

**ALMARA****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	upper 3/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium to large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	slightly elevated to strongly elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-prostrate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

**AMBOISE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	absent or very weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short
Wall thickness @20cms below ear	very thick or filled

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

Variety Name: **ANAPOLIS**

Crop: Winter wheat

Breeder's Reference:

AFP No: 1/2148

Breeder: NORDSAAT

Translated from: German

Origin:

Date: 23 July 2013

Code: ANAP

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 - distribution:

\*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 segment - convex face hairiness:

\*Grain - colour:

Grain - Shape:

Grain - Brush hair length in dorsal view:

Grain - Colouration with phenol:

\*Seasonal type:

Extra characters:

Medium to strong

Semi prostrate

Medium to late

Very low to low

Strong to very strong

Strong

Strong to very strong

Short to medium

Absent or very thin.

Strong to very strong

White

Tapering

Medium

Lax to medium

Present

Very short to short

Very short to short

Slightly curved

Narrow

Straight

Medium

Slightly curved

Strong

Red

Medium to dark

Winter

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

31 March 2015

## Winter Wheat

[AFP 1/3336]

# ARLINGTON

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/4



**ASTOUND****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	long
Beak curvature	strongly curved
Shoulder width	medium
Shoulder shape	elev. to strongly elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	red
Colouration with phenol	very dark

**Straw**

Length	medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	very strong
Flag leaf- blade (lower side)	very strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

Variety Name: **Axioma**

Crop: **Wheat**

Breeder's Reference: SEC 228-02-4

AFP No:

Breeder: Secobra Rechereches

Translated from: German

Origin:

Date: 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:

Frequency of plants with recurved flag leaves:

Very low to low

\*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:

Short to medium

\*Straw - wall thickness @ 20cms below ear:

Medium

\*Ear - Glaucosity:

Strong

Ear - Supernumerary spikelets - frequency:

\*Ear - Colour:

\*Ear - Shape (side profile):

Tapering

Ear - Length:

Short to medium

\*Ear - Density:

Dense

\*Awns or scurs - presence:

Scurs present

Awns or scurs - distribution:

\*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:

Lower glume - Extent of internal hairs:

Lower glume - Internal imprint:

Lower lemma - Beak shape:

Lower lemma - Beak length-:

Lower lemma - Beak swelling:

Apical rachis segment - 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



**BAHAMAS CS****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

**BAMFORD****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak



**BANQUO****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## BASIL

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	not applicable

#### Glaucosity

Flag leaf sheath	strong
Flag leaf blade (lower side)	strong
Ear	absent or very weak
Culm - neck	medium to strong

#### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short to medium
Shape of beak	strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/4

## 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	

## 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
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## Grain

Colour	red
Colouration with phenol:	dark to very dark

## Straw

Length:	medium
Wall thickness @ 20cms below ear:	thin

## Glaucosity

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:	

**BLACKSMITH****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	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	absent or very small
Anthers - anthocyanin colouration	present

**Lower glume**

External surface	smooth
Extent of internal hairs	weak (group 1)
Beak length	short to medium
Beak curvature	slightly curved
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	purple
Colouration with phenol	very dark

**Straw**

Length	medium to long
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	very strong
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

**BLACKSTONE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 3/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	small to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	reddish
Colouration with phenol	dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong to very strong
Ear	strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**BOLINDER****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	short to medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	reddish
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

Variety Name: **CELLULE**

Crop: Alternative Wheat

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:**

**\*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 - distribution:**

**\*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 segment - convex face hairiness:**

**\*Grain - colour:**

**Grain - Shape:**

**Grain - Brush hair length in dorsal view:**

**Grain - Colouration with phenol:**

**\*Seasonal type:**

**Extra characters:**

Very strong

Intermediate to semi prostrate

Early

Low

Very strong

Strong ot very strong

Strong to very strong

Short to medium

Very thin

Strong to very strong

White

Parallel sided

Medium to long

Dense

Awns present

Very long

Short to medium

Slightly curved

Narrow ot medium

Slightly sloping or straight

Weak to medium

Weak

Red

Medium

Alternative

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

16 May 2018

**CHAMPION****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	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	very weak to weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong to whole surface
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak



## CHARLES

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late to very late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	long
Shape of beak	slightly to moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

## CHEVRON

## 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 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow to medium
Shoulder shape	elevated

## Lower lemma

Beak curvature	slightly to moderately curved
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## Grain

Colour	red
Colouration with phenol	medium to dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

## Glaucosity

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	medium to strong
Ear	strong

## Plant growth characters

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	early to medium
Flag leaf - anthocyanin of auricles	

**CLAIRE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	lax
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns of scurs - distribution	upper ½
Awns or scurs - length:	short
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium - Group 2
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	very dark

**Straw**

Length	medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

**COSTELLO****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak to medium (1+)
Beak length	short
Beak curvature	strongly curved
Shoulder width	very narrow to narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	light to medium

