reddish medium to dark

very short to short thin

strong to very strong strong strong

weak to medium intermed. to semi-prostrate medium to late absent or very weak



# AFP 1/2082 KWS YARIS

# **CHARACTERS IN DETAIL**

| Ear  |                       |
|--|-----------------------|
| Colour:  | white                 |
| Length:  | medium to long        |
| Density:   | medium                |
| Shape (side profile)                             | tapering              |
| Awns or scurs - presence:                        | scurs present         |
| Awns or scurs - distribution:                    |                       |
| Awns or scurs - length:                          | medium                |
| Apical rachis segment - convex face hairiness:   | medium to strong      |
| Anthers - anthocyanin colouration                |                       |
| Lower Glume                                      |                       |
| External surface roughness:                      |                       |
| Extent of internal hairs:                        | strong - group 3      |
| Beak length:                                     | long                  |
| Beak shape (curvature):                          | strongly curved       |
| Shoulder   | medium                |
| Shoulder   | elevated              |
| Lower Lemma                                      |                       |
| Beak shape:                                      | strongly curved       |
| Grain  |                       |
| Colour   | red                   |
| Colouration with phenol:                         | medium to dark        |
| Straw  |                       |
| Length:  | medium                |
| Wall thickness @ 20cms below ear:                | very thin             |
| Glaucosity                                       |                       |
| Flag leaf - sheath:                              | strong to very strong |
| Flag leaf - blade (lower side):                  | very strong           |
| Culm neck:                                       | strong to very strong |
| Ear - Glaucosity:                                | strong to very strong |
| Plant growth characters                          |                       |
| Coleoptile-anthocyanin                           | absent or very weak   |
| Plant - growth habit:                            | semi-prostrate        |
| Time ear emergence:                              | late                  |
| Flag leaf - Anthocyanin colouration of auricles: |                       |



# AFP 1/2762 KWS ZENTARR

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/2 long to very long medium to strong
- smooth medium to strong (group 2+) medium moderate to strongly curved medium elevated

## strongly curved

red medium to dark

very short to short absent or very thin

strong to very strong strong strong strong

weak to medium intermediate late to very late



# AFP 1/2417 KWS ZYATT

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium lax to medium parallel sided scurs present upper 1/4 long medium to strong
- rough strong (group 3) short to medium slightly curved very narrow to narrow elevated

moderately curved

red dark

very short absent or very thin

medium to strong medium to strong medium to strong strong

weak semi-erect to intermediate very late



# AFP 1/2113 LANCASTER

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

**Grain** Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long weak absent

slightly rough medium - Group 2 medium moderately curved narrow to medium elevated

moderately curved

red dark to very dark

short to medium thin

medium to strong medium weak to medium weak to medium

weak intermed. to semi-prostrate late



# AFP 1/1756 LANGDALE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium parallel sided scurs present upper 1/4 medium medium to strong absent
- rough medium (2) short to medium slightly curved medium elevated

## strongly curved to geniculate

red dark

medium absent or very thin

strong medium to strong medium to strong medium to strong

strong semi-erect late



# AFP 1/1790 **LEAR**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium weak to medium absent

smooth medium - Group 2 short to medium slightly curved narrow elevated

strongly curved

red dark

medium to long thin

strong medium to strong medium to strong medium to strong

weak semi-erect to intermediate late to very late



# AFP 1/2081 **LEEDS**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

white medium to long lax to medium tapering scurs present upper 1/2 long weak to medium

slightly rough medium - Group 2 medium moderately curved narrow elevated

moderately curved

red very dark

short to medium thin

strong strong medium to strong medium

weak to medium intermediate medium



# AFP 1/3061 LG ALDANITI

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short medium to dense tapering awns present whole length very long very small to small absent

smooth strong (group 3) long to very long moderate to strongly curved very narrow to narrow slightly elevated to strongly elevated

reddish very dark

very short to short thick or filled

absent or very weak absent or very weak absent or very weak absent or very weak

strong intermediate medium to late very weak



# AFP 1/3131 LG ARKLE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper 3/4 long large absent

slightly rough strong (group 3) medium to long v.slightly curved narrow slightly elevated

slightly to moderately curved

reddish medium to dark

short to medium thin

strong to very strong strong medium to strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/2809 LG ASTRONOMER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper 1/4 long to very long medium to strong absent

slightly rough medium (group 2) medium to long moderate to strongly curved medium straight to elevated

#### strongly curved

red dark to very dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

weak intermed. to semi-prostrate late absent or very weak



# AFP 1/3125 LG BEOWULF

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper 1/2 long

absent

entire external surface rough strong (group 3) medium moderate to strongly curved narrow slightly elevated

strongly curved

reddish medium to dark

short to medium thin

strong to very strong strong medium to strong

weak intermediate late absent or very weak



# AFP 1/2449 LG BLETCHLEY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/4 long weak to medium

smooth weak to medium (group 1+) medium to long slight to moderately curved narrow elevated

moderately to strongly curved

red medium to dark

very short to short absent or very thin

medium to strong medium medium medium

absent or very weak semi-erect to intermediate late



# AFP 1/2456 LG CASSIDY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium tapering scurs present upper 1/4 short to medium weak to medium
- smooth medium (group 2) medium moderate to strongly curved narrow to medium elevated

## strongly curved

red medium

very short to short absent or very thin

absent or very weak absent or very weak absent or very weak absent or very weak

medium semi-erect to intermediate late



# AFP 1/2629 LG DETROIT

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense tapering scurs present upper 1/2 long medium
- smooth medium (group 2) short to medium slight to moderately curved medium elevated

### moderately curved

red dark

short absent or very thin

strong strong strong strong

weak intermediate late



# AFP 1/2899 LG FARRIER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense tapering scurs present upper 1/4 short to medium weak
- entire external surface rough medium to strong (group 2+) medium strongly curved narrow to medium elevated

strongly curved to geniculate

red dark

short absent or very thin

very strong strong very strong medium to strong

medium intermediate late absent or very weak



# AFP 1/2524 LG GENERATION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/2 long weak to medium absent

slightly rough medium (group 2) medium moderately curved narrow to medium straight to elevated

moderately to strongly curved

red dark to very dark

short to medium absent or very thin

medium weak medium to strong medium to strong

weak to medium intermediate medium to late



# AFP 1/3068 LG GILMORE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit

- white short to medium dense parallel sided scurs present tip only very short to short large to very large absent
- smooth medium to strong (group 2+) very short to short slightly curved narrow to medium slightly elevated

moderately to strongly curved

reddish dark to very dark

short to medium thin

strong to very strong strong strong

strong intermediate



# AFP 1/2731 LG GRADUATE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense tapering scurs present upper 1/4 short to medium very weak to weak
- smooth weak to medium (group 1+) long slight to moderately curved narrow to medium elevated

# moderately curved

red dark to very dark

short to medium absent or very thin

strong to very strong strong strong strong

weak intermediate late to very late



# AFP 1/3129 LG GRENDEL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper 1/2 medium to long

absent

smooth strong (group 3) medium to long moderately curved narrow slightly elevated

strongly curved

reddish dark

short to medium thin

strong medium to strong strong medium

medium to strong intermed. to semi-prostrate late absent or very weak



# AFP 1/2810 LG ILLUMINATE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/4 long to very long weak to medium absent
- slightly rough medium (group 2) long moderate to strongly curved narrow to medium straight to elevated

### strongly curved

red dark to very dark

very short to short absent or very thin

very strong very strong strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/2620 LG INTERSTELLAR

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium to long medium
- rough medium (group 2) medium to long moderately curved narrow elevated

moderately curved

red medium to dark

short to medium absent or very thin

strong strong strong strong

medium intermediate late



# AFP 1/2622 LG JIGSAW

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 3/4 long medium

slightly rough medium (group 2) medium slightly curved narrow to medium elevated

# slightly curved

red dark to very dark

short absent or very thin

strong strong medium to strong

weak to medium intermediate late to very late



# AFP 1/2905

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 medium to long very weak to weak absent
- smooth medium (group 2) long strongly curved very narrow to narrow elev. to strongly elevated

strongly curved

red dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium to strong

weak intermediate late to very late absent or very weak



# AFP 1/2451 LG MOTOWN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short medium tapering scurs present upper 1/4 medium to long weak to medium

slightly rough strong (group 3) short to medium strongly curved narrow elevated

strongly curved

red dark to very dark

very short to short absent or very thin

medium to strong medium medium to strong

absent or very weak semi-erect to intermediate late



# AFP 1/2454 LG NASHVILLE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper 1/4 short to medium medium

slightly rough strong (group 3) medium slightly curved narrow elevated

moderately curved

red dark to very dark

very short to short absent or very thin

absent or very weak absent or very weak absent or very weak absent or very weak

strong semi-erect to intermediate late



# AFP 1/2900 LG PHAROS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white long lax to medium tapering scurs present upper 1/2 long weak absent
- smooth weak to medium (group 1+) medium moderate to strongly curved narrow to medium elevated

### strongly curved

red dark to very dark

short absent or very thin

strong to very strong strong to very strong strong to very strong strong

very weak to weak intermediate late absent or very weak



# AFP 1/2838

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium parallel sided scurs present upper 1/2 long to very long strong absent
- smooth weak (group 1) medium to long moderate to strongly curved narrow to medium straight to elevated

strongly curved

red dark to very dark

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong medium to strong

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/3123 LG REDRUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper 3/4 long

absent

smooth weak to medium (group 1+) medium moderate to strongly curved medium slightly elevated

strongly curved

reddish medium to dark

short thin

strong to very strong strong to very strong strong medium to strong

weak intermed. to semi-prostrate late very weak



# AFP 1/3065 LG REDWALD

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium dense parallel sided scurs present upper 1/4 long to very long large absent

strong (group 3) medium to long moderately curved narrow to medium slightly elevated to strongly elevated

### strongly curved

reddish dark to very dark

medium thin

strong medium to strong strong medium to strong

weak intermediate late absent or very weak



# AFP 1/2631 LG RHYTHM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 medium to long very weak to weak
- smooth weak (group 1) medium moderately curved medium elevated

moderately curved

red medium to dark

short absent or very thin

strong medium to strong medium to strong medium to strong

weak intermediate late



# AFP 1/3122 LG ROCKHOPPER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium tapering awns present whole length very long small to medium absent

entire external surface rough strong (group 3) very long moderate to strongly curved narrow slightly elevated to strongly elevated

moderately to strongly curved

reddish medium to dark

short thin

strong to very strong medium to strong strong to very strong strong

strong intermediate medium to late very weak



# AFP 1/2815 LG SEEKER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/4 medium to long medium to strong absent
- entire external surface rough medium to strong (group 2+) medium strongly curved medium straight to elevated

### strongly curved

red medium

very short to short absent or very thin

very strong very strong strong

very weak to weak intermed. to semi-prostrate late absent or very weak



# AFP 1/2455 LG SUNDANCE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short dense parallel sided scurs present upper 1/4 long to very long medium to strong
- slightly rough strong (group 3) medium slight to moderately curved narrow elevated

