

MGA TIMES



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MGA MAILINGS THEME FOR THE YEAR “ REDUCING COSTS ON A £/TDM BASIS”

In this Issue

- ◆ Costs of forage production.
- ◆ Top tips for maize in 2015—Simon Draper.
- ◆ Cover crops- John Morgan.
- ◆ Nitrogen timing on maize—John Morgan.

Not surprisingly, especially in the maize for livestock sector, reducing costs of production is high on the agenda. Importantly the focus should be on reducing costs per tonne of Dry Matter (DM) rather than per unit of area (per hectare/acre) as reducing costs on per unit of area basis can sometimes impact on crop yield, with the result that savings are not actually made per £/tonne DM.

With this theme in mind, we are, in this mailing looking at two key growing costs, the first of which is crop nutrition, with the second being crop establishment. The contributions from John Morgan focused on crop nutrition and Simon Draper on agronomy, both aim to boost crop yields, with the results that some of the more fixed costs of growing maize are diluted by more production.

As the season progresses, the focus will move on to post emergence weed and disease/pest control.

MAIZE TRAINING DAYS REPORT – 10TH & 11TH MARCH

Simon Draper and John Morgan from the MGA were joined by Kate Smith of ADAS for two Maize Training Days in March. The first meeting, kindly hosted by John Jackson and Severn Trent, focused almost inevitably on maize growing for biogas production. The second meeting was based at CEDAR near Reading and had a maize for livestock bias.

Kate started proceedings reviewing the crop production, nitrate and soil erosion results from the two site, three year DEFRA funded project focused on different establishment techniques for maize. Key conclusions were that over sowing worked both in terms of grass establishment, reduced over winter nitrate and soil loss. Perhaps not surprisingly maize yields suffered when planted in to a growing crop of grass or biodiversity seed mix. The next step of this work will be to consider various over sowing establishment techniques while retaining as much year around biodiversity as possible.

Simon Draper used the opportunity of the meeting to review the latest maize establishment and crop nutrition information and in particularly challenged the need and crop yield benefit of starter fertiliser. John Morgan reviewed variety selection finishing with the conclusion that good agronomy has a far greater impact on eventual crop yield and quality than variety choice.

The two meetings were the final of this winters training programme. We would like to thank all four hosts, for organising the venues and refreshments. Watch this space for notification of more meetings in the coming growing season.

MAIZE AND THE NEW BASIC PAYMENT SCHEME

A key project for many at present will no doubt be getting to grips with the application for and new rules associated with the Basic Payment Scheme. In terms of maize growing issues to consider are the dramatically ramped up Cross Compliance rules associated with soil erosion from land (GAEC 5) and the potential to use oversown/undersown grass cover crop as an option to meet your Greening, Ecological Focus Area requirements. Within this mailing John Morgan provides an update on the undersowing work done in Denmark in the hope that growers considering the option can learn from those with a lot more experience. To further our understanding of over/under sowing we are working with FWAG south west and the Catchment Sensitive Farming projects to develop demonstration sites. Dates to visit the sites will be published in due course. John Morgan has also visited DEFRA in London to talk about the issues with those who may be able to support further work



Drilled oversown grass in Denmark shows what is possible.

EXAMPLE OF A N PREDICTOR RESULT SHEET

It will not have gone un noticed that we have been pushing the MGA N predictor quite strongly this year with a technical note based on crop nitrogen supply in both this and the last mailing. We believe the subject of considered application of nitrogen to maize ground to be very important both on a crop production and environmental basis. Applying the correct amount of nitrogen will maximise economic maize yields and in so doing reduce costs per tonne of maize DM. Such an approach will also reduce the amount of soluble nitrogen swilling around in the soil and as a consequence reduce the risk of excessive nitrate leaching to the surface or ground water.

Having considered the RB 209 based alternative, we believe the MGA Nitrogen Predictor is the most up to date and proven method of working out how much nitrogen is required for your crops. The N predictor takes into account soil nitrogen, that supplied by manure and crop demands to come up with a field specific recommendation. Please fill in the input form sent to you in the last two mailings, there is also a form you can download from the MGA website if you have mislaid your copy and return it to the office for your own recommendation. Also please feel free to make contact with the office team, or Simon to discuss the approach further.

Below is a real life N Predictor result sheet showing individual field recommendations, plus an explanation as to how the recommendations were generated. Thanks go to vice chairman Stephen Temple for letting us use his results.



MGA NITROGEN PREDICTOR

Make better use of expensive Nitrogen by only applying what is needed.
Save money and reduce leaching

| | |
|-------------------------------------|-------------------------------|
| Members Name: Stephen Temple | Farm Name: Copys Green |
|-------------------------------------|-------------------------------|

| Field Name | Field Size (hectares) | Variety | Nitrogen Prediction | |
|------------------|-----------------------|-----------|---------------------|--------------|
| | | | (kg/ha) | (units/acre) |
| Binham Road W | 8 | Emblem | 0 | 0 |
| Binham Road E | 14 | Kaspian | 56 | 44 |
| Doughty Track | 9 | Glory | 106 | 85 |
| Ellis | 16 | Glory | 106 | 85 |
| Dalling | 18 | ES Regain | 125 | 100 |
| Dalling Building | 8 | ES Regain | 188 | 150 |
| Dyes | 17 | Kaspian | 119 | 95 |
| J Smith | 7 | Asgaard | 169 | 135 |

NVZ Warning: In drawing up the **N Predictor** recommendations, no account has been taken of the NVZ N max for maize (150 kg/ha). Farmers in an NVZ should ensure that they do not exceed the maximum allowable amount of N (N max) on their maize crops.

Introduction

The table above sets out the approximate requirement for inorganic Nitrogen on maize grown in your individual fields.

The recommendation is based on the information you entered on your Data Sheet. Additions and deductions are made from a standard crop requirement of 150 units N/acre as a result of these answers.

NB

To ensure that N is supplied to the crop when it most needs it we recommend that you apply 60% of the Nitrogen pre-emergence with the remainder being applied post-emergence at the 2 - 4 leaf stage. Where the recommendation is 30 units or less we recommend that remaining N, after application of starter fertiliser, is all applied post-emergence at the 2 - 4 leaf stage.

If you are unhappy with the recommendation that has been generated please contact the office before fertilising the crop.

How is the recommendation generated?

The predictor takes many factors into account. Some of the logic behind its decisions has been set out here:

Variety and harvest date

Nitrogen applications should be tailored so that maize reaches maturity at suitable harvest date. Too much Nitrogen causes maize to mature more slowly. To ensure late varieties reach maturity in most seasons it is vital that not too much Nitrogen is applied.

Soil Type

Heavier soils tend to retain more natural fertility leaving less of a requirement from inorganic sources.

Soil Structure

Maize has a deep root system. Nitrogen levels need to be increased to feed the plants with limited room for root growth.

Previous Cropping / Past History

Residual soil Nitrogen available to the maize crop depends largely on the past history of the field.

Spring / Autumn Rainfall

Heavy rainfall pre drilling has the potential to leach Nitrogen out of the soil thereby increasing the inorganic requirement.

Drilling Date

Early drilled crops may need extra Nitrogen to reach their potential. Later drilled crops have a shorter growing season and will use less.

FYM and Slurry

The amount, type and timing of organic manure applications influence the amount of organic Nitrogen available.

Keeping records of organic manure applied will allow more accurate applications of fertiliser.