

WHEAT DUS TESTING

Cereal DUS testing is carried out by the ACC department at NIAB on behalf of APHA.

To be granted Plant Breeder's Rights or be added to the UK Variety list, a new variety must be:

Distinct

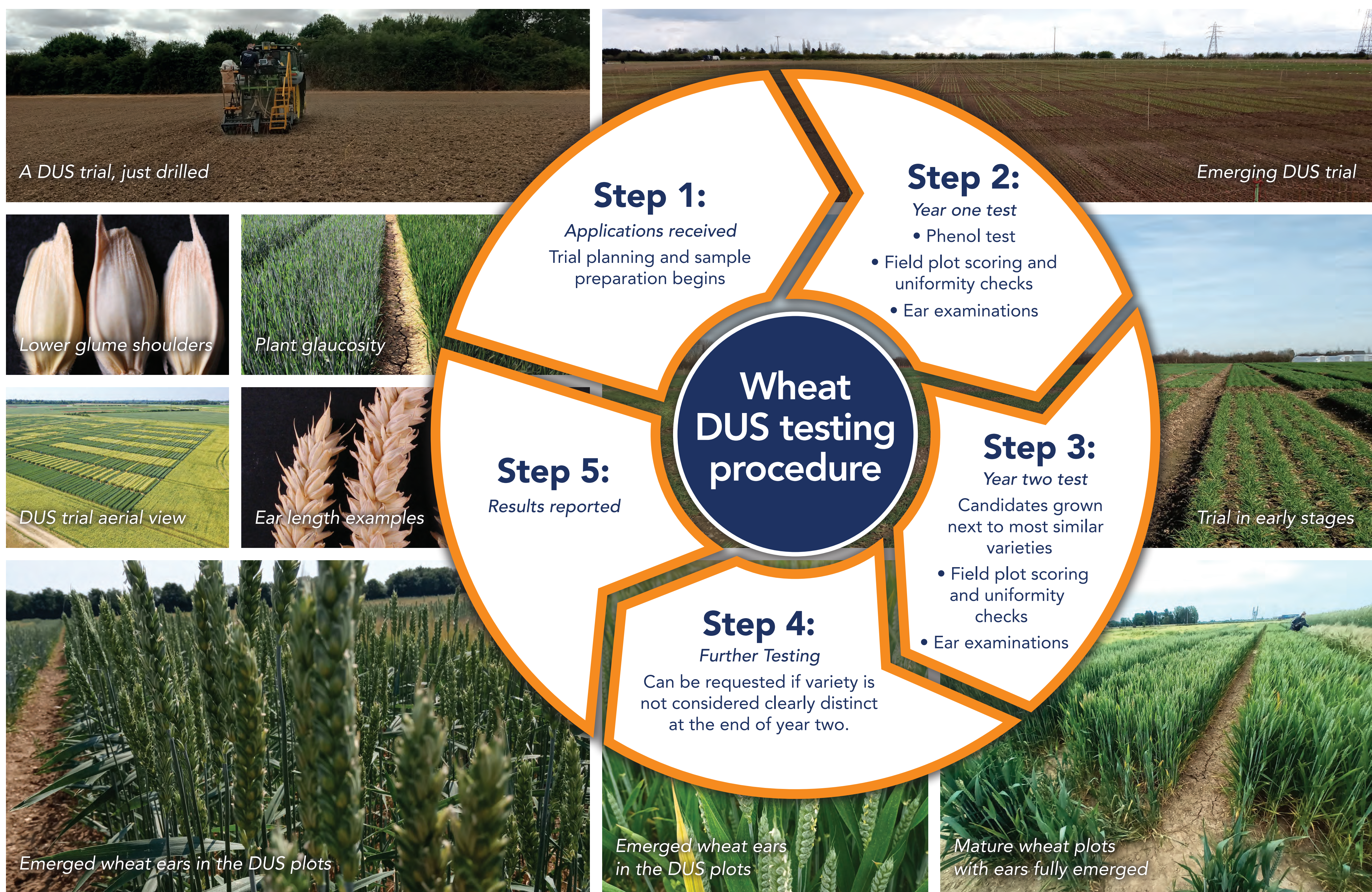
Must be sufficiently different from other varieties on the market

Uniform

Plants within the variety must have consistent features

Stable

Stable over more than one season



A standard DUS test for wheat involves two years of testing. In both years, plant characters such as growth habit, ear glaucosity and glume beak shape are assessed and scored.

The second year of testing ensures that new eligible varieties which have passed year one are distinct from the most similar varieties currently on the market.

What is the phenol test?

- The phenol test is a colour reaction carried out on wheat grains.
- It is used in DUS testing to score the phenol grain colour of a new variety and can be an early warning for any varietal off-types.



Ear characters

- These are scored on harvested ears later in the season
- Top left:** Shoulder elevation and width
- Top middle:** Ear length
- Top right:** Ear shape
- Middle left:** Beak length
- Bottom left:** Beak curvature
- Bottom right:** Internal Glume Hair



Plot characters

- Scored during the season
- Glaucosity
 - Plant length
 - Ear emergence
 - Vernalisation trial
 - Flag leaf attitude

Young plant characters

Scored in the plots and the coleoptile test which is carried out separately in the glasshouses.

- Growth habit
- Anthocyanin colouration of the coleoptile



Uniformity

Variety uniformity is also assessed throughout the season.

Off types that do not match the rest of the sample are recorded.

For a variety to pass DUS testing the off types must remain within acceptable thresholds.