# moderately curved

red dark to very dark

short to medium absent or very thin

medium weak medium medium

medium intermediate very late



# AFP 1/2627 LG SABERTOOTH

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present

long medium

rough weak to medium (group 1+) medium moderately curved narrow to medium elevated

# moderately curved

red medium to dark

medium to long absent or very thin

strong strong strong strong

medium semi-erect to intermediate medium to late



# AFP 1/2626 LG SKYSCRAPER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/2 long to very long weak to medium
- slightly rough strong to whole surface medium slight to moderately curved narrow elevated

# slightly curved

red medium to dark

short to medium absent or very thin

strong to very strong strong to very strong strong

absent to weak intermediate medium to late



# AFP 1/2619 LG SPOTLIGHT

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 medium to long medium to strong
- slightly rough weak (group 1) medium slight to moderately curved narrow to medium elevated

# moderately curved

red dark to very dark

short to medium absent or very thin

medium to strong medium to strong medium to strong medium

absent to weak intermediate late



# AFP 1/2814 LG TAPESTRY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 long very weak to weak absent
- entire external surface rough medium to strong (group 2+) medium slight to moderately curved medium elevated

### strongly curved

red dark

short to medium absent or very thin

very strong strong to very strong strong to very strong strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/2901 LG TICKET

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short medium to dense parallel sided scurs present upper 1/4 medium medium to strong absent
- entire external surface rough whole internal surface covered medium to long strongly curved medium straight to elevated

strongly curved to geniculate

red dark

short absent or very thin

strong to very strong strong to very strong medium to strong

very weak to weak intermediate late absent or very weak



# AFP 1/2907 LG TYPHOON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 1/2 long to very long very weak to weak absent
- entire external surface rough medium to strong (group 2+) medium moderately curved narrow to medium elevated

### strongly curved

red dark to very dark

very short absent or very thin

very strong very strong strong to very strong strong to very strong

weak intermediate late to very late absent or very weak



# AFP 1/2836 LG QUASAR

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 1/4 long medium absent
- smooth medium to strong (group 2+) medium to long slight to moderately curved narrow to medium straight to elevated

### moderately curved

red dark to very dark

short to medium absent or very thin

strong to very strong strong to very strong medium

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2909

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles absent or very weak

- white medium to long lax to medium tapering scurs present upper 1/4 medium medium to strong absent
- smooth strong to whole surface short to medium slight to moderately curved narrow to medium elevated

### strongly curved

red dark to very dark

very short absent or very thin

absent or very weak absent or very weak absent or very weak absent or very weak

medium intermediate medium to late



AFP 1/1626 **Lion** 

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 short to medium small to medium absent
- rough medium to strong (group 2+) short to medium slight to moderately curved narrow horizontal to slightly elevated

### slightly curved

reddish dark to very dark

# thin

medium to strong medium to strong medium to strong

strong intermediate early to medium



# AFP 1/2893 LOXTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### **Plant growth characters**

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense tapering scurs present upper 1/4 medium to long weak absent

smooth weak to medium (group 1+) short to medium slight to moderately curved narrow to medium elevated

slightly to moderately curved

red very dark

short absent or very thin

strong to very strong medium to strong strong to very strong strong

medium intermediate medium to late absent or very weak



# AFP 1/2538

# LUSTRE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper 1/4 medium to long weak to medium absent

smooth strong (group 3) short slightly curved narrow straight to elevated

# slightly to moderately curved

white dark to very dark

medium very thick or filled

medium medium medium medium

very weak to weak intermediate medium



# MAGISTER

# CHARACTERS IN DETAIL Ear

| Ear  |                              |
|--|------------------------------|
| Colour:  | white                        |
| Length:  | medium                       |
| Density:                                       | lax to medium                |
| Shape (side profile)                           | tapering                     |
| Awns or scurs - presence:                      | scurs present                |
| Awns or scurs - distribution:                  |                              |
| Awns or scurs - length:                        | short to medium              |
| Apical rachis segment - convex face hairiness: | medium                       |
| Anthers - anthocyanin                          |                              |
| Lower Glume                                    |                              |
| External surface roughness:                    |                              |
| Extent of internal hairs:                      | weak to medium -group 1 to 2 |
| Beak length:                                   | short                        |
| Beak shape (curvature):                        | moderately curved            |
| Shoulder                                       | medium to broad              |
| Shoulder                                       | straight                     |
| Lower Lemma                                    |                              |
| Beak shape:                                    |                              |
| Grain  |                              |
| Colour   | red                          |
| Colouration with phenol:                       | dark                         |
| Straw  |                              |
| Length:  | medium to long               |
| Wall thickness @ 20cms below ear:              | very thin                    |
| Glaucosity                                     |                              |
| Flag leaf - sheath:                            | strong                       |
| Flag leaf - blade (lower side):                | strong                       |
| Culm neck:                                     | strong                       |
| Ear - Glaucosity:                              | medium to strong             |
| Plant growth characters                        |                              |
| Coleoptile-anthocyanin                         | weak                         |
| Plant - growth habit:                          | semi-prostrate               |
| Time ear emergence:                            | medium to late               |
|  |                              |



Flag leaf - Anthocyanin colouration of auricles:

# AFP 1/1917 MARIBOSS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short medium tapering scurs present

short to medium very weak to weak

medium (group 2) medium slight to moderately curved medium straight to elevated

slightly to moderately curved

red medium to dark

medium absent or very thin

medium to strong strong to very strong strong very weak to weak

medium intermed. to semi-prostrate early



# AFP 1/66 MARIS HUNTSMAN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium dense parallel sided scurs present upper 1/4 short to medium weak absent

entire external surface rough weak to medium (group 1+) medium to long slightly curved medium elevated

moderately curved

red medium

long to very long absent or very thin

medium medium medium medium

strong intermediate medium weak



# AFP 1/319 MARIS WIDGEON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium very lax to lax tapering scurs present upper <sup>1</sup>/<sub>4</sub> medium to long medium absent

smooth weak - Group 1 medium v.slightly curved narrow to medium straight

slightly curved

red medium

very long thin

medium medium medium medium

strong intermediate late weak



Crop:

| Breeder's Reference: Sj9726005                   | <b>AFP No:</b> 1/2413                |
|--|--------------------------------------|
| Breeder: Senova Ltd                              | Translated from: Danish              |
| Origin:  | <b>Date:</b> 23 March 2017           |
| Code: MARL                                       |                                      |
| Coleoptile-anthocyanin colouration:              | Weak to medium                       |
| *Plant - growth habit:                           | Semi prostrate                       |
| *Time ear emergence:                             | Late                                 |
| Flag leaf - Anthocyanin colouration of auricles: |                                      |
| Frequency of plants with recurved flag leaves:   | Medium to high                       |
| *Flag leaf - Glaucosity of sheath:               | Strong                               |
| Flag leaf - Glaucosity of leaf blade:            | Strong                               |
| Anthers - anthocyanin colouration:               |                                      |
| Glaucosity of neck:                              | Strong                               |
| Hairiness of uppermost node:                     |                                      |
| *Plant - height:                                 | Medium                               |
| *Straw - wall thickness @ 20cms below ear:       | Absent or very thin                  |
| *Ear - Glaucosity:                               | Strong                               |
| Ear - Supernumerary spikelets - frequency:       |                                      |
| *Ear - Colour:                                   | White                                |
| *Ear - Shape (side profile):                     | Parallel                             |
| Ear - Length:                                    | Short to medium                      |
| *Ear - Density:                                  | Dense to very dense                  |
| *Awns or scurs - presence:                       | Scurs present                        |
| Awns or scurs - distibution:                     |                                      |
| *Scurs at tip of ear - length:                   | Medium                               |
| *Awns at tip of ear - length:                    | Medium                               |
| Lower glume - Beak length:                       | Long                                 |
| Lower glume - Beak shape (curvature):            | Strongly curved                      |
| Lower glume - Beak tip:                          | Long                                 |
| Lower glume - Shoulder width:                    | Medium                               |
| Lower glume - Shoulder type:                     | Elevated                             |
| Lower glume - External surface roughness:        |                                      |
| Lower glume - Extent of internal hairs:          | Strong                               |
| Lower glume - Internal imprint:                  | -                                    |
| Lower lemma - Beak shape:                        | Moderately curved to strongly curved |
| Lower lemma - Beak length-:                      |                                      |
| Lower lemma - Beak swelling:                     |                                      |
| Apical rachis segement - convex face hairiness:  | Medium                               |
| *Grain - colour:                                 | Red                                  |
| Grain - Shape:                                   |                                      |
| Grain - Brush hair length in dorsal view:        |                                      |
| Grain - Colouration with phenol:                 | Light to medium                      |
| *Seasonal type:                                  | Winter                               |
| Extra characters:                                |                                      |
|  |                                      |

\* = Characteristics which should always be included in the description of the variety. 28 March 2017



# AFP 1/2380

# MARSTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 medium medium to strong

smooth medium (group 2) medium strongly curved to geniculate medium elevated

#### strongly curved to geniculate

red light to medium

# very short to short absent or very thin

medium to strong medium to strong medium medium

absent to weak semi-erect to intermediate very late



# Variety Name: Maurizio

# Crop: Winter Wheat

| Breeder's Reference: SZD 6374                    | AFP No:                       |
|--|-------------------------------|
| Breeder: Saatzucht Donau GmbH                    | Translated from: Hungarian    |
| Origin:  | <b>Date:</b> 19 November 2018 |
| Code: IZIO                                       |                               |
| Coleoptile-anthocyanin colouration:              | Abesnt or very weak           |
| *Plant - growth habit:                           | Intermediate                  |
| *Time ear emergence:                             | Early to medium               |
| Flag leaf - Anthocyanin colouration of auricles: |                               |
| Frequency of plants with recurved flag leaves:   | Very low to low.              |
| *Flag leaf - Glaucosity of sheath:               | Strong                        |
| Flag leaf - Glaucosity of leaf blade:            | Medium to strong              |
| Anthers - anthocyanin colouration:               |                               |
| Glaucosity of neck:                              | Very strong to strong         |
| Hairiness of uppermost node:                     |                               |
| *Plant - height:                                 |                               |
| *Straw - wall thickness @ 20cms below ear:       | Thin                          |
| *Ear - Glaucosity:                               | Strong                        |
| Ear - Supernumerary spikelets - frequency:       |                               |
| *Ear - Colour:                                   | White                         |
| *Ear - Shape (side profile):                     | Parallel                      |
| Ear - Length:                                    | Short to medium               |
| *Ear - Density:                                  | Lax to medium                 |
| *Awns or scurs - presence:                       | Awns present                  |
| Awns or scurs - distibution:                     |                               |
| *Scurs at tip of ear - length:                   | Long                          |
| *Awns at tip of ear - length:                    |                               |
| Lower glume - Beak length:                       | Short                         |
| Lower glume - Beak shape (curvature):            | Moderately curved             |
| Lower glume - Beak tip:                          |                               |
| Lower glume - Shoulder width:                    | Medium                        |
| Lower glume - Shoulder type:                     | Sloping to sightly sloping    |
| Lower glume - External surface roughness:        |                               |
| Lower glume - Extent of internal hairs:          | Weak                          |
| Lower glume - Internal imprint:                  |                               |
| Lower lemma - Beak shape:                        |                               |
| Lower lemma - Beak length-:                      |                               |
| Lower lemma - Beak swelling:                     |                               |
| Apical rachis segement - convex face hairiness:  |                               |
| *Grain - colour:                                 | Red                           |
| Grain - Shape:                                   |                               |
| Grain - Brush hair length in dorsal view:        |                               |
| Grain - Colouration with phenol:                 | Medium to dark                |
| *Seasonal type:                                  | Winter                        |
| Extra characters:                                |                               |
|  |                               |

\* = Characteristics which should always be included in the description of the variety.