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

**CRUSOE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	medium to strong - Group 2+
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	medium to broad
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	absent or very weak
Flag leaf- blade (lower side)	absent or very weak
Culm - neck	absent or very weak
Ear	absent or very weak

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-erect
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

## DIAMOND

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	semi-erect to intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated
Length of beak	very long
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	entire external surface rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	awns present
Awns or scurs - length	very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	whole length

**DICKENS****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns of scurs - distribution	upper ¼
Awns or scurs - length:	medium
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	strong - Group 3
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-erect
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

Variety Name: **EDELMANN**

Crop: Winter Wheat

Breeder's

AFP No:

Breeder:

Translated from: AUSTRIAN

Origin: AUSTRIA

Date:

Code: EDEL

**Coleoptile-anthocyanin colouration:**

**\*Plant - growth habit:**

weak

**\*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:**

weak to medium

**Flag leaf - Glaucosity of leaf blade:**

weak

**Anthers - anthocyanin colouration:**

**Glaucosity of neck:**

medium

**Hairiness of uppermost node:**

**\*Plant - height:**

long

**\*Straw - wall thickness @ 20cms below ear:**

absent to very thin

**\*Ear - Glaucosity:**

medium

**Ear - Supernumerary spikelets - frequency:**

**\*Ear - Colour:**

white

**\*Ear - Shape (side profile):**

parallel

**Ear - Length:**

medium

**\*Ear - Density:**

medium

**\*Awns or scurs - presence:**

Awns present

**Awns or scurs - distribution:**

**\*Scurs at tip of ear - length:**

**\*Awns at tip of ear - length:**

long

**Lower glume - Beak length:**

medium to long

**Lower glume - Beak shape (curvature):**

medium

**Lower glume - Beak tip:**

**Lower glume - Shoulder width:**

narrow to medium

**Lower glume - Shoulder type:**

slightly sloping to straight

**Lower glume - External surface roughness:**

**Lower glume - Extent of internal hairs:**

strong group 3

**Lower glume - Internal imprint:**

**Lower lemma - Beak shape:**

**Lower lemma - Beak length-:**

**Lower lemma - Beak swelling:**

**Apical rachis segment - convex face hairiness:**

strong to very 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.

28 March 2024



## ELATION

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	short to 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 to long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	medium
Shoulder shape	straight to elevated

## Lower lemma

Beak curvature	moderately curved
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## Grain

Colour	red
Colouration with phenol	medium to dark

## Straw

Length	short
Wall thickness @20cms below ear	absent or very thin

## Glaucosity

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

## Plant growth characters

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

**ELICIT****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak (group 1)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

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

**ENERGY****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	dark

**Plant**

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	short to medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

**Ear**

Density	medium
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	large
Awns or scurs - distribution	upper 1/4

## EVOLUTION

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns of scurs - distribution	upper ½
Awns or scurs - length:	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	rough
Extent of internal hairs	weak to medium - Group 1+
Beak length	medium
Beak curvature	strongly curved
Shoulder width	medium
Shoulder shape	elevated

## Lower lemma

Beak curvature	strongly curved to geniculate
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## Grain

Colour	red
Colouration with phenol	medium to dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	thin

## Glaucosity

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

## Plant growth characters

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

**FITZROY****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	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	strongly curved
Shoulder width	medium to broad
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	very strong
Flag leaf- blade (lower side)	very strong
Culm - neck	strong to very strong
Ear	weak to medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	very weak to weak
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	strong to very strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	long
Shape of beak	slight to moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	rough

### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	large
Awns or scurs - distribution	upper 1/2

**GALLANT****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns of scurs - distribution	upper $\frac{1}{4}$
Awns or scurs - length:	medium
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong - Group 3
Beak length	short - medium
Beak curvature	slightly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	straight
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	semi-erect
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

## GALLOWGLASS

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	horizontal to slightly elevated
Length of beak	medium to long
Shape of beak	moderately curved
Extent of internal hairs	medium to very large (Group 2+)
External surface roughness	not applicable

#### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	large
Awns or scurs - distribution	upper 1/2



**GLEAM****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	upper 3/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (group 3)
Beak length	short to medium
Beak curvature	v.slightly curved
Shoulder width	very narrow to narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

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

**GRAFTON****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns of scurs - distribution	upper ½
Awns or scurs - length:	medium to long
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	rough
Extent of internal hairs	weak to medium - Group 1+
Beak length	short to medium
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

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

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:

\*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 - distribution:

\*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 segment - convex face hairiness:

\*Grain - colour:

Grain - Shape:

Grain - Brush hair length in dorsal view:

Grain - Colouration with phenol:

\*Seasonal type:

Extra characters:

