

## RECOMMENDED LISTS

### **AHDB Recommended Lists (RL) for cereals and oilseeds: Special spring barley high nitrogen plots for the production of grain for grain distilling tests (2022–26)**

This protocol was believed to comply with relevant agrochemical, environmental and other regulations at the time of writing but it is the responsibility of the contractor to ensure that it continues to comply. In the event of non-compliance the protocol should not be followed but the Field Trials Manager should be notified at once of how the protocol requirements would breach regulations.

Any deviation from this protocol other than under the circumstances described above may result in a breach of contract and should be agreed in advance.

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**Changes from previous version**

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## **Part 1: Background and aims**

Barley varieties suited to grain distilling are characterised by their relatively high grain nitrogen content expressed as total nitrogen % (TN%) and high enzyme levels (DP and DU).

Although varieties suited to grain distilling have a tendency for above-average grain nitrogen they may require additional nitrogen fertiliser to achieve acceptable barley TN% and malt TN%, DP and DU.

In commercial use, grain distilling varieties are grown at an increased, or later applied, level of fertiliser nitrogen, compared to malting distilling varieties. This practice increases the likelihood of varieties achieving acceptable levels of malt TN%, DP and DU.

It is not always possible to identify a new variety's potential for grain distilling when it is grown at the levels of nitrogen fertiliser applied to RL and NL trials.

The aim of these special grain production plots is to provide the Micro-Malting Group (MMG) laboratories with samples from plots that have received higher levels of nitrogen (i.e. in line with local practise) on which to conduct grain distilling malting tests.

## **Part 2: Field Plots and Samples**

### **2.1 Number and location of sites**

The special grain distilling sample production plots will be grown at five suitable sites in the North region if there are suitable high DU candidate varieties. Sites will be preferred that have a record of delivering high N samples, especially commercial crops of an MBC grain distilling variety such as Fairing or other suitable variety.

SB681T, SB682T, SB683T, SB684T, SB685T.

### **2.2 Varieties to be sown**

A suitable control variety (e.g. Fairing) will be grown.

RL candidate varieties will be selected in November each year. Of these candidates, only candidate varieties suited to malt distilling and identified during NL testing as having high DU characteristics will be grown; if no such candidate varieties exist in any year these plots will not be grown.

A small number of older varieties that are in commercial use may also be grown as comparators.

### **2.3 Design**

A single plot of each selected variety should be grown in single plots within a commercial crop intended to produce high N grain for the grain distilling industry. The plots must be arranged at 90° to the tramlines to allow fertiliser to be applied uniformly to each variety.

Plots may be grown next to RL or other trials but they must be arranged in the field in such a way as to allow the application of extra nitrogen fertiliser top dressing evenly and without damaging neighbouring plots.

## **2.4 Management and husbandry**

The plots should receive a nitrogen fertiliser treatment suitable to produce grain with a grain nitrogen content of 1.95% or above. The management of the plots is at the discretion of the trial manager or host farmer but typically the amount of N fertiliser applied will be 40 kg N/ha higher than NL/RL trials.

A proportion of the total N applied may be to the seedbed (i.e. within one week of sowing) with a second application at the four leaf stage (typically, four leaves unfolded and with 2 or 3 tillers).

All plots should be treated with fungicide and plant growth regulator according to the NL/RL protocols.

The sowing date should be within a day or two of the host farm crop or, if sown next to trials, the same day. Seed rates and other agronomic inputs should be the same as the NL/RL protocol.

## **2.5 Varieties to be tested**

As advised by MMG/MAGB.

## **2.6 Site data and location details**

A workbook will be supplied by the RL Data Team. This workbook should be used to record site location, management and husbandry details to the requirements and deadlines given in the main Protocol 001 CER 22-26 - AHDB RL Cereal trials H22-26. Data must be submitted in a format defined by the RL Data Team to [trials@ahdb.org.uk](mailto:trials@ahdb.org.uk).

Yield data are not required from the plots.

The plots will be subject to an inspection by an appointed representative of AHDB.

## **2.7 Harvest and sample preparation**

At harvest, 2kg of grain should be collected in cloth bags from each plot.

All samples should be identified by labels inside and outside the bags showing site, year and variety code/AFP number.

All samples should be dried (if necessary) to 12% moisture content.

The Micro-Malting Group (MMG) chair will determine the list of MMG members to receive samples.

Arrangements for the distribution of samples will be made by the Field Trials Manager.

# **Part 3: Barley and Malt Analyses**

## **3.1 Barley and malt analyses**

Grain nitrogen and germination tests will be carried out on the control for sample selection purposes. Samples will be selected by the MMG chair.

Each participant MMG member should undertake barley and malt analyses according to the MBC MMG Protocol for Barley and Micromalt Testing.

### **3.2 Data handing and report production**

Barley and malt analyses data should be submitted (on the agreed data recording sheets) by e-mail to AHDB at [trials@ahdb.org.uk](mailto:trials@ahdb.org.uk) two weeks before the April meeting of the MMG to allow time for data storage and the production of report summaries for Micromalting Group and Barley Committee use. This deadline will be set annually and will be in early April.