19 March 2019

# AFP 1/1668 MAXWELL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided awns present whole length very long weak absent

smooth medium (group 2) very long moderate to strongly curved narrow strongly elevated with 2nd pt. present

moderately to strongly curved

red medium

short to medium very thick or filled

medium weak to medium medium very weak to weak

medium semi-erect to intermediate very early



# AFP 1/2929 MAYFLOWER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense tapering scurs present upper 1/2 medium to long weak to medium absent
- smooth strong to whole surface short to medium moderate to strongly curved narrow to medium straight to elevated

moderately curved

red medium to dark

very short to short absent or very thin

strong to very strong weak to medium strong medium

strong to very strong intermediate medium to late absent or very weak



# AFP 1/2797

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/2 long to very long weak to medium absent
- slightly rough weak to medium (group 1+) long moderate to strongly curved medium straight to elevated

#### strongly curved

red dark

short to medium absent or very thin

very strong very strong strong to very strong strong

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/3072 MINDFUL

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 short to medium small to medium absent
- rough weak to medium (group 1+) short strongly curved medium horizontal to slightly elevated

strongly curved to geniculate

reddish medium to dark

short to medium thin

strong to very strong strong to very strong strong

strong intermed. to semi-prostrate late absent or very weak



# AFP 1/2464 MONROE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper 1/4 long medium

smooth medium (group 2) medium slightly curved narrow elevated

slightly curved

red dark to very dark

very short absent or very thin

medium to strong medium medium to strong

absent to weak intermediate late



# AFP 1/2022 MONTEREY

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long to very long weak

smooth medium - Group 2 medium slight to moderately curved medium elevated

### moderately to strongly curved

red dark

short to medium thin

strong medium strong medium to strong

weak semi-erect to intermediate medium



# Variety Name: MORTIMER

Crop: Winter Wheat

| Breeder's Reference: SC 2405                     | AFP No:     |                   |
|--|-------------|-------------------|
| Breeder: Secobra                                 | Translated  | from:             |
| Origin:  | Date:       | 15 May 2018       |
| Code: MORT                                       |             |                   |
| Coleoptile-anthocyanin colouration:              |             | very weak         |
| *Plant - growth habit:                           | Semi pros   | strate            |
| *Time ear emergence:                             | Medium      |                   |
| Flag leaf - Anthocyanin colouration of auricles: |             |                   |
| Frequency of plants with recurved flag leaves:   | Very low    | ot low            |
| *Flag leaf - Glaucosity of sheath:               | Strong      |                   |
| Flag leaf - Glaucosity of leaf blade:            | Strong to   | very strong       |
| Anthers - anthocyanin colouration:               |             |                   |
| Glaucosity of neck:                              | Strong      |                   |
| Hairiness of uppermost node:                     |             |                   |
| *Plant - height:                                 | Short       |                   |
| *Straw - wall thickness @ 20cms below ear:       | Absent or   |                   |
| *Ear - Glaucosity:                               | Medium t    | o strong          |
| Ear - Supernumerary spikelets - frequency:       |             |                   |
| *Ear - Colour:                                   | White       |                   |
| *Ear - Shape (side profile):                     | Parallel    |                   |
| Ear - Length:                                    | Long        |                   |
| *Ear - Density:                                  | Lax to me   | edium             |
| *Awns or scurs - presence:                       | Present     |                   |
| Awns or scurs - distibution:                     |             |                   |
| *Scurs at tip of ear - length:                   |             |                   |
| *Awns at tip of ear - length:                    | Short to n  | nedium            |
| Lower glume - Beak length:                       | Short       |                   |
| Lower glume - Beak shape (curvature):            | Straight to | o slightly curved |
| Lower glume - Beak tip:                          |             |                   |
| Lower glume - Shoulder width:                    | Narrow to   | o medium          |
| Lower glume - Shoulder type:                     |             |                   |
| Lower glume - External surface roughness:        |             |                   |
| Lower glume - Extent of internal hairs:          | Very weat   | k to weak         |
| Lower glume - Internal imprint:                  |             |                   |
| Lower lemma - Beak shape:                        |             |                   |
| Lower lemma - Beak length-:                      |             |                   |
| Lower lemma - Beak swelling:                     |             |                   |
| Apical rachis segement - convex face hairiness:  | Weak to r   | nedium            |
| *Grain - colour:                                 | Red         |                   |
| Grain - Shape:                                   |             |                   |
| Grain - Brush hair length in dorsal view:        |             |                   |
| Grain - Colouration with phenol:                 | Medium      |                   |
| *Seasonal type:                                  | Winter      |                   |
| Extra characters:                                |             |                   |
|  |             |                   |

\* = Characteristics which should always be included in the description of the variety. 16 May 2018



# AFP 1/2345 MOSAIC

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium tapering scurs present upper 3/4 medium to long weak to medium
- smooth strong (3) medium moderately curved narrow elevated

## moderately curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium

medium to strong semi-erect to intermediate late to very late



# Variety Name: Moschus

| Breeder's Reference: STRU 114017                 | AFP No:                       |  |
|--|-------------------------------|--|
| Breeder: Dr HermannStrube                        | Translated from: German       |  |
| Origin:  | <b>Date:</b> 19 November 2018 |  |
| Code: MOSC                                       |                               |  |
| Coleoptile-anthocyanin colouration:              | Strong to very strong         |  |
| *Plant - growth habit:                           | Intermediate                  |  |
| *Time ear emergence:                             | Medium to late                |  |
| Flag leaf - Anthocyanin colouration of auricles: |                               |  |
| Frequency of plants with recurved flag leaves:   | Low to medium                 |  |
| *Flag leaf - Glaucosity of sheath:               | Strong to very strong         |  |
| Flag leaf - Glaucosity of leaf blade:            | Strong to very strong         |  |
| Anthers - anthocyanin colouration:               |                               |  |
| Glaucosity of neck:                              | Strong to very strong         |  |
| Hairiness of uppermost node:                     |                               |  |
| *Plant - height:                                 | Medium                        |  |
| *Straw - wall thickness @ 20cms below ear:       | Absent or very thin           |  |
| *Ear - Glaucosity:                               | Strong                        |  |
| Ear - Supernumerary spikelets - frequency:       |                               |  |
| *Ear - Colour:                                   |                               |  |
| *Ear - Shape (side profile):                     | Tapering                      |  |
| Ear - Length:                                    | Medium to long                |  |
| *Ear - Density:                                  | Lax to medium                 |  |
| *Awns or scurs - presence:                       | Scurs present                 |  |
| Awns or scurs - distibution:                     |                               |  |
| *Scurs at tip of ear - length:                   | Very short to short           |  |
| *Awns at tip of ear - length:                    |                               |  |
| Lower glume - Beak length:                       | Short                         |  |
| Lower glume - Beak shape (curvature):            | Slightly to moderately curved |  |
| Lower glume - Beak tip:                          |                               |  |
| Lower glume - Shoulder width:                    | Narrow to medium              |  |
| Lower glume - Shoulder type:                     | Straight                      |  |
| Lower glume - External surface roughness:        |                               |  |
| Lower glume - Extent of internal hairs:          | Weak                          |  |
| Lower glume - Internal imprint:                  |                               |  |
| Lower lemma - Beak shape:                        |                               |  |
| Lower lemma - Beak length-:                      |                               |  |
| Lower lemma - Beak swelling:                     |                               |  |
| Apical rachis segement - convex face hairiness:  | Medium to strong              |  |
| *Grain - colour:                                 | Red                           |  |
| Grain - Shape:                                   |                               |  |
| Grain - Brush hair length in dorsal view:        |                               |  |
| Grain - Colouration with phenol:                 | Medium                        |  |
| *Seasonal type:                                  | Winter                        |  |
| Extra characters:                                |                               |  |
|  |                               |  |

\* = Characteristics which should always be included in the description of the variety. 19 March 2019



# AFP 1/2385 MOULTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long medium tapering scurs present upper 1/4 medium strong

slightly rough medium (group 2) short to medium strongly curved medium elevated

moderately to strongly curved

red dark to very dark

short absent or very thin

strong strong strong strong

weak intermediate late to very late



# AFP 1/2716 **MV FREDERICIA**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering awns present whole length very long medium to strong

smooth medium to strong (group 2+) long to very long moderate to strongly curved narrow elevated

moderately to strongly curved

red dark to very dark

medium absent or very thin

strong strong strong medium to strong

weak semi-erect to intermediate medium to late



# AFP 1/2062 MYRIAD

# **CHARACTERS IN DETAIL**

#### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long to very long weak to medium

> smooth medium - Group 2 medium strongly curved medium elevated

strongly curved

red very dark

short to medium thin

strong strong medium to strong

medium semi-erect to intermediate medium to late



# AFP 1/2468 MYSTIC CS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/2 long very weak to weak absent
- smooth medium (group 2) medium slight to moderately curved very narrow to narrow elevated

# slightly curved

red very dark

short absent or very thin

medium medium medium medium

absent to weak intermediate medium to late



# AFP 1/1192 NELSON

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax tapering scurs present upper ½ medium weak absent

smooth weak to medium - Group 1+ short to medium slightly curved narrow to medium straight

### slightly curved

red medium

short thin

### strong

strong strong to very strong

strong semi-prostrate late absent or very weak



# AFP 1/1658 OAKLEY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> medium to long weak absent

smooth medium to strong - Group 2+ medium to long moderate to strongly curved medium elevated

### moderately curved

red very dark

medium thin

strong medium strong strong

medium to strong intermediate medium



# OLIVIN

# **CHARACTERS IN DETAIL**

Ear white Colour: Length: medium Density: medium parallel sided Shape (side profile) Awns or scurs - presence: scurs present Awns or scurs - distribution: Awns or scurs - length: short Apical rachis segment - convex face hairiness: medium to strong Anthers - anthocyanin Lower Glume External surface roughness: Extent of internal hairs: medium - group 2 Beak length: very short to short Beak shape (curvature): strongly curved Shoulder narrow to medium Shoulder slightly sloping to straight Lower Lemma Beak shape: strongly curved to geniculate Grain Colour red Colouration with phenol: medium to dark Straw Length: medium to long Wall thickness @ 20cms below ear: thin Glaucosity Flag leaf - sheath: strong medium Flag leaf - blade (lower side): Culm neck: medium Ear - Glaucosity: medium to strong Plant growth characters Coleoptile-anthocyanin strong to very strong Plant - growth habit: intermediate to semi-prostrate Time ear emergence: late Flag leaf - Anthocyanin colouration of auricles: absent or very weak