Absent or very weak

Intermediate to semi prostrate

Medium to late

Strong to very strong

Strong to very strong

Short to medium

Very thin

Strong to very strong

White

Parallel sided

Long to very long

Medium to dense

Present

Very short

Short

Slightly curved

Narrow

Straight or elevated

Weak

Slightly curved

Short

Weak

Red

Medium

Winter

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

31 March 2015

## HEARTWOOD

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 3/4

## Winter Wheat

[AFP 1/3297]

# HECTOR

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark to very dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2



## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	slightly rough

### Ear

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4

## HEROLDO

## 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:	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):	straight
Shoulder	narrow
Shoulder	straight to elevated

## Lower Lemma

Beak shape:

## Grain

Colour	white
Colouration with phenol:	light to medium

## Straw

Length:	short to medium
Wall thickness @ 20cms below ear:	very thin

## Glaucosity

Flag leaf - sheath:	strong to very strong
Flag leaf - blade (lower side):	strong to very strong
Culm neck:	strong to very strong
Ear - Glaucosity:	medium to strong

## Plant growth characters

Coleoptile-anthocyanin	absent or very weak
Plant - growth habit:	semi-prostrate
Time ear emergence:	medium to late
Flag leaf - Anthocyanin colouration of auricles:	

## Winter Wheat

[AFP 1/3333]

# ISLA

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

### Glaucosity

Flag leaf sheath	strong
Flag leaf blade (lower side)	strong to very strong
Ear	medium
Culm - neck	strong

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	slightly to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4



**JB DIEGO****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns of scurs - distribution	tip only
Awns or scurs - length:	short to medium
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak to medium - Group 1+
Beak length	short
Beak curvature	slight to moderately curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	medium to strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	medium to strong
Ear	weak to medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

## KWS AINTREE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	very narrow to narrow
Shoulder shape	horizontal to slightly elevated
Length of beak	short to medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	absent or very small
Awns or scurs - distribution	upper 1/4

## KWS ARNIE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	slight to moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 3/4

**KWS BARREL****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
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 strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (3)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

**KWS BASSET****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	long
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

## Winter Wheat

[AFP 1/3220]

## KWS BESTE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short
Shape of beak	slightly to moderately curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	entire external surface rough

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/4



Variety Name: **KWS COLOSSEUM**

Crop: **Wheat**

Breeder's **KWS W370**

AFP No:

Breeder: **KWS UK LTD**

Translated from:

Origin:

Date: 28 June 2021

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 - distribution:**

**\*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 segment - convex face hairiness:**

**\*Grain - colour:**

**Grain - Shape:**

**Grain - Brush hair length in dorsal view:**

**Grain - Colouration with phenol:**

**\*Seasonal type:**

**Extra characters:**

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.

28 June 2021

**KWS CRANIUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak



**KWS CRISPIN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

**KWS DAWSUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	strongly curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong to very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**KWS DRAGUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	small to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**KWS EQUIPE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Plant**

Anthocyanin colouration of coleoptile	weak
Growth habit	semi-erect to intermediate
Frequency of plants with recurved flag leaves	low to medium
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

**Ear**

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 3/4

**KWS EXTASE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	short
Beak curvature	slightly curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

**KWS FIREFLY****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	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium (group 2)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

## KWS FLUTE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

## KWS FOWLMERE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	short to medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2



## Winter Wheat

[AFP 1/3307]

## KWS GREBE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	rough

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

**KWS GUIUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	long
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 3/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	short to medium
Beak curvature	strongly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong to very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

## Winter Wheat

[AFP 1/3303]

# KWS IMRIE

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	slightly to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	rough

### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2



**KWS JACKAL****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

**KWS KERRIN****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 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	very short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	intermediate
Time of ear emergence	very late
Flag leaf - anthocyanin of auricles	

**KWS KINETIC****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	strong to whole surface
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	light to medium

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

**KWS LILI****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium
Beak length	short to medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

## KWS MAJESTIQUE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	short to medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	rough

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4



## KWS MANATEE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short to medium
Shape of beak	moderately curved
Extent of internal hairs	medium to very large (Group 2+)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/4

## KWS MAXIMISE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	not applicable

#### Glaucosity

Flag leaf sheath	strong
Flag leaf blade (lower side)	very weak to weak
Ear	absent or very weak
Culm - neck	medium

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	not applicable
Awns or scurs - distribution	upper 1/4

**KWS MONGOOSE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	dark

**Plant**

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

**Ear**

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

## WINTER WHEAT

Variety Name: **KWS Montana**

Crop: Winter wheat

Breeder's Reference: KW 8027-3-08

AFP No:

Breeder: KWS LOCHOW GMBH

Translated from: German

Origin:

Date: 22 March 2016

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

**\*Ear - Shape (side profile):**

Parallel sided

**Ear - Length:**

Medium

**\*Ear - Density:**

Medium

**\*Awns or scurs - presence:**

Scurs present

**Awns or scurs - distribution:**

**\*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 segment - 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



