

RECOMMENDED LISTS

AHDB Recommended Lists (RL) for cereals and oilseeds: The assessment of the vernalisation requirements of winter wheat varieties (2022–26)

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Changes from previous version

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Part 1: General information

1.1 Aims

Varieties of true winter cereals all require vernalisation before they can progress from the vegetative to the reproductive stage of development. Vernalisation is a complex process involving the interaction of low temperatures and day length on the plant in initiating reproductive development.

The vernalisation requirement of winter wheat varies from variety to variety: all varieties obtain sufficient vernalisation when sown in the autumn but this character becomes increasingly important if sowing is delayed to the late winter and early spring when temperatures are rising and day length is increasing.

The work covered by this protocol is aimed at establishing the latest safe sowing date for varieties of winter wheat.

1.2 Crop

Winter wheat.

Part 2: Field plots and samples

2.1 Sites

To be located in Eastern regions of the UK. The site should be chosen where plots can be left in the field after the normal harvest timing and where any consequent shedding of grain or ears will not have serious consequences for the succeeding crop.

2.2 Trials

Winter wheat: WW581, WW582 & WW583.

2.3 Replications

One rep of each variety at three sowing dates in the spring, not taken to yield.

2.4 Plots size

Minimum plot size 1m².

2.5 Treatment

Agrochemicals should be used as appropriate for a commercial crop to promote 'normal' growth and to keep the plots substantially free of lodging, disease and weeds.

2.6 Sowing dates

1. 10th March
2. 24th March
3. 7th April

These dates are critical.

2.7 Varieties

All varieties on the AHDB Recommended List of winter wheat plus candidates. One spring wheat variety also to be sown as a control.

2.8 Management

The management of the plots should be as for a commercial crop: plots should be substantially free of disease and weeds with fungicides and plant growth regulators applied as appropriate.

Part 3: Records and Assessments

3.1 Records

Site, location, management and husbandry details plus any factors that have an effect on the growth of the crop and the data should be recorded. No yield data are required.

3.2 Assessments

There are to be two assessments: 1) when the spring control varieties have reached growth stage 61 (anthesis) and 2) when the spring controls have reached GS91 (mid to late August). The plots are scored for ear development and maturity. All plots at all sowing dates are scored. Scoring is done on the following basis:

Heading (1-9)

1 = no ears, still vegetative

9 = 100% ear development (as compared to the spring control)

Maturity (1-9)

1 = ear green

9 = ear fully ripe (as compared to the spring control)

3.3 Harvest & sampling

No yield data or samples required.