# AFP 1/2276 OLYMPUS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 3/4 long to very long strong
- smooth medium (2) medium moderately curved narrow elevated

moderately curved

red dark

short to medium absent or very thin

medium to strong medium medium medium

absent to weak semi-erect to intermediate late to very late



| Breeder's Reference: PBIS 99/70  | AFP No:                       |     |
|--|-------------------------------|-----|
| Breeder: Erhardt Eger  | Translated from: German       |     |
| Origin:  | <b>Date:</b> 23 November 2001 |     |
| Code: OPUS   |                               |     |
| Coleoptile-anthocyanin colouration:  | absent or very weak           |     |
| *Plant - growth habit:   | intermediate to semi-prostra  | ate |
| *Time ear emergence:   | medium to late                |     |
| Flag leaf - Anthocyanin colouration of auricles:   | absent or very weak           |     |
| Frequency of plants with recurved flag leaves:   | very low to low               |     |
| *Flag leaf - Glaucosity of sheath:   | strong                        |     |
| Flag leaf - Glaucosity of leaf blade:  | medium to strong              |     |
| Anthers - anthocyanin colouration:   |                               |     |
| Glaucosity of neck:  | strong                        |     |
| Hairiness of uppermost node:   |                               |     |
| *Plant - height:   | medium                        |     |
| *Straw - wall thickness @ 20cms below ear:   | very thin                     |     |
| *Ear - Glaucosity:   | medium                        |     |
| Ear - Supernumerary spikelets - frequency:   |                               |     |
| *Ear - Colour:   | white                         |     |
| *Ear - Shape (side profile):   | tapering                      |     |
| Ear - Length:  | medium                        |     |
| *Ear - Density:  | medium                        |     |
| *Awns or scurs - presence:   | scurs present                 |     |
| Awns or scurs - distibution:   |                               |     |
| *Scurs at tip of ear - length:   | short                         |     |
| *Awns at tip of ear - length:  |                               |     |
| Lower glume - Beak length:   |                               |     |
| Lower glume - Beak shape (curvature):  |                               |     |
| Lower glume - Beak tip:  |                               |     |
| Lower glume - Shoulder width:  |                               |     |
| Lower glume - Shoulder type:   |                               |     |
| Lower glume - External surface roughness:  |                               |     |
| Lower glume - Extent of internal hairs:  |                               |     |
| Lower glume - Internal imprint:  |                               |     |
| Lower lemma - Beak shape:  |                               |     |
| Lower lemma - Beak length-:  |                               |     |
| Lower lemma - Beak swelling:   |                               |     |
| Apical rachis segement - convex face hairiness:  |                               |     |
| *Grain - colour:   |                               |     |
| Grain - Shape:   |                               |     |
| Grain - Brush hair length in dorsal view:  |                               |     |
| Grain - Colouration with phenol:   |                               |     |
| *Seasonal type:  | winter                        |     |
| Extra characters:  |                               |     |
| * = Characteristics which should always be included in the description of the variety. 06 May 2020 |                               |     |

# AFP 1/1714 **ORATOR**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/4 medium medium absent

smooth weak to medium (1+) medium to long slight to moderately curved narrow straight to elevated

moderately to strongly curved

red dark

very short to short absent or very thin

strong weak to medium medium to strong weak to medium

medium semi-prostrate medium to late



AFP 1/1933 **ORBIT** 

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white long medium parallel sided scurs present upper 1/4 short to medium absent or very weak absent
- smooth medium (2) medium moderately curved medium elevated

moderately curved

red dark to very dark

short absent or very thin

strong strong strong to very strong

strong semi-erect to intermediate medium to late



# AFP 1/2536 OSMIUM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short medium parallel sided scurs present upper 1/2 long to very long weak absent
- rough weak (group 1) short v.slightly curved medium straight to elevated

slightly curved

red medium to dark

short absent or very thin

medium to strong strong medium to strong medium

weak to medium semi-erect to intermediate medium



# AFP 1/3005 OXFORD

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper 1/4 long to very long

absent

smooth strong (group 3) medium moderately curved narrow to medium slightly elevated

strongly curved

reddish dark

very short to short thin

strong medium to strong strong medium to strong

weak to medium semi-prostrate late to very late absent or very weak



# AFP 1/2157 PANACEA

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long medium absent

smooth medium - Group 2 medium slight to moderately curved narrow elevated

#### moderately curved

red very dark

short to medium thin

medium to strong medium to strong medium medium

weak intermed. to semi-prostrate late



# AFP 1/1801 PANORAMA

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium lax to medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> short to medium weak to medium absent
- smooth strong - Group 3 short to medium slightly curved narrow to medium elevated

#### moderately curved

red very dark

medium thin

medium to strong weak to medium medium weak to medium

strong semi-erect to intermediate late



# AFP 1/2158 PHILOSOPHER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long weak absent

smooth weak to medium - Group 1+ medium slight to moderately curved narrow straight to elevated

#### strongly curved

red very dark

short thin

medium to strong medium medium medium

medium intermed. to semi-prostrate medium to late



# **PIRENEO**

# **CHARACTERS IN DETAIL**

| Ear  |                   |
|--|-------------------|
| Colour:  | white             |
| Length:  | medium            |
| Density:                                       | medium to dense   |
| Shape (side profile)                           | tapering          |
| Awns or scurs - presence:                      | awns present      |
| Awns or scurs - distribution:                  |                   |
| Awns or scurs - length:                        | long              |
| Apical rachis segment - convex face hairiness: | medium            |
| Anthers - anthocyanin                          |                   |
| Lower Glume                                    |                   |
| External surface roughness:                    |                   |
| Extent of internal hairs:                      | medium - group 2  |
| Beak length:                                   | long to very long |
| Beak shape (curvature):                        | slightly curved   |
| Shoulder                                       | narrow            |
| Shoulder                                       | straight          |
| Lower Lemma                                    |                   |
| Beak shape:                                    |                   |
| Grain  |                   |
| Colour   | red               |
| Colouration with phenol:                       | medium            |
| Straw  |                   |
| Length:  | medium            |
| Wall thickness @ 20cms below ear:              | thin              |
| Glaucosity                                     |                   |
| Flag leaf - sheath:                            | weak              |
| Flag leaf - blade (lower side):                | very weak to weak |
| Culm neck:                                     | weak to medium    |
| Ear - Glaucosity:                              | weak              |
| Plant growth characters                        |                   |
| Coleoptile-anthocyanin                         |                   |
| Plant - growth habit:                          | intermediate      |
| Time ear emergence:                            | early to late     |

Time ear emergence: Flag leaf - Anthocyanin colouration of auricles:



# Variety Name: **PONTICUS**

Breeder's Reference: STRU 114010

Breeder: Dr Hermann Strube

**Origin:** 

Code: PONT

**Coleoptile-anthocyanin colouration:** \*Plant - growth habit: \*Time ear emergence: Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: \*Flag leaf - Glaucosity of sheath: Flag leaf - Glaucosity of leaf blade: Anthers - anthocyanin colouration: **Glaucosity of neck:** Hairiness of uppermost node: \*Plant - height: \*Straw - wall thickness @ 20cms below ear: \*Ear - Glaucosity: Ear - Supernumerary spikelets - frequency: \*Ear - Colour: \*Ear - Shape (side profile): Ear - Length: \*Ear - Density: \*Awns or scurs - presence: Awns or scurs - distibution: \*Scurs at tip of ear - length: \*Awns at tip of ear - length: Lower glume - Beak length: Lower glume - Beak shape (curvature): Lower glume - Beak tip: Lower glume - Shoulder width: Lower glume - Shoulder type: Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: \*Grain - colour: Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: \*Seasonal type: **Extra characters:** 

AFP No: Translated from: German Date: 14 November 2017 Strong Intermediate to semi-prostrate Medium to late Very low to low Very strong Very strong Very strong Strong to medium Absent or very thin Strong White Tapering Medium to long Lax Scurs present Very short to short Very short to short Narrow to medium Slightly sloping Weak Medium Red

Medium Winter

\* = Characteristics which should always be included in the description of the variety.

28 March 2018



Variety Name: PRAKTIK

Crop:

| Breeder's Reference:                             | <b>AFP No:</b> 1/              |
|--|--------------------------------|
| Breeder: RAGT                                    | Translated from:               |
| Origin: GERMANY                                  | <b>Date:</b> 22 October 2012   |
| Code: PRAK                                       |                                |
| Coleoptile-anthocyanin colouration:              | ABSENT OR VERY WEAK            |
| *Plant - growth habit:                           | INTERMEDIATE TO SEMI-PROSTRATE |
| *Time ear emergence:                             | MEDIUM TO LATE                 |
| Flag leaf - Anthocyanin colouration of auricles: |                                |
| Frequency of plants with recurved flag leaves:   | ABSENT OR VERY LOW             |
| *Flag leaf - Glaucosity of sheath:               | MEDIUM                         |
| Flag leaf - Glaucosity of leaf blade:            | MEDIUM                         |
| Anthers - anthocyanin colouration:               |                                |
| Glaucosity of neck:                              | MEDIUM TO STRONG               |
| Hairiness of uppermost node:                     |                                |
| *Plant - height:                                 | SHORT                          |
| *Straw - wall thickness @ 20cms below ear:       | very thin                      |
| *Ear - Glaucosity:                               | MEDIUM                         |
| Ear - Supernumerary spikelets - frequency:       |                                |
| *Ear - Colour:                                   | WHITE                          |
| *Ear - Shape (side profile):                     | TAPERING                       |
| Ear - Length:                                    | SHORT TO MEDIUM                |
| *Ear - Density:                                  | MEDIUM                         |
| *Awns or scurs - presence:                       | SCURS PRESENT                  |
| Awns or scurs - distibution:                     |                                |
| *Scurs at tip of ear - length:                   | VERY SHORT TO SHORT            |
| *Awns at tip of ear - length:                    |                                |
| Lower glume - Beak length:                       | VERY SHORT TO SHORT            |
| Lower glume - Beak shape (curvature):            | STRAIGHT                       |
| Lower glume - Beak tip:                          | SLIGHTLY CURVED                |
| Lower glume - Shoulder width:                    | NARROW TO MEDIUM               |
| Lower glume - Shoulder type:                     |                                |
| Lower glume - External surface roughness:        |                                |
| Lower glume - Extent of internal hairs:          | MEDIUM                         |
| Lower glume - Internal imprint:                  |                                |
| Lower lemma - Beak shape:                        |                                |
| Lower lemma - Beak length-:                      |                                |
| Lower lemma - Beak swelling:                     |                                |
| Apical rachis segement - convex face hairiness:  | MEDIUM                         |
| *Grain - colour:                                 | RED                            |
| Grain - Shape:                                   |                                |
| Grain - Brush hair length in dorsal view:        |                                |
| Grain - Colouration with phenol:                 | DARK                           |
| *Seasonal type:                                  | WINTER TYPE                    |
| Extra characters:                                | STRAW:PILTH IN CROSS SECTION - |
|  | VERY THIN                      |
|  |                                |

\* = Characteristics which should always be included in the description of the variety.