**KWS NEWBIE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium

**Plant**

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium
Shape of beak	strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	entire external surface rough

**Ear**

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Awns or scurs - distribution	upper 1/4

**KWS PALLADIUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to 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	long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	rough
Extent of internal hairs	strong to whole surface
Beak length	medium
Beak curvature	moderately curved
Shoulder width	very narrow to narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**KWS PARKIN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	absent or very weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	strong to whole surface
Beak length	medium
Beak curvature	moderately curved
Shoulder width	very narrow to narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	light to medium

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong
Ear	weak to medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

**KWS SABRUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong (group 3)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	absent or very weak



**KWS SCOPE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	light to medium

**Plant**

Anthocyanin colouration of coleoptile	strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

**Ear**

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/4

**KWS SILVERSTONE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
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 to long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (2)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	light to medium

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

**KWS SISKIN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	rough
Extent of internal hairs	weak to medium (1+)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	very narrow to narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	light to medium

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

## KWS SMOOTHIE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/2

**KWS SOLITAIRE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	dark

**Plant**

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

**Ear**

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium
Awns or scurs - distribution	upper 3/4

## Winter Wheat

[AFP 1/3308]

# KWS TWINE

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	low to medium
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/4



**KWS ULTIMATUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium to large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong (group 3)
Beak length	medium
Beak curvature	strongly curved
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## Winter Wheat

[AFP 1/3225]

# KWS VIBE

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

Flag leaf sheath	strong to very strong
Flag leaf blade (lower side)	medium to strong
Ear	strong
Culm - neck	strong

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	slightly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/2





## KWS VICARAGE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark to very dark

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	medium to long
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

## KWS VINNIE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	short to medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium
Awns or scurs - distribution	upper 1/2

**KWS WEBBUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium to long
Beak curvature	strongly curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	very weak to weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**KWS WRENUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	large to very large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium to long
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

**KWS ZEALUM****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow
Shoulder shape	horizontal to slightly elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	reddish
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## Winter Wheat

[AFP 1/3304]

# KWS ZIZZLE

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	short to medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/4

**KWS ZYATT****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	lax to medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	rough
Extent of internal hairs	strong (group 3)
Beak length	short to medium
Beak curvature	slightly curved
Shoulder width	very narrow to narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	very late
Flag leaf - anthocyanin of auricles	

**LEEDS****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper ½
Awns or scurs - length:	long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium - Group 2
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	very dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	



Variety Name: **LEMMY**

Crop: **Winter wheat**

Breeder's Reference:

AFP No:

Breeder:

Translated from: German

Origin:

Date: 01 January 2017

Code: LEMMY

<b>Coleoptile-anthocyanin colouration:</b>	Weak to medium
<b>*Plant - growth habit:</b>	Intermediate
<b>*Time ear emergence:</b>	Early to medium
<b>Flag leaf - Anthocyanin colouration of auricles:</b>	-
<b>Frequency of plants with recurved flag leaves:</b>	Very low to low
<b>*Flag leaf - Glaucosity of sheath:</b>	Strong
<b>Flag leaf - Glaucosity of leaf blade:</b>	Medium
<b>Anthers - anthocyanin colouration:</b>	
<b>Glaucosity of neck:</b>	Weak
<b>Hairiness of uppermost node:</b>	
<b>*Plant - height:</b>	Short to medium
<b>*Straw - wall thickness @ 20cms below ear:</b>	Thin
<b>*Ear - Glaucosity:</b>	Weak to medium
<b>Ear - Supernumerary spikelets - frequency:</b>	
<b>*Ear - Colour:</b>	White
<b>*Ear - Shape (side profile):</b>	Tapering
<b>Ear - Length:</b>	Medium
<b>*Ear - Density:</b>	Lax
<b>*Awns or scurs - presence:</b>	Scurs present
<b>Awns or scurs - distribution:</b>	-
<b>*Scurs at tip of ear - length:</b>	Short to medium
<b>*Awns at tip of ear - length:</b>	-
<b>Lower glume - Beak length:</b>	Short to medium
<b>Lower glume - Beak shape (curvature):</b>	Slight to moderately curved
<b>Lower glume - Beak tip:</b>	
<b>Lower glume - Shoulder width:</b>	Narrow to medium
<b>Lower glume - Shoulder type:</b>	Straight to elevated
<b>Lower glume - External surface roughness:</b>	-
<b>Lower glume - Extent of internal hairs:</b>	Strong to very strong
<b>Lower glume - Internal imprint:</b>	-
<b>Lower lemma - Beak shape:</b>	-
<b>Lower lemma - Beak length-:</b>	-
<b>Lower lemma - Beak swelling:</b>	-
<b>Apical rachis segment - convex face hairiness:</b>	Weak
<b>*Grain - colour:</b>	Red
<b>Grain - Shape:</b>	-
<b>Grain - Brush hair length in dorsal view:</b>	-
<b>Grain - Colouration with phenol:</b>	Dark
<b>*Seasonal type:</b>	Winter
<b>Extra characters:</b>	

