

# MGA TIMES

## Maize Growers Association

June 2021

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### Date for your Diary: MGA AGM!!

The MGA Annual General Meeting has been set for 2nd September 2021. It will be held in Shepton Mallet and attendees will be invited on a farm walk and to view the MGA South West Trial Site before discussing the annual accounts and association achievements during 2020/21. We're very much looking forward to inviting members to a face-to-face event at last and showing you some of our trial progress! Open to all members. More information to follow.

### Introduction to 2021 trials

You will be aware that a portion of your membership sub goes towards our annual research programme which in turn enables us to give you reliable and real-life advice, as well as to test scenarios that are perhaps not ready for field-wide implementation but that you would like to learn more about. Below is a crash-introduction into the trials being run this year. We will be reporting observations over the coming months, and will be exploring the results in the annual conference next February. There will also be the opportunity to see some of these trials in situ. More details on this to follow.

Pre-emergence, post-emergence, and sequential weed control - tests products currently on the market and emerging products either used as a pre-em, post-em, or in combination. Weed counts are done to determine efficacy, and this year we intend to take the sequential trial to harvest to assess impacts on final yield.

Cultural Weed Control - will be testing methods on non-chemical weed control in conjunction and against the 'standard' herbicide routine. We will be reporting weed counts and final maize yields.

Fungicide - this will determine the efficacy of various fungicides against eyespot, but will also assess whether there is a benefit to using fungicides even where there is no disease present.

Drilling date and depth - mid-April and mid-May drilling at both 5 and 10cm deep to compare speed of spring growth and final yield and quality. This is based on the theory that we may lose Korit in the future and that deeper drilling may help to deter corvids but may also be equally successful in terms of plant emergence and growth.

Starter fertiliser - determines how types and quantities of starter phosphate affect speed of spring growth and final yield

Nitrogen and N inhibitors - different rates of nitrogen applied and types of nitrogen inhibitor to see how it affects final yield

Undersowing Grass - ryegrass and fescue at different rates and time of undersowing will be compared to determine whether there is a yield or quality effect on the maize

Biostimulants - the effect of different biostimulants on the yield and quality of maize

Undersowing with Non-Grass Species - where wireworm is a problem or different cover crop benefits are required, non-grass species may be considered. We aim to determine undersown crop emergence and effect on maize crop

Maize and beans - German research has shown great success companion cropping maize with beans. We aim to find out how final yield and quality of the crops is impacted by growing them together

If you would like to know more, or would like to see any of the results from previous years trials, do get in touch.



N curve trial 150kg N vs 0kg N in June 2021



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### Undersowing Webinar



Thank you to those that attended the undersowing webinar this month (kindly sponsored by Bright Maize), I hope that you found it useful. We have recorded the event so if you missed it but would like to watch it, please email the office.

If you have any questions on the webinar or your undersowing plans, do get in touch with us - MGA agronomist, Jon, is on hand to answer your queries.

## Why does late drilling mean late harvest? The maths.

Some members may be nervous that their late drilling, due to the inclement weather in May, will lead to a later harvest date, so greater risk of soil damage and erosion, and a challenge to drill cover crops or following cash crops. This section goes into the detail of what Ontario Heat Units (OHUs) are, how they affect the speed of growth of your maize, and how they are calculated.

### What is an OHU and how are they calculated?

An OHU is an internationally recognised measurement of cumulative heat and is calculated over a typical maize growing season. OHU's can be used to determine how quickly maize is maturing and also how suitable different areas of the UK (and world) are for different maize varieties.

Measurements start in mid-April. The highest and lowest temperatures during the day are recorded and an average is taken. The base figure for maize growth is then deducted (10°C), leaving a value which is your OHU for that day. Each figure is added on to the previous days to give a cumulative figure which is the total heat units so far. The base figure is such because maize will not usually continue growing below this figure. There is also a maximum figure of 30°C, above which maize growth does not increase with temperature, so this should always be used as the maximum figure if daytime temperatures have exceeded this. An example of the OHU calculation is below:

Maximum daytime temperature: 24°C Minimum daytime temperature: 11°C

OHU for the day:  $(24+11)/2$  to give average temperature, then minus 10 (base figure), to give 7.5 OHU.

### How does this affect maize growth?

Maize requires a set number of OHUs over the growing season to reach maturity depending on whether it is an early, mid or late maturing variety. As a rough guide, an early variety would require a total of 2000-2500 OHU to reach maturity by mid-September, and a late variety around 2400-2900+ OHU by mid-September. When you drill your maize, it typically requires 45 OHUs to produce one true leaf, or around 300 OHUs for full emergence. Therefore, for each day that the temperature remains too low for emergence, it is one day fewer to collect heat units, pushing harvest back until the required OHUs are reached. Using this theory, you can predict when your maize will emerge, but there is also scope to estimate when certain pests may become a threat, and when harvest may occur. KWS have developed a Heat Unit Tool which predicts harvest date depending on location and drilling date based on the previous five-year OHU averages. This can be found if searched for on the internet, and may be interesting to compare to your chosen harvest date later in the year based on dry matter tests.

OHUs can also be used to determine the variety that would best suit you depending on your location. If you are in an area with typically lower total heat units between mid-April and mid-October, you would need to be drilling an early maturing variety, whereas if you were in an area of high OHUs, you could experiment with later-maturing varieties. Limagrain have developed a resource called the 'LG Heat Map Tool' (can be found by searching online) which shows the average number of heat units in your region from the last ten years. It may be of interest to see what your average heat units are and compare to the MGA site selector tool (found in the MGA Variety Booklet) which takes location but also site characteristics into account. It is very important to consider that, whilst you may have optimum heat units for certain varieties, some fields, if steep, with poor drainage, or next to a watercourse, may still be unsuitable for later-maturing maize.

*There will be tools available from other seed companies so please do look around. We do not recommend any one above another and would suggest that you use a qualified independent agronomist to guide your decision making before and during the growing season.*

From kws.com

### LG Heat Map Tool

We have developed the LG Heat Map Tool in conjunction with The Met Office to provide quick and easy advice for maize growers on variety selection.

To find out which maize varieties may be suitable for your farm, simply enter your postcode below to discover the number of heat units available to grow maize in your area.

The LG Heat Map Tool uses the internationally recognised Ontario Heat Unit (OHU) system to show the average available heat units, calculated from a 10 year period, available for maize to be grown in a particular location.

From lgseeds.co.uk