30 March 2015



AFP 1/2033

QI

# **CHARACTERS IN DETAIL**

#### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium absent or very weak

smooth medium to strong - Group 2+ medium slightly curved narrow elevated

slightly to moderately curved

red dark

short to medium medium

strong strong medium to strong

weak to medium semi-erect medium



# **RA3W 08**

# **CHARACTERS IN DETAIL**

Ear Colour: Length: Density: Shape (side profile) Awns or scurs - presence: Awns or scurs - distribution: Awns or scurs - length: Apical rachis segment - convex face hairiness: Anthers - anthocyanin Lower Glume External surface roughness: Extent of internal hairs: Beak length: Beak shape (curvature): Shoulder Shoulder Lower Lemma Beak shape: Grain Colour Colouration with phenol: Straw Length: Wall thickness @ 20cms below ear: Glaucosity Flag leaf - sheath: Flag leaf - blade (lower side): Culm neck: Ear - Glaucosity: **Plant growth characters** Coleoptile-anthocyanin Plant - growth habit: Time ear emergence:

Flag leaf - Anthocyanin colouration of auricles:

white short to medium medium to dense tapering scurs present

medium to long weak to medium

medium medium - group 2 medium moderately curved broad elevated

#### moderately curved to strongly curved

red medium to dark

short to medium thin

strong to very strong medium to strong

weak medium

medium intermediate medium



# AFP 1/2328 RAMSAY

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 1/2 medium to long weak to medium
- smooth weak to medium (1+) short slightly curved narrow to medium elevated

moderately to strongly curved

red dark to very dark

very short to short absent or very thin

strong medium to strong medium to strong medium to strong

weak to medium semi-erect to intermediate late



# RAPSODIA

# **CHARACTERS IN DETAIL**

Ear Colour: white short to medium Length: Density: medium Shape (side profile) tapering Awns or scurs - presence: scurs present Awns or scurs - distribution: Awns or scurs - length: short Apical rachis segment - convex face hairiness: weak to medium Anthers - anthocyanin Lower Glume External surface roughness: smooth Extent of internal hairs: medium to strong - group 2 to 3 Beak length: short Beak shape (curvature): moderately curved Shoulder medium Shoulder straight Lower Lemma Beak shape: slightly curved Grain Colour red Colouration with phenol: medium Straw Length: short Wall thickness @ 20cms below ear: very thin to thin Glaucosity Flag leaf - sheath: strong to very strong Flag leaf - blade (lower side): medium to strong Culm neck: medium to strong Ear - Glaucosity: medium to strong Plant growth characters Coleoptile-anthocyanin strong Plant - growth habit: semi-prostrate to prostrate Time ear emergence: medium Flag leaf - Anthocyanin colouration of auricles: absent or very weak



# AFP 1/1994 RAZZANO

# **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present

very short weak to medium

medium to strong - Group 2+ short v.slightly curved narrow straight to elevated

red medium to dark

short thin

strong strong medium to strong medium to strong

strong intermed. to semi-prostrate medium to late



# AFP 1/2229 **REFLECTION**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 3/4 medium absent to weak absent
- smooth strong medium moderately curved narrow to medium elevated

moderately curved

red medium

very short to short absent or very thin

strong medium to strong medium to strong medium to strong

absent to weak intermediate medium to late



# AFP 1/1988 **RELAY**

# **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns or scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> long strong

smooth medium - Group 2 medium slightly curved narrow elevated

slightly curved

red dark

short thin

strong to very strong strong to very strong strong

strong semi-erect to intermediate medium to late



# AFP 1/2059 **REVELATION**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### **Grain** Colour

Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> long medium to strong
- slightly rough medium - Group 2 medium moderately curved medium elevated

moderately curved

red very dark

short to medium thin

strong to very strong strong medium to strong

weak semi-erect to intermediate medium to late



# AFP 1/2266 RGT ADVENTURE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium parallel sided scurs present upper 1/2 medium to long strong absent
- smooth medium (2) short to medium moderately curved medium elevated

strongly curved

red medium

very short to short absent or very thin

strong medium to strong medium to strong strong

weak to medium semi-erect to intermediate late



# AFP 1/2842 **RGT ANELLE**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- coloured short to medium dense parallel sided scurs present upper 1/4 very short to short medium to strong absent
- smooth strong to whole surface medium moderately curved narrow elevated

#### strongly curved

red dark

short absent or very thin

strong to very strong medium to strong strong to very strong absent or very weak

medium to strong intermediate medium to late absent or very weak



# AFP 1/2919 RGT BAIRSTOW

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/4 medium to long very strong absent

slightly rough medium to strong (group 2+) medium to long moderate to strongly curved medium straight to elevated

strongly curved to geniculate

red dark to very dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

very weak to weak intermediate medium to late absent or very weak



# AFP 1/2699 RGT BLOSSOM

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/2 medium to long weak to medium
- smooth medium to strong (group 2+) short to medium moderately curved narrow to medium elevated

moderately curved

red medium

short to medium absent or very thin

strong to very strong medium to strong medium to strong medium to strong

medium to strong intermediate late



# AFP 1/2591 **RGT BOWEN**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper 1/4 long weak

smooth medium (group 2) short to medium slight to moderately curved medium elevated

slightly to moderately curved

red very dark

short absent or very thin

strong medium to strong medium to strong medium to strong

strong intermediate late



# AFP 1/2913 **RGT COOK**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided awns present whole length very long strong to very strong absent

entire external surface rough strong to whole surface long to very long strongly curved very narrow to narrow elevated

#### strongly curved

red dark

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong strong

medium to strong intermediate medium to late absent or very weak



# AFP 1/2188 RGT CONVERSION

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/2 long to very long weak absent

smooth medium long strongly curved narrow elevated

strongly curved

red dark

short absent or very thin

medium to strong medium medium weak to medium

absent to weak intermediate late



# AFP 1/3010 RGT DALLAGLIO

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper 1/4 medium large absent

slightly rough medium to strong (group 2+) medium strongly curved narrow to medium slightly elevated

strongly curved to geniculate

reddish medium to dark

very short to short thin

strong to very strong strong to very strong strong

very weak to weak semi-prostrate late to very late absent or very weak



# AFP 1/3012 RGT DOMINICI

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 medium large absent

entire external surface rough medium (group 2) medium strongly curved medium to broad slightly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong medium to strong strong medium

strong intermed. to semi-prostrate late absent or very weak



# AFP 1/2845 **RGT DRAX**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense parallel sided scurs present upper 1/4 medium to long absent or very weak absent
- smooth medium (group 2) medium slightly curved narrow to medium straight to elevated

moderately curved

red medium to dark

very short to short medium

strong to very strong strong to very strong strong to very strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/2911 RGT FLINTOFF

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided awns present whole length very long medium to strong absent

entire external surface rough whole internal surface covered very long moderate to strongly curved very narrow to narrow elevated

#### strongly curved

red dark

short absent or very thin

strong to very strong strong to very strong strong

medium intermediate medium to late absent or very weak



# AFP 1/2850 RGT GALACTUS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/4 medium to long medium to strong absent
- smooth strong to whole surface medium moderately curved narrow to medium straight to elevated

moderately to strongly curved

red very dark

short absent or very thin

strong to very strong strong strong

weak intermed. to semi-prostrate late to very late absent or very weak



# Variety Name: RGT GRADIENT

Crop: WW

| Breeder's Reference: RW41394                     | AFP No:                 |               |  |
|--|-------------------------|---------------|--|
| Breeder: R2n sas                                 | Translated from: Danish |               |  |
| <b>Origin:</b> Trident + Gravitas                | Date:                   | 22 March 2016 |  |
| Code: RGTG                                       |                         |               |  |
| Coleoptile-anthocyanin colouration:              | Very weak to weak       |               |  |
| *Plant - growth habit:                           | Prostrate               |               |  |
| *Time ear emergence:                             | Medium                  |               |  |
| Flag leaf - Anthocyanin colouration of auricles: |                         |               |  |
| Frequency of plants with recurved flag leaves:   | Low to medium           |               |  |
| *Flag leaf - Glaucosity of sheath:               | Strong                  |               |  |
| Flag leaf - Glaucosity of leaf blade:            | Medium to strong        |               |  |
| Anthers - anthocyanin colouration:               |                         |               |  |
| Glaucosity of neck:                              | Strong                  |               |  |
| Hairiness of uppermost node:                     |                         |               |  |
| *Plant - height:                                 | Short to medium         |               |  |
| *Straw - wall thickness @ 20cms below ear:       | Absent or Very thin     |               |  |
| *Ear - Glaucosity:                               | Medium to strong        |               |  |
| Ear - Supernumerary spikelets - frequency:       |                         |               |  |
| *Ear - Colour:                                   | White                   |               |  |
| *Ear - Shape (side profile):                     | Tapering                |               |  |
| Ear - Length:                                    | Short to medium         |               |  |
| *Ear - Density:                                  | Medium                  |               |  |
| *Awns or scurs - presence:                       | Present                 |               |  |
| Awns or scurs - distibution:                     |                         |               |  |
| *Scurs at tip of ear - length:                   | Long                    |               |  |
| *Awns at tip of ear - length:                    | -                       |               |  |
| Lower glume - Beak length:                       | Medium to long          |               |  |
| Lower glume - Beak shape (curvature):            | Slightly curved         |               |  |
| Lower glume - Beak tip:                          | C                       | -             |  |
| Lower glume - Shoulder width:                    | Mediu                   | Medium        |  |
| Lower glume - Shoulder type:                     | Elevated                |               |  |
| Lower glume - External surface roughness:        |                         |               |  |
| Lower glume - Extent of internal hairs:          | Medium                  |               |  |
| Lower glume - Internal imprint:                  |                         |               |  |
| Lower lemma - Beak shape:                        | Moderately curved       |               |  |
| Lower lemma - Beak length-:                      |                         | 5             |  |
| Lower lemma - Beak swelling:                     |                         |               |  |
| Apical rachis segement - convex face hairiness:  | Weak to medium          |               |  |
| *Grain - colour:                                 | Red                     |               |  |
| Grain - Shape:                                   |                         |               |  |
| Grain - Brush hair length in dorsal view:        |                         |               |  |
| Grain - Colouration with phenol:                 | Dark                    |               |  |
| *Seasonal type:                                  | Winter                  |               |  |
| Extra characters:                                |                         | -             |  |
|  |                         |               |  |

\* = Characteristics which should always be included in the description of the variety. 28 March 2018



# AFP 1/2517 RGT GRAVITY

### **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium tapering scurs present upper 1/2 long weak to medium absent
- smooth medium (group 2) medium slight to moderately curved medium elevated

#### moderately curved

red dark

short to medium absent or very thin

medium medium to strong medium to strong

weak intermed. to semi-prostrate medium to late



#### AFP 1/3090

# **RGT GROUSE**

### **CHARACTERS IN DETAIL**

#### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/2 long large absent

smooth medium (group 2) medium to long moderate to strongly curved narrow to medium slightly elevated

strongly curved

reddish medium to dark

short to medium thin

strong to very strong strong to very strong strong medium

weak to medium semi-prostrate late absent or very weak



#### AFP 1/3088

# **RGT HIGHGROVE**

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering awns present whole length very long very small to small absent

smooth strong (group 3) very long moderate to strongly curved very narrow to narrow slightly elevated to strongly elevated