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

07 April 2025

**LG ALDANITI****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short
Density	medium to dense
Shape-side profile	tapering
Awns or scurs - presence	awns present
Awns or scurs - distribution	whole length
Awns or scurs - length	very long
Apical rachis segment - convex face hairiness	very small to small
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (group 3)
Beak length	long to very long
Beak curvature	moderate to strongly curved
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated to strongly elevated

**Lower lemma**

Beak curvature	
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**Grain**

Colour	reddish
Colouration with phenol	very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	thick or filled

**Glaucosity**

Flag leaf - sheath	absent or very weak
Flag leaf- blade (lower side)	absent or very weak
Culm - neck	absent or very weak
Ear	absent or very weak

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	very weak

**LG ARKLE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 3/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong (group 3)
Beak length	medium to long
Beak curvature	v.slightly curved
Shoulder width	narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## Winter Wheat

[AFP 1/3240]

# LG ARTMAN

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	medium
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/2

## Winter Wheat

[AFP 1/3362]

# LG ASHE

## CHARACTERS IN DETAIL

### Grain

Colour	white
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

Flag leaf sheath	strong to very strong
Flag leaf blade (lower side)	strong
Ear	medium
Culm - neck	strong

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	long to very long
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium to very large (Group 2+)
External surface roughness	smooth

### Ear

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	awns present
Awns or scurs - length	very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	whole length

**LG ASTRONOMER****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium (group 2)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**LG BEOWULF****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	strong (group 3)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## LG CHALLENGER

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium
Awns or scurs - distribution	upper 1/2



## Winter Wheat

[AFP 1/3368]

## LG DEFIANCE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	slightly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	long
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/2

**LG DETROIT****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

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

**LG GRADUATE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	very weak to weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	long
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

## LG HENRI

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark to very dark

#### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	long
Shape of beak	moderate to strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	slightly rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium
Awns or scurs - distribution	upper 3/4

**LG ILLUMINATE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium (group 2)
Beak length	long
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## LG KERMIT

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short

#### Glaucosity

Flag leaf sheath	medium to strong
Flag leaf blade (lower side)	medium to strong
Ear	weak to medium
Culm - neck	medium to strong

#### Lower glume

Hairiness of external surface	absent
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	slightly curved
Extent of internal hairs	very small (Group 1)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	short
Colour	white
Shape in profile	tapering
Awns or scurs - distribution	upper 1/4

## Winter Wheat

[AFP 1/3367]

# LG LOTUS

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	long
Shape of beak	slightly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	large
Awns or scurs - distribution	upper 3/4

**LG MOTOWN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong (group 3)
Beak length	short to medium
Beak curvature	strongly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	



## Winter Wheat

[AFP 1/3365]

# LG PACHA

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short to medium
Shape of beak	slightly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

**LG PARTRIDGE****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Plant**

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

**Ear**

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4

**LG PRINCE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak (group 1)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**LG PUFFIN****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	light to medium

**Plant**

Anthocyanin colouration of coleoptile	medium
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short to medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

**Ear**

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4

## Winter Wheat

AFP 1/3247

# LG REBELLION

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	short
Shape of beak	v.slightly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

**LG REDRUM****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	upper 3/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	very weak

**LG REDWALD****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	
Extent of internal hairs	strong (group 3)
Beak length	medium to long
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	dark to very dark

**Straw**

Length	medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**LG ROCKHOPPER****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	awns present
Awns or scurs - distribution	whole length
Awns or scurs - length	very long
Apical rachis segment - convex face hairiness	small to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	strong (group 3)
Beak length	very long
Beak curvature	moderate to strongly curved
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong to very strong
Ear	strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	very weak



**LG SHERGAR****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Plant**

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium
Shape of beak	strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

**Ear**

Density	medium to dense
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

**LG SKYSCRAPER****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	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong to whole surface
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

## LG SPOTLIGHT

### 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	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

#### Lower glume

External surface	slightly rough
Extent of internal hairs	weak (group 1)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

#### Lower lemma

Beak curvature	moderately curved
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#### Grain

Colour	red
Colouration with phenol	dark to very dark

#### Straw

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

#### Glaucosity

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

#### Plant growth characters

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

**LG SUNDANCE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	slightly rough
Extent of internal hairs	strong (group 3)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermediate
Time of ear emergence	very late
Flag leaf - anthocyanin of auricles	

**LG TAPESTRY****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 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	very weak to weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**LG TYPHOON****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to 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	long to very long
Apical rachis segment - convex face hairiness	very weak to weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

## Winter Wheat

[AFP 1/3293]

