

## TRIAL RESULTS

Three of the speakers at this year's upcoming Maize Growers Association (MGA) Conference, Neil Groom, Simon Draper and Oli Knowland, reflect on the results of recent trial work.

# Maize trials point way to raising crop output

**T**rial work carried out last year showed the importance of getting maize off to a clean start.

And while the best pre-emergence herbicide gave up to 60 days freedom from weeds, it did not provide season-long weed control.

There were differences in post-emergence treatments as well, with the best giving season-long weed control. Timing was critical and where weeds were already big (more than the two-leaf stage), yield losses had already been accrued.

According to Simon Draper the best treatments were where weed control was applied twice – a pre-emergence followed by a post-emergence. In these situations, a poorer pre-emergence, followed by a good post-emergence, was equally as good as a good pre-emergence herbicide followed by a poorer post-emergence treatment.

Both sequences gave virtually 100% weed control, with variations only in the level of grass weed control due to the quantity of grass



Neil Groom, technical director for Grainseed.

weed herbicides in the sequence.

The next question is to do with whether to roll the maize seedbed after drilling or not. If drilling is early and the weather is mixed, the field should be left rough to allow drainage of rainwater away from the seed, as otherwise it can rot it.

However, if dry conditions prevail, the seedbed needs to be rolled to conserve moisture, which is even more important in drier areas of the country. Under drier, later conditions, seed should be

drilled into moisture even if it is at 100mm. This is likely to affect the final yield, but it is important to get rapid germination from late drilled crops to ensure a good harvest.

There is discussion underway about the possible withdrawal of Mesurol as a seed dressing. If this were to occur, deeper, later drilling, followed by rolling, may have to be carried out to avoid rook damage.

This is likely to incur a yield penalty and the MGA will be carrying out some trial work to determine what these yield losses might be.

Maize, in general, does not suffer from many diseases and is not routinely treated with fungicides, but growers in the West need to keep a look out for eyespot, which can infect plants when conditions are cool and wet.

Reporting to the conference on a fungicide trial near Caernarfon, South Wales, Neil Groom, technical director for Grainseed, says last summer the weather conditions were ideal for eyespot, with cool weather and rain during August when the wheat harvest started.

### MGA Conference

▶▶ **When:** 9am on Wednesday, February 28, 2018

▶▶ **Where:** Peterborough Arena, East of England Showground

▶▶ **Details:** 01363 775 040

Untreated plots had only 20% green leaf area (GLA) at harvest on October 5, despite the field being sown with an ultra early variety with a high rating for eyespot resistance.

Eyespot levels were over 50% leaf area on upper leaves and 15% on lower leaves. The use of fungicides doubled GLA on upper leaves and reduced eyespot levels to 15% or less on these upper leaves.

### Harvest

This impacted on the maize harvest with much higher starch levels on the treated plots where leaves remained green, allowing sugars to be converted to starch. The higher grain content increased crops' dry matter, because the plant matured rather than died with an immature cob. At harvest, the cob and grain are 60% of total yield and, therefore, getting proper maturity has driven DM ahead of the leaf just dying.

Eyespot spores are blown long distances and are normally observed in July onwards. High temperatures of more than 28degC stop the pathogen increasing, so during hot summers, no disease is observed and fungicides are not needed. Previous MGA trials have shown fungicides give protection for six weeks.

High clearance sprayers can apply fungicides even in July and do little

### MGA cover crop trial: maize harvest 2017

Source: MGA