#### moderately to strongly curved

reddish medium

medium thin

strong strong strong strong

medium to strong semi-prostrate late absent or very weak



# AFP 1/3015 **RGT HOWLEY**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium to dense parallel sided scurs present upper 1/2 medium to long large to very large absent
- slightly rough medium to strong (group 2+) medium to long moderately curved narrow to medium slightly elevated to strongly elevated

### moderately curved

reddish medium to dark

short thin

strong medium to strong strong medium to strong

weak to medium semi-prostrate late to very late absent or very weak



# AFP 1/2265 RGT ILLUSTRIOUS

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/2 medium strong absent
- rough medium to strong (2+) medium slight to moderately curved narrow to medium elevated

moderately to strongly curved

red dark

very short to short absent or very thin

strong medium to strong medium to strong medium

medium intermed. to semi-prostrate late to very late



# AFP 1/2368 RGT KNIGHTSBRIDGE

# **CHARACTERS IN DETAIL**

- Ear
  - Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

# Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium to long weak to medium
- smooth medium (group 2) medium moderately curved medium elevated

### moderately to strongly curved

red dark

very short to short absent or very thin

medium to strong weak medium medium

medium intermediate very late



# AFP 1/2708 **RGT KOI**

# **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

# Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/4 medium to long strong absent

slightly rough medium to strong (group 2+) medium strongly curved narrow slightly sloping

moderately curved

red dark

short to medium absent or very thin

strong to very strong strong to very strong strong medium

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2704 RGT LANTERN

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense tapering scurs present upper 1/2 long to very long medium
- smooth weak to medium (group 1+) medium slight to moderately curved narrow elevated

slightly to moderately curved

red dark

short absent or very thin

strong strong strong strong

medium intermed. to semi-prostrate late to very late



# AFP 1/2271 RGT MARLBOROUGH

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper 1/2 long medium

smooth weak to medium (1+) medium to long moderately curved narrow to medium straight to elevated

moderately to strongly curved

red medium

short absent or very thin

medium to strong medium to strong medium to strong medium to strong

medium intermediate late to very late



#### AFP 1/3092

# **RGT MOGUL**

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/2 long small to medium absent

smooth medium (group 2) medium to long moderate to strongly curved very narrow to narrow slightly elevated

moderately to strongly curved

reddish medium to dark

short thin

strong to very strong medium to strong strong medium to strong

weak to medium intermed. to semi-prostrate late absent or very weak



# AFP 1/3016 RGT NONU

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 medium to long medium to large absent
- rough strong to whole surface medium strongly curved narrow to medium horizontal to slightly elevated

strongly curved

reddish dark to very dark

very short to short thin

strong to very strong strong to very strong medium to strong

very weak to weak semi-prostrate late to very late absent or very weak



# AFP 1/2371 RGT PADDINGTON

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/4 medium to long medium

smooth medium to strong (group 2+) medium moderately curved narrow to medium elevated

slightly to moderately curved

red very dark

very short absent or very thin

medium to strong weak to medium medium medium

weak semi-erect to intermediate very late



# AFP 1/3013 RGT PARISSE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium tapering scurs present upper 1/2 very long small to medium absent
- smooth weak to medium (group 1+) medium strongly curved narrow to medium slightly elevated

strongly curved to geniculate

reddish medium to dark

short to medium thin

strong strong strong medium

weak semi-prostrate late to very late absent or very weak



# AFP 1/2269 RGT PEMBROKE

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper 1/4 long very weak to weak

smooth medium (group 2) medium moderately curved medium elevated

slightly to moderately curved

red dark to very dark

very short absent or very thin

medium to strong medium to strong medium to strong

weak to medium intermediate late to very late



# AFP 1/2849 RGT QUICKSILVER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

Straw Length

Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/2 long medium to strong absent

smooth medium (group 2) medium to long moderate to strongly curved medium elevated

moderately to strongly curved

red medium to dark

short absent or very thin

strong to very strong strong to very strong medium to strong

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2920 RGT RASHID

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/2 long medium absent
- smooth medium (group 2) medium moderate to strongly curved medium elevated

#### strongly curved

red very dark

very short to short absent or very thin

strong medium medium to strong medium

weak to medium intermediate very late absent or very weak



# AFP 1/2264 RGT SACRAMENTO

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

# Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short medium tapering awns present whole length very long medium absent

smooth medium (2) long to very long slightly curved very narrow to narrow slightly sloping

slightly curved

red light

short to medium absent or very thin

strong medium to strong strong strong

strong semi-erect medium to late



# AFP 1/2702

# **RGT SAKI**

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

# Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/4 long weak to medium absent

smooth medium to strong (group 2+) long strongly curved narrow to medium straight to elevated

geniculate

red dark to very dark

very short to short absent or very thin

strong to very strong strong to very strong strong to very strong medium to strong

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2851 RGT SILVERSURFER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/4 long to very long medium to strong absent
- smooth medium (group 2) long moderately curved narrow to medium straight to elevated

strongly curved

red dark to very dark

short absent or very thin

strong to very strong strong medium

weak to medium intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2191 RGT SCRUMMAGE

# **CHARACTERS IN DETAIL**

#### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

# Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

#### Grain

Colour Colouration with phenol

Straw Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present upper 1/2 medium weak absent

smooth medium (2) medium moderately curved narrow to medium elevated

moderately curved

red medium to dark

very short to short absent or very thin

strong medium to strong medium to strong medium to strong

absent to weak intermediate late



# AFP 1/2268 RGT SORCERER

# **CHARACTERS IN DETAIL**

# Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

Straw Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium tapering awns present

n/a weak to medium

smooth medium (group 2) long moderate to strongly curved narrow straight to elevated

slightly to moderately curved

red dark

very short to short absent or very thin

medium medium medium medium

weak semi-erect to intermediate very late



## AFP 1/2918

# **RGT STOKES**

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/4 medium to long

absent

smooth medium (group 2) medium moderate to strongly curved narrow to medium elevated

strongly curved

red dark

very short to short absent or very thin

very strong very strong strong to very strong strong

weak to medium intermediate late to very late absent or very weak



# AFP 1/3017 RGT TINDALL

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long to very long lax to medium tapering scurs present upper 1/2 long

absent

smooth medium to strong (group 2+) long strongly curved narrow slightly elevated to strongly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong medium to strong strong medium to strong

weak semi-prostrate late to very late absent or very weak



## AFP 1/2843 **RGT VENOM**

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white long lax to medium tapering scurs present upper 1/4 medium to long medium absent
- smooth strong (group 3) medium slight to moderately curved narrow elevated

#### moderately curved

red dark to very dark

short absent or very thin

strong to very strong strong strong

medium intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2703 RGT WASABI

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense parallel sided scurs present upper 1/4 medium medium to strong absent
- slightly rough medium (group 2) medium moderately curved narrow straight to elevated

moderately curved

red medium to dark

short absent or very thin

strong to very strong strong to very strong strong to very strong medium

weak intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/3018 RGT WILKINSON

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 1/4 medium medium to large absent

entire external surface rough medium (group 2) short to medium slight to moderately curved narrow to medium slightly elevated

strongly curved

reddish medium to dark

very short to short thin

strong to very strong strong medium to strong

medium to strong semi-prostrate late to very late absent or very weak



# AFP 1/2367 RGT WESTMINSTER

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present

medium to long medium

rough medium (group 2) medium moderately curved narrow to medium elevated

## moderately curved

red dark to very dark

very short absent or very thin

medium to strong weak to medium medium medium

weak to medium intermediate very late



# AFP 1/2846 RGT WOLVERINE

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 short strong absent
- smooth strong (group 3) short slightly curved medium elevated

moderately curved

red dark to very dark

short absent or very thin

very strong very strong very strong medium

medium to strong intermed. to semi-prostrate late to very late absent or very weak



# AFP 1/2519 RGT UNIVERSE

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense parallel sided scurs present upper 1/4 long medium to strong absent
- slightly rough medium (group 2) medium to long moderate to strongly curved medium straight to elevated

#### strongly curved

red medium to dark

short absent or very thin

strong strong strong strong

weak intermediate medium to late



# AFP 1/3011 RGT ZINZAN

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/4 long small to medium absent

entire external surface rough strong (group 3) short to medium moderate to strongly curved narrow slightly elevated to strongly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong strong strong strong

very weak to weak semi-prostrate late absent or very weak



AFP 1/628

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 long to very long weak absent
- smooth weak (1) medium slight to moderately curved medium elevated

## moderately curved

red medium

medium absent or very thin

medium weak medium weak to medium

absent or very weak prostrate medium absent or very weak



## AFP 1/2377 **ROADSTER**

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium tapering awns present

n/a weak

smooth medium (group 2) long to very long moderately curved very narrow to narrow straight

slightly to moderately curved

red light

very short to short absent or very thin

medium to strong medium medium to strong

absent to weak semi-erect to intermediate late



# AFP 1/1330 **ROBIGUS**

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

white medium medium tapering scurs present upper<sup>1</sup>/<sub>4</sub> long to very long weak absent

smooth medium - Group 2 short to medium slight to moderately curved narrow to medium elevated

## moderately curved

red very dark

short to medium thin

strong

medium to strong strong

medium intermediate medium weak



# AFP 1/2818 ROWLING

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium weak to medium absent
- smooth medium (group 2) short to medium slightly curved narrow to medium elevated

moderately curved

red very dark

very short to short absent or very thin

strong to very strong strong to very strong medium

weak intermed. to semi-prostrate medium to late absent or very weak



## AFP 1/2211 ROYSTON

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 1/4 medium weak absent

smooth weak to medium (1+) short to medium strongly curved medium elevated

geniculate

red medium

short to medium absent or very thin

medium to strong weak to medium weak to medium medium

absent or very weak intermediate late



AFP 1/2249 **RUSKIN** 

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to dense tapering scurs present upper 1/4 long absent to weak absent
- smooth weak to medium short to medium moderately curved narrow elevated

strongly curved

red medium to dark

very short to short absent or very thin

strong medium medium to strong medium to strong

absent to weak semi-erect to intermediate late



# AFP 1/1649 SAHARA

# **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> short to medium weak to medium absent

smooth weak to medium - Group 1+ medium moderate to strongly curved narrow to medium elevated

#### moderately curved

red medium

medium to long thin

medium weak weak weak to medium

weak intermed. to semi-prostrate late to very late



# AFP 1/2774 SARTORIAL

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper 1/4 long strong

smooth weak (group 1) medium to long moderately curved narrow elevated

strongly curved to geniculate

red medium

short to medium absent or very thin

strong strong strong strong

weak to medium intermediate late



# AFP 1/2406 SAVELLO

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium medium to dense parallel sided scurs present upper 1/4 long to very long weak to medium
- smooth strong (group 3) medium moderately curved narrow elevated