# LOXLEY

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	slightly to moderately curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

**LOXTON****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	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	very dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong to very strong
Ear	strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak



**MARIS HUNTSMAN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium to long
Beak curvature	slightly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	long to very long
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	weak

**MARIS WIDGEON****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	very lax to lax
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper $\frac{1}{4}$
Awns or scurs - length:	medium to long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak - Group 1
Beak length	medium
Beak curvature	v.slightly curved
Shoulder width	narrow to medium
Shoulder shape	straight

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	very long
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	weak

**MAYFLOWER****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	dense
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong to whole surface
Beak length	short to medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	weak to medium
Culm - neck	strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong to very strong
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

## MEMPHIS

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	absent or very small
Awns or scurs - distribution	upper 1/2

**MERIT****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	long
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**MINDFUL****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	short to medium
Apical rachis segment - convex face hairiness	small to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	rough
Extent of internal hairs	weak to medium (group 1+)
Beak length	short
Beak curvature	strongly curved
Shoulder width	medium
Shoulder shape	horizontal to slightly elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**NELSON****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	lax
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper ½
Awns or scurs - length:	medium
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium - Group 1+
Beak length	short to medium
Beak curvature	slightly curved
Shoulder width	narrow to medium
Shoulder shape	straight

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## OLYMPUS

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 3/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	

## Lower glume

External surface	smooth
Extent of internal hairs	medium (2)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	elevated

## Lower lemma

Beak curvature	moderately curved
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## Grain

Colour	red
Colouration with phenol	dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

## Glaucosity

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

## Plant growth characters

Coleoptile - anthocyanin colouration	absent to weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	



**OXFORD****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (group 3)
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Plant**

Anthocyanin colouration of coleoptile	weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

Flag leaf sheath	strong
Flag leaf blade (lower side)	medium to strong
Ear	weak to medium
Culm - neck	medium to strong

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium to long
Shape of beak	strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	slightly rough

**Ear**

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

## REVELATION

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper $\frac{1}{4}$
Awns or scurs - length:	long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	

## Lower glume

External surface	slightly rough
Extent of internal hairs	medium - Group 2
Beak length	medium
Beak curvature	moderately curved
Shoulder width	medium
Shoulder shape	elevated

## Lower lemma

Beak curvature	moderately curved
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## Grain

Colour	red
Colouration with phenol	very dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	thin

## Glaucosity

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium to strong

## Plant growth characters

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

**RGT BAIRSTOW****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	very strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	very weak to weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT EVESHAM****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	dark

**Plant**

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	medium
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	entire external surface rough

**Ear**

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	upper 1/2

## Winter Wheat

[AFP 1/3260]

# RGT GEM

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late to very late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	rough

### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2



## RGT GOLDFINCH

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

**RGT GRAVITY****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	short to medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	



## RGT GROUSE

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	large
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

## Lower lemma

Beak curvature	strongly curved
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## Grain

Colour	reddish
Colouration with phenol	medium to dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	thin

## Glaucosity

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong
Ear	medium

## Plant growth characters

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## RGT GUARDSMAN

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium to dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	short to medium
Shape of beak	slightly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/2

**RGT HEXTON****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium

**Plant**

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

**Ear**

Density	medium to dense
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

**RGT HIGHGROVE****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	very long
Apical rachis segment - convex face hairiness	very small to small
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (group 3)
Beak length	very long
Beak curvature	moderate to strongly curved
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated to strongly elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium

**Straw**

Length	medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT ILLUSTRIOUS****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	strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	rough
Extent of internal hairs	medium to strong (2+)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

## Winter Wheat

[AFP 1/3350]

# RGT KINGSBURY

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	dark

### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late to very late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium to long
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 3/4



**RGT LANTERN****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	slight to moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly to moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	

**RGT LUDLOW****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	dark

**Plant**

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

Flag leaf sheath	strong to very strong
Flag leaf blade (lower side)	medium to strong
Ear	strong
Culm - neck	strong

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

**Ear**

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	short to medium
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	large to very large
Awns or scurs - distribution	upper 1/4



**RGT MOGUL****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	small to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium to long
Beak curvature	moderate to strongly curved
Shoulder width	very narrow to narrow
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	medium to strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT RASHID****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	long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	very late
Flag leaf - anthocyanin of auricles	absent or very weak

## RGD REDGRAVE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late to very late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	rough

#### Ear

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/2

**RGT SAKI****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 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium to strong (group 2+)
Beak length	long
Beak curvature	strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT SILVERSURFER****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium to dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	long
Beak curvature	moderately curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT STOKES****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	lax to medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	medium (group 2)
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT WILKINSON****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	medium
Shape-side profile	tapering
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium
Apical rachis segment - convex face hairiness	medium to large
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	entire external surface rough
Extent of internal hairs	medium (group 2)
Beak length	short to medium
Beak curvature	slight to moderately curved
Shoulder width	narrow to medium
Shoulder shape	slightly elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak

**RGT WOLVERINE****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 1/4
Awns or scurs - length	short
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong (group 3)
Beak length	short
Beak curvature	slightly curved
Shoulder width	medium
Shoulder shape	elevated

**Lower lemma**

Beak curvature	moderately curved
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium to strong
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late to very late
Flag leaf - anthocyanin of auricles	absent or very weak



## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

### Ear

Density	dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Awns or scurs - distribution	upper 1/2

## CHARACTERS IN DETAIL

### Grain

Colour	reddish
Colouration with phenol	medium to dark

### Plant

Anthocyanin colouration of coleoptile	weak to medium
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	very short to short
Straw wall thickness (20cm below ear)	thin

### Glaucosity

Flag leaf sheath	strong to very strong
Flag leaf blade (lower side)	medium to strong
Ear	strong
Culm - neck	strong

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated
Length of beak	short to medium
Shape of beak	moderate to strongly curved
Extent of internal hairs	very large (Group 3)
External surface roughness	entire external surface rough

### Ear

Density	medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 3/4

## Winter Wheat

[AFP 1/3331]

# SANDY

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	medium to long
Shape of beak	moderately curved
Extent of internal hairs	very small (Group 1)
External surface roughness	smooth

#### Ear

Density	lax to medium
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/2

**SARTORIAL****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	upper 1/4
Awns or scurs - length	long
Apical rachis segment - convex face hairiness	strong
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	weak (group 1)
Beak length	medium to long
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short to medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	

## SKYFALL

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	awns present
Awns or scurs - distribution	whole length
Awns or scurs - length:	very long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	smooth
Extent of internal hairs	strong - Group 3
Beak length	long to very long
Beak curvature	v.slightly curved
Shoulder width	very narrow to narrow
Shoulder shape	elev. to elev with 2nd point

## Lower lemma

Beak curvature	straight
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## Grain

Colour	red
Colouration with phenol	dark to very dark

## Straw

Length	short to medium
Wall thickness @20cms below ear	thin

## Glaucosity

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

## Plant growth characters

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	medium
Flag leaf - anthocyanin of auricles	

# SNOWFLAKE

## CHARACTERS IN DETAIL

### Grain

Colour	white
Colouration with phenol	light to medium

### Plant

Anthocyanin colouration of coleoptile	medium to strong
Growth habit	intermediate
Frequency of plants with recurved flag leaves	low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

### Glaucosity

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

### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow
Shoulder shape	slightly elevated to strongly elevated
Length of beak	very long
Shape of beak	slightly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	awns present
Awns or scurs - length	very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	whole length

**SPEARHEAD****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium to long
Density	medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong to whole surface
Beak length	short to medium
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	strongly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

**SWALLOW****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	long to very long
Apical rachis segment - convex face hairiness	weak to medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	slightly rough
Extent of internal hairs	medium to strong (group 2+)
Beak length	long
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	medium

**Straw**

Length	very short
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong to very strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	very weak to weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak



**SY CHEER****CHARACTERS IN DETAIL****Grain**

Colour	reddish
Colouration with phenol	medium to dark

**Plant**

Anthocyanin colouration of coleoptile	weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

**Glaucosity**

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

**Lower glume**

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	moderately curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

**Ear**

Density	medium to dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/4

**SY INSITOR****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	lax to medium
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/2
Awns or scurs - length	long to very long
Apical rachis segment - convex face hairiness	medium to strong
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong to whole surface
Beak length	medium
Beak curvature	moderate to strongly curved
Shoulder width	narrow to medium
Shoulder shape	straight to elevated

**Lower lemma**

Beak curvature	strongly curved to geniculate
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**Grain**

Colour	red
Colouration with phenol	dark to very dark

**Straw**

Length	medium
Wall thickness @20cms below ear	absent or very thin

**Glaucosity**

Flag leaf - sheath	strong to very strong
Flag leaf- blade (lower side)	strong to very strong
Culm - neck	strong
Ear	medium to strong

**Plant growth characters**

Coleoptile - anthocyanin colouration	very weak to weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	absent or very weak

## SY MONZA

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

Flag leaf sheath	strong to very strong
Flag leaf blade (lower side)	medium to strong
Ear	strong
Culm - neck	strong

#### Lower glume

Hairiness of external surface	absent
Shoulder width	very narrow to narrow
Shoulder shape	horizontal to slightly elevated
Length of beak	medium
Shape of beak	slight to moderately curved
Extent of internal hairs	very large (Group 3)
External surface roughness	smooth

#### Ear

Density	dense
Length (excluding awns or scurs)	medium
Awns or scurs - presence	scurs present
Awns or scurs - length	long to very long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	small
Awns or scurs - distribution	upper 1/2