## strongly curved

red dark to very dark

short absent or very thin

medium to strong medium medium medium

absent or very weak semi-erect to intermediate very late



# AFP 1/1787 **SCOUT**

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

#### Grain Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper <sup>1</sup>/<sub>4</sub> medium weak absent

smooth medium - Group 2 medium slight to moderately curved narrow to medium elevated

## straight to slightly curved

red dark to very dark

short to medium thin

medium to strong medium medium weak to medium

medium semi-erect to intermediate late



## AFP 1/2068 SCRIBE

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium strong

slightly rough weak to medium - Group 1+ medium slightly curved narrow elevated

## moderately to strongly curved

red very dark

short thin

strong strong strong medium

absent or very weak intermediate medium



## AFP 1/2404 SHABRAS

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium to dense parallel sided scurs present upper 1/2 very long weak to medium

smooth strong (group 3) medium moderately curved narrow to medium strongly elevated with 2nd pt. present

moderately to strongly curved

red dark to very dark

very short to short absent or very thin

strong medium to strong strong

absent or very weak semi-erect to intermediate late to very late



## AFP 1/1650 SHEPHERD

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium parallel sided scurs present upper 1/4 medium to long medium absent

slightly rough medium (2) medium moderate to strongly curved narrow to medium elevated

slightly to moderately curved

red dark

medium absent or very thin

strong to very strong strong medium to strong

strong intermediate medium to late



## AFP 1/2295 SHERLOCK

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium tapering awns present whole length very long very weak to weak
- smooth medium (2) long to very long moderate to strongly curved narrow elevated

## slightly curved

red medium

short absent or very thin

strong medium to strong medium to strong medium to strong

weak semi-erect to intermediate late



## AFP 1/1951 SHIRE

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper 1/4 long medium absent

smooth weak to medium (1+) medium slightly curved narrow elevated

slightly to moderately curved

red very dark

short absent or very thin

strong strong medium to strong

strong semi-erect to intermediate medium to late



# AFP 1/2138 SKYFALL

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided awns present whole length very long medium absent

smooth strong - Group 3 long to very long v.slightly curved very narrow to narrow elev. to elev with 2nd point

## straight

red dark to very dark

short to medium thin

strong medium to strong medium to strong strong

medium intermed. to semi-prostrate medium



# AFP 1/1415 SMUGGLER

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 1/4 medium medium absent

entire external surface rough weak to medium (group 1+) medium moderately curved medium elevated

slightly to moderately curved

red light to medium

medium absent or very thin

#### medium

medium to strong medium

very strong intermediate early absent or very weak



## AFP 1/834 SOISSONS

## **CHARACTERS IN DETAIL**

| Ear   |                     |
|---|---------------------|
| Colour  | white               |
| Length  | medium              |
| Density                                       | medium              |
| Shape-side profile                            | tapering            |
| Awns or scurs - presence                      | awns present        |
| Awns or scurs - distribution                  | whole length        |
| Awns or scurs - length:                       | long                |
| Apical rachis segment - convex face hairiness | absent to weak      |
| Anthers - anthocyanin colouration             | absent              |
| Lower glume                                   |                     |
| External surface                              | slightly rough      |
| Extent of internal hairs                      | weak - Group 1      |
| Beak length                                   |                     |
| Beak curvature                                |                     |
| Shoulder width                                | narrow              |
| Shoulder shape                                | slightly sloping    |
| Lower lemma                                   |                     |
| Beak curvature                                | straight            |
| Grain   |                     |
| Colour  | red                 |
| Colouration with phenol                       |                     |
| Straw   |                     |
| Length  |                     |
| Wall thickness @20cms below ear               | thin                |
| Glaucosity                                    |                     |
| Flag leaf - sheath                            | absent or very weak |
| Flag leaf- blade (lower side)                 | weak                |
| Culm - neck                                   | absent or very weak |
| Ear   | absent or very weak |
| Plant growth characters                       |                     |
| Coleoptile - anthocyanin colouration          | absent or very weak |
| Plant - growth habit                          | intermediate        |
| Time of ear emergence                         | very early to early |
| Flag leaf - anthocyanin of auricles           | absent or very weak |



# AFP 1/2132 SOLACE

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> long medium absent

smooth medium - Group 2 medium moderate to strongly curved medium elevated

#### moderately curved

red very dark

short thin

strong medium to strong medium to strong medium to strong

medium intermed. to semi-prostrate medium to late



# AFP 1/1225 SOLSTICE

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma Beak curvature

# Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium lax to medium tapering scurs present upper <sup>1</sup>/<sub>2</sub> medium to long weak to medium absent

smooth weak to medium - Group 1+ medium moderately curved medium straight

moderately curved

red medium

very short to short thin

strong to very strong

strong to very strong strong

medium intermediate late very weak



## AFP 1/2178 SOLTEK

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium dense tapering scurs present upper 1/4 short to medium strong to very strong absent
- smooth medium (2) medium moderately curved narrow to medium elevated

moderately to strongly curved

red dark

medium absent or very thin

strong medium medium medium to strong

medium semi-erect to intermediate late to very late



Variety Name: SORRIAL

**Breeder's Reference:** 

Breeder: CAUSSADE SEMENCES SA

**Origin:** FRANCE

Code: SORRI

**Coleoptile-anthocyanin colouration:** \*Plant - growth habit: \*Time ear emergence: Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: \*Flag leaf - Glaucosity of sheath: Flag leaf - Glaucosity of leaf blade: Anthers - anthocyanin colouration: **Glaucosity of neck:** Hairiness of uppermost node: \*Plant - height: \*Straw - wall thickness @ 20cms below ear: \*Ear - Glaucosity: Ear - Supernumerary spikelets - frequency: \*Ear - Colour: \*Ear - Shape (side profile): Ear - Length: \*Ear - Density: \*Awns or scurs - presence: Awns or scurs - distibution: \*Scurs at tip of ear - length: \*Awns at tip of ear - length: Lower glume - Beak length: Lower glume - Beak shape (curvature): Lower glume - Beak tip: Lower glume - Shoulder width: Lower glume - Shoulder type: Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: \*Grain - colour: Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: \*Seasonal type: **Extra characters:** 

AFP No:

Translated from:

**Date:** 03 June 2013

MEDIUM INTERMEDIATE TO SEMI-PROSTRATE EARLY TO MEDIUM VERY LOW TO LOW VERY STRONG STRONG TO VERY STRONG STRONG TO VERY STRONG SHORT VERY THIN STRONG TO VERY STRONG WHITE PARALLEL SIDED MEDIUM TO LONG DENSE SCURS PRESENT VERY SHORT TO SHORT MEDIUM TO BROAD STRAIGHT WEAK SLIGHTLY CURVED SHORT WEAK TO MEDIUM RED

MEDIUM WINTER

\* = Characteristics which should always be included in the description of the variety. 30 March 2015



# AFP 1/2800 SPEARHEAD

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium parallel sided scurs present upper 1/4 medium to long medium to strong absent
- smooth strong to whole surface short to medium moderately curved narrow elevated

strongly curved

red medium

short absent or very thin

very strong very strong strong

medium intermed. to semi-prostrate late absent or very weak



AFP 1/2756 **SPOCK** 

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper 1/4 medium to long strong to very strong
- smooth medium (group 2) medium to long moderate to strongly curved narrow to medium elevated

#### strongly curved

red medium

short absent or very thin

strong to very strong strong to very strong strong to very strong

medium to strong intermediate late to very late



AFP 1/2300
SPYDER

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium parallel sided scurs present upper 1/2 medium to long weak
- smooth medium (2) medium moderately curved narrow to medium elevated

moderately curved

red medium

short to medium absent or very thin

strong medium to strong medium to strong strong

absent to weak semi-erect to intermediate late to very late



## AFP 1/1941 **STIGG**

## **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium very dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium weak absent

slightly rough weak to medium - Group 1+ medium moderately curved narrow to medium straight to elevated

strongly curved

red medium to dark

short thin

strong to very strong strong absent or very weak

weak semi-erect to intermediate late



# AFP 1/2447 STRATOSPHERE

## **CHARACTERS IN DETAIL**

## Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

## Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

## Straw

Length Wall thickness @20cms below ear

## Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

## Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium dense parallel sided scurs present upper 1/4 medium medium
- slightly rough medium (group 2) medium moderately curved narrow to medium elevated

strongly curved

red dark to very dark

very short to short absent or very thin

medium weak medium weak to medium

weak to medium semi-erect to intermediate late to very late



## AFP 1/2823 SWALLOW

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present upper 1/2 long to very long weak to medium absent

slightly rough medium to strong (group 2+) long moderately curved narrow straight to elevated

moderately to strongly curved

red medium

very short absent or very thin

strong to very strong strong to very strong medium to strong

very weak to weak intermed. to semi-prostrate late absent or very weak



## AFP 1/3049 SY COACH

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/4 very short to short large to very large absent
- smooth weak to medium (group 1+) medium strongly curved medium slightly elevated

strongly curved to geniculate

reddish medium to dark

short thin

strong medium to strong medium to strong medium to strong

weak intermediate medium to late absent or very weak



AFP 1/2001

# SY EPSON

### **CHARACTERS IN DETAIL**

| Ear  |                               |
|--|-------------------------------|
| Colour:  | white                         |
| Length:  | long                          |
| Density:   | lax to medium                 |
| Shape (side profile)                             | parallel sided                |
| Awns or scurs - presence:                        | scurs present                 |
| Awns or scurs - distribution:                    |                               |
| Awns or scurs - length:                          | long                          |
| Apical rachis segment - convex face hairiness:   | very weak                     |
| Anthers - anthocyanin                            |                               |
| Lower Glume                                      |                               |
| External surface roughness:                      |                               |
| Extent of internal hairs:                        | weak to medium - group 1 to 2 |
| Beak length:                                     | short to medium               |
| Beak shape (curvature):                          | slightly to moderately curved |
| Shoulder   | narrow to medium              |
| Shoulder   | slightly sloping or straight  |
| Lower Lemma                                      |                               |
| Beak shape:                                      |                               |
| Grain  |                               |
| Colour   | red                           |
| Colouration with phenol:                         | medium                        |
| Straw  |                               |
| Length:  |                               |
| Wall thickness @ 20cms below ear:                | very thin                     |
| Glaucosity                                       |                               |
| Flag leaf - sheath:                              | medium to strong              |
| Flag leaf - blade (lower side):                  | medium                        |
| Culm neck:                                       | medium to strong              |
| Ear - Glaucosity:                                | medium to strong              |
| Plant growth characters                          |                               |
| Coleoptile-anthocyanin                           | absent to very weak           |
| Plant - growth habit:                            | semi-prostrate                |
| Time ear emergence:                              | medium to late                |
| Flag leaf - Anthocyanin colouration of auricles: |                               |