## SY NAIRN

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark

#### Plant

Anthocyanin colouration of coleoptile	very weak to weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	very low to low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	very short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium
Shape of beak	slightly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	small to medium
Awns or scurs - distribution	upper 1/4

## SY PINNACLE

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	medium

#### Plant

Anthocyanin colouration of coleoptile	absent or very weak
Growth habit	intermed. to semi-prostrate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	medium to late
Length (stem, ears, awns or scurs)	short to medium
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated to strongly elevated
Length of beak	long to very long
Shape of beak	slightly curved
Extent of internal hairs	very small to medium (Group 1+)
External surface roughness	rough

#### Ear

Density	medium to dense
Length (excluding awns or scurs)	short to medium
Awns or scurs - presence	awns present
Awns or scurs - length	very long
Colour	white
Shape in profile	tapering
Apical rachis hairiness on convex surface	very small to small
Awns or scurs - distribution	whole length

**THEODORE****CHARACTERS IN DETAIL****Ear**

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper 1/4
Awns or scurs - length	medium to long
Apical rachis segment - convex face hairiness	very weak to weak
Anthers - anthocyanin colouration	

**Lower glume**

External surface	smooth
Extent of internal hairs	weak to medium (group 1+)
Beak length	medium
Beak curvature	strongly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	geniculate
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**Grain**

Colour	red
Colouration with phenol	medium to dark

**Straw**

Length	very short to short
Wall thickness @20cms below ear	medium

**Glaucosity**

Flag leaf - sheath	strong
Flag leaf- blade (lower side)	strong
Culm - neck	strong
Ear	absent or very weak

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak
Plant - growth habit	intermediate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	

## Winter Wheat

[AFP 1/3332]

# TREBLE4

### CHARACTERS IN DETAIL

#### Grain

Colour	reddish
Colouration with phenol	dark to very dark

#### Plant

Anthocyanin colouration of coleoptile	weak
Growth habit	intermediate
Frequency of plants with recurved flag leaves	absent or very low
Anthocyanin colouration of flag leaf auricles	absent or very weak
Time of ear emergence	late
Length (stem, ears, awns or scurs)	short
Straw wall thickness (20cm below ear)	thin

#### Glaucosity

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

#### Lower glume

Hairiness of external surface	absent
Shoulder width	narrow to medium
Shoulder shape	slightly elevated
Length of beak	medium to long
Shape of beak	moderately to strongly curved
Extent of internal hairs	medium (Group 2)
External surface roughness	smooth

#### Ear

Density	medium
Length (excluding awns or scurs)	medium to long
Awns or scurs - presence	scurs present
Awns or scurs - length	medium to long
Colour	white
Shape in profile	parallel sided
Apical rachis hairiness on convex surface	medium to large
Awns or scurs - distribution	upper 1/4

## VISCOUNT

## CHARACTERS IN DETAIL

## Ear

Colour	white
Length	medium
Density	dense
Shape-side profile	parallel sided
Awns or scurs - presence	scurs present
Awns or scurs - distribution	upper $\frac{1}{4}$
Awns or scurs - length:	medium to long
Apical rachis segment - convex face hairiness	weak
Anthers - anthocyanin colouration	absent

## Lower glume

External surface	slightly rough
Extent of internal hairs	weak to medium - Group 1+
Beak length	medium
Beak curvature	moderately curved
Shoulder width	medium
Shoulder shape	elevated

## Lower lemma

Beak curvature	moderately curved
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## Grain

Colour	red
Colouration with phenol	dark

## Straw

Length	very short to short
Wall thickness @20cms below ear	thin

## Glaucosity

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

## Plant growth characters

Coleoptile - anthocyanin colouration	strong
Plant - growth habit	semi-erect to intermediate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	



**XI19****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 - length:	short
Awns or scurs - distribution	tip only
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong - Group 3
Beak length	medium
Beak curvature	moderately curved
Shoulder width	narrow
Shoulder shape	straight

**Lower lemma**

Beak curvature	moderately to strongly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	absent or very weak
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	late
Flag leaf - anthocyanin of auricles	very weak

**ZULU****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 $\frac{3}{4}$
Awns or scurs - length:	long
Apical rachis segment - convex face hairiness	medium
Anthers - anthocyanin colouration	absent

**Lower glume**

External surface	smooth
Extent of internal hairs	strong - Group 3
Beak length	medium
Beak curvature	slightly curved
Shoulder width	narrow
Shoulder shape	elevated

**Lower lemma**

Beak curvature	slightly curved
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**Grain**

Colour	red
Colouration with phenol	dark

**Straw**

Length	medium
Wall thickness @20cms below ear	thin

**Glaucosity**

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

**Plant growth characters**

Coleoptile - anthocyanin colouration	weak to medium
Plant - growth habit	intermed. to semi-prostrate
Time of ear emergence	medium to late
Flag leaf - anthocyanin of auricles	