## AFP 1/2659 SY GRIFFIN

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present

medium to long medium to strong

slightly rough medium (group 2) medium moderately curved narrow elevated

moderately curved

red medium to dark

short absent or very thin

medium to strong medium to strong medium to strong medium to strong

absent or very weak intermediate late to very late



## AFP 1/2745 SY INSITOR

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium lax to medium parallel sided scurs present upper 1/2 long to very long medium to strong absent
- smooth strong to whole surface medium moderate to strongly curved narrow to medium straight to elevated

strongly curved to geniculate

red dark to very dark

medium absent or very thin

strong to very strong strong to very strong strong medium to strong

very weak to weak intermed. to semi-prostrate late absent or very weak



## AFP 1/2654 SY LOKI

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long lax to medium tapering scurs present upper 1/2 long to very long medium to strong
- smooth weak to medium (group 1+) short to medium slight to moderately curved narrow to medium straight to elevated

moderately to strongly curved

red dark

short absent or very thin

medium to strong strong medium to strong

absent to weak intermediate medium to late



## AFP 1/2656 SY MEDEA

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium tapering scurs present upper 1/4 medium strong

smooth strong to whole surface very short to short slightly curved medium to broad elevated

red dark to very dark

short to medium absent or very thin

absent or very weak absent or very weak absent or very weak absent or very weak

weak intermediate medium



## AFP 1/2711 THEODORE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium dense parallel sided scurs present upper 1/4 medium to long very weak to weak

smooth weak to medium (group 1+) medium strongly curved narrow elevated

#### geniculate

red medium to dark

very short to short medium

strong strong absent or very weak

weak intermediate medium to late



## AFP 1/1806 TIMARU

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white long dense parallel sided scurs present tip only very short medium to strong absent

rough weak to medium - Group 1+ medium strongly curved narrow to medium elevated

strongly curved

red light to medium

medium thin

strong medium to strong medium to strong medium to strong

medium semi-erect to intermediate late



## AFP 1/2712 **TOBY**

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short dense to very dense parallel sided scurs present upper 1/4 medium medium to strong absent
- smooth medium to strong (group 2+) medium slight to moderately curved narrow to medium straight to elevated

moderately curved

red medium

short medium

strong to very strong strong to very strong strong to very strong absent or very weak

very weak to weak intermed. to semi-prostrate late to very late absent or very weak



### AFP 1/1986 TORCH

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium absent or very weak
- smooth medium - Group 2 medium slightly curved narrow elevated

slightly curved

red dark

short to medium medium

strong strong strong strong

absent to weak semi-erect to intermediate medium



## AFP 1/2044 TORPHINS

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long to very long medium

rough weak to medium - Group 1+ medium moderate to strongly curved narrow to medium elevated

strongly curved

red dark

short to medium thin

strong to very strong strong strong strong

medium to strong intermediate medium to late



## AFP 1/2931 TREASURE

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided scurs present upper 1/2 long medium absent
- smooth medium (group 2) medium to long strongly curved narrow to medium elevated

strongly curved to geniculate

red very dark

very short absent or very thin

very strong strong to very strong very strong medium to strong

medium intermediate late absent or very weak



## AFP 1/1954 **TUXEDO**

## CHARACTERS IN DETAIL

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

Lower lemma Beak curvature

### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long weak to medium absent

smooth medium - Group 2 medium slightly curved narrow to medium elevated

#### moderately curved

red dark

short to medium thin

strong medium to strong medium to strong

strong semi-erect to intermediate medium to late



## AFP 1/2125 TWISTER

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short to medium lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>2</sub> long to very long weak absent

slightly rough medium - Group 2 medium to long moderate to strongly curved narrow to medium elevated

### moderately to strongly curved

red very dark

medium thin

strong medium medium medium

weak intermed. to semi-prostrate medium



## AFP 1/2206 UNIVERSAL

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper 1/2 long weak to medium absent

smooth medium (2) medium to long strongly curved medium straight to elevated

strongly curved

red dark

short to medium absent or very thin

medium to strong medium to strong medium to strong medium to strong

absent to weak intermediate late



## AFP 1/1704 VELOCITY

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium parallel sided scurs present tip only short to medium medium absent

smooth medium (group 2) medium to long strongly curved to geniculate medium to broad strongly elevated with 2nd pt. present

#### geniculate

red dark

short to medium absent or very thin

strong weak to medium medium medium

weak intermediate early to medium



AFP 1/2544 VERSO

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium tapering scurs present upper 3/4 long weak to medium absent

smooth medium (group 2) medium v.slightly curved narrow elevated

### straight to slightly curved

red dark

short absent or very thin

strong medium to strong strong strong to very strong

weak intermediate medium to late



## AFP 1/1812 VISCOUNT

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> medium to long weak absent

slightly rough weak to medium - Group 1+ medium medium elevated

moderately curved

red dark

very short to short thin

strong medium medium to strong medium

strong semi-erect to intermediate late



## Variety Name: Vulkan

Code: VULK

Crop: Winter Wheat

| Breeder's Reference:                   | AFP No:    |                  |
|--|------------|------------------|
| Breeder: Poljoprivredni Intitut Osijek | Translated | l from: Croatian |
| Origin:                                | Date:      | 11 March 2014    |

**Coleoptile-anthocyanin colouration:** \*Plant - growth habit: \*Time ear emergence: Flag leaf - Anthocyanin colouration of auricles: Frequency of plants with recurved flag leaves: \*Flag leaf - Glaucosity of sheath: Flag leaf - Glaucosity of leaf blade: Anthers - anthocyanin colouration: **Glaucosity of neck:** Hairiness of uppermost node: \*Plant - height: \*Straw - wall thickness @ 20cms below ear: \*Ear - Glaucosity: Ear - Supernumerary spikelets - frequency: \*Ear - Colour: \*Ear - Shape (side profile): Ear - Length: \*Ear - Density: \*Awns or scurs - presence: Awns or scurs - distibution: \*Scurs at tip of ear - length: \*Awns at tip of ear - length: Lower glume - Beak length: Lower glume - Beak shape (curvature): Lower glume - Beak tip: Lower glume - Shoulder width: Lower glume - Shoulder type: Lower glume - External surface roughness: Lower glume - Extent of internal hairs: Lower glume - Internal imprint: Lower lemma - Beak shape: Lower lemma - Beak length-: Lower lemma - Beak swelling: Apical rachis segement - convex face hairiness: \*Grain - colour: Grain - Shape: Grain - Brush hair length in dorsal view: Grain - Colouration with phenol: \*Seasonal type: **Extra characters:** 

Semi erect to intermediate Very early to early Low Medium Very weak to weak Weak to medium Medium Very thick or filled White Parallel sided Very short Medium Present Medium Medium Long to very long Slightly curved Absent or very narrow Sloping Medium Medium Red Winter



AFP 1/1865 WARRIOR

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white short medium to dense parallel sided scurs present upper 1/4 medium to long weak to medium absent

slightly rough weak to medium - Group 1+ medium slightly curved narrow to medium elevated

### moderately curved

red very dark

short to medium n/a

strong strong medium medium to strong

medium to strong semi-erect medium to late



## AFP 1/2029 WEAVER

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium to dense parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> long strong

slightly rough medium - Group 2 medium strongly curved narrow elevated

strongly curved

red very dark

short to medium thin

strong strong medium to strong

absent to weak intermediate medium



## AFP 1/2126 WELCOME

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

### Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white short to medium medium to dense parallel sided awns present whole length very long absent or very weak absent
- smooth medium (2) very long moderately curved narrow elev. to elev with 2nd point

### straight

red very dark

medium absent or very thin

medium to strong medium medium to strong

weak to medium intermed. to semi-prostrate medium to late



## AFP 1/1449 **WELFORD**

### **CHARACTERS IN DETAIL**

| Ear   |                   |
|---|-------------------|
| Colour  | white             |
| Length  | medium            |
| Density                                       | medium            |
| Shape-side profile                            | parallel sided    |
| Awns or scurs - presence                      | scurs present     |
| Awns or scurs - distribution                  | upper 1/2         |
| Awns or scurs - length                        | medium            |
| Apical rachis segment - convex face hairiness | medium to str     |
| Anthers - anthocyanin colouration             | absent            |
| Lowon chumo                                   |                   |
| Lower glume<br>External surface               | ali ahtler norrah |
|   | slightly rough    |
| Extent of internal hairs                      | medium - Gro      |
| Beak length                                   | medium            |
| Beak curvature                                | moderately cu     |
| Shoulder width                                | narrow            |
| Shoulder shape                                | straight to ele   |
| Lower lemma                                   |                   |
| Beak curvature                                | moderately cu     |
|   | j                 |

Grain Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

Glaucosity Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

d trong

gh oup 2 curved evated

curved

red dark

short thin

#### strong

strong weak to medium

medium intermed. to semi-prostrate medium absent or very weak



### AFP 1/1281 XI19

## CHARACTERS IN DETAIL

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - length: Awns or scurs - distribution Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf - blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long medium tapering scurs present short tip only medium absent

smooth strong - Group 3 medium moderately curved narrow straight

#### moderately to strongly curved

red dark

medium thin

#### strong

strong strong to very strong

absent or very weak intermed. to semi-prostrate late very weak



## AFP 1/1545 **ZEBEDEE**

### **CHARACTERS IN DETAIL**

Ear Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length: Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

# Lower lemma

Beak curvature

## Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles white medium to long lax to medium parallel sided scurs present upper <sup>1</sup>/<sub>4</sub> short to medium weak absent

smooth medium - Group 2 medium slight to moderately curved narrow to medium straight

### slightly to moderately curved

red light to medium

medium thin

### medium to strong

medium to strong strong

medium intermediate medium to late absent or very weak



AFP 1/3001 **ZOOM** 

### **CHARACTERS IN DETAIL**

### Ear

Colour Length Density Shape-side profile Awns or scurs - presence Awns or scurs - distribution Awns or scurs - length Apical rachis segment - convex face hairiness Anthers - anthocyanin colouration

### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

#### Lower lemma

Beak curvature

#### Grain

Colour Colouration with phenol

#### Straw

Length Wall thickness @20cms below ear

#### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

#### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium to long medium tapering scurs present upper 1/2 long to very long medium to large absent
- slightly rough strong (group 3) medium to long strongly curved narrow slightly elevated to strongly elevated

strongly curved to geniculate

reddish medium to dark

very short to short thin

strong to very strong strong strong

weak semi-prostrate late absent or very weak



## AFP 1/2155 **ZULU**

### **CHARACTERS IN DETAIL**

| Ear   |
|---|
| Colour  |
| Length  |
| Density                                       |
| Shape-side profile                            |
| Awns or scurs - presence                      |
| Awns or scurs - distribution                  |
| Awns or scurs - length:                       |
| Apical rachis segment - convex face hairiness |
| Anthers - anthocyanin colouration             |

#### Lower glume

External surface Extent of internal hairs Beak length Beak curvature Shoulder width Shoulder shape

## Lower lemma

Beak curvature

### Grain

Colour Colouration with phenol

### Straw

Length Wall thickness @20cms below ear

### Glaucosity

Flag leaf - sheath Flag leaf- blade (lower side) Culm - neck Ear

### Plant growth characters

Coleoptile - anthocyanin colouration Plant - growth habit Time of ear emergence Flag leaf - anthocyanin of auricles

- white medium parallel sided scurs present upper <sup>3</sup>/<sub>4</sub> long medium absent
- smooth strong - Group 3 medium slightly curved narrow elevated

### slightly curved

red dark

medium thin

medium weak to medium medium medium

weak to medium intermed. to semi-prostrate medium to late

