PROCAM
AGRONOMY THAT DELIVERS™

Technical Update
FEBRUARY '17

February Focus

As spring beckons the priority will be to plan the early season husbandry to get crops off to the best possible start.

Relatively benign conditions in December allowed even late sown cereal crops to make steady progress. But the colder temperatures in January will have restricted plant development and slowed mineralisation of soil organic N. Technically the closed period for the application of manufactured N to arable crops under NVZ rules ended on the 15th January. Crops have had no urgent need for N where soil temperatures have remained below 5-6°C but as days lengthen and soils warm the first priority for many will be to look at the nutritional requirements of cereals and oilseed rape. N applications will be the initial driver for growth. Under NVZ rules remember that the quantity of N to be applied must be planned on a field by field basis before applications start. The plan needs to show that you have:

- Calculated the amount of nitrogen in the soil available for uptake by the crop during the growing season (the soil nitrogen supply)
- Calculated the optimum amount of nitrogen that should be applied to the crop, taking account of the soil nitrogen supply (the crop nitrogen requirement)
- Calculated the amount of nitrogen, from any planned applications of organic manure, (the crop available nitrogen) and finally
- Calculated the amount of manufactured fertiliser required

Before applying either organic manures or manufactured N a field inspection is required to assess the risk of run-off into surface water. Obviously, the risk is increased on sloping ground and where fields are close to rivers, streams and water-carrying ditches. Although opportunities for access to land may be limited when the soils are wet applications of N must not be made when soils have been frozen for more than 12 hours in the previous 24 or when snow covered. Normal common sense should also meet the requirements not to apply N to waterlogged or flooded ground. Applications on a frost that thaws during the day are permitted. Remember also that records of fertiliser applications must be kept for at least 5 years. Your ProCam agronomist will have details of the NVZ rules and will also be able to advise on and help prepare a Nutrient Management Plan to enable you to meet the NVZ requirements.

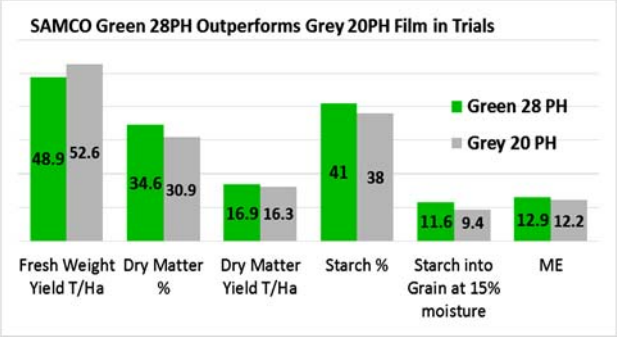
Following on from Nitrogen other crop nutrient requirements will need to be planned to promote vigorous and healthy spring growth.

Sulphur should now be applied routinely to all crops, not just to oilseed rape. Lack of available S can reduce N-use efficiency and restrict early spring growth. Other key nutrients for cereals are magnesium (Mg), manganese (Mn), copper (Cu) and zinc (Zn). Any shortage of these will lead to a less efficient, less healthy plant. Oilseed rape also has a relatively high demand for boron. It has several key roles in plants and is required for both cell division and cell elongation. Boron is particularly important for root development, during stem extension and at flowering and is essential to ensure good pollen production and ultimately pod formation. Molybdenum is also an element important in oilseed rape, even sub-clinical deficiencies can result in poor growth and poor N utilisation. Early intervention to limit the risk of nutrient shortages is the best approach. Once symptoms of deficiency are obvious, damage has already been done. A healthy crop is better able to stand up to the threats from disease and makes better use of fungicide and nutrient inputs.

Forage Maize

Improving Yield Potential

Even in areas of high solar radiation e.g. the south west of the UK, high rainfall and/or exposed field sites can reduce the necessary heat units for maize to reach full maturity. This is especially the case with hybrid varieties and will be exacerbated in more northerly areas. To reduce any climatic restriction on maize performance ProCam has been working with Samco for a number of years to develop and demonstrate the advantages of sowing maize under biodegradable mulch. This technique using the Samco 3 in 1 machine which sows seed, sprays the soil with pre-emergence herbicide, and lays a thin layer of Biodegradable Film over the seed bed. This protects the young maize plants from late frost, increases the soil temperature and thus maximises the crop yield per hectare. ProCam SW's Barry Mills who has led the development of this system in the UK has carried trials comparing various types and colours of the available films.



ProCam's recent trials have shown that colour does matter, especially with regard to improved dry matter and quality.

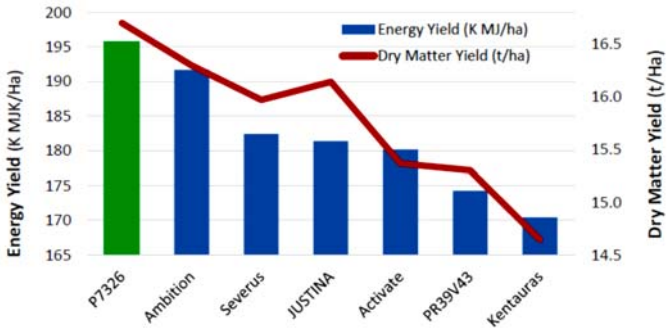
Using a green film gave better overall performance than the older grey options. The other challenge that ProCam has been addressing is to identify the hybrid maize varieties that are best suited to being grown under film. Impressive results were found in 2016 from the top varieties Isanto and P8201.

	Dry Matter %	DM Yield (t/ha)	ME		Starch	
			Mj/kg	Yield (kMj/ha)	%	Yield (t/ha)
P8201	31.2	17.5	11.5	201	30.1	5.3
P8200	31.1	17.1	11.4	195	31.2	5.3

PACTS 2015-16; Head to Head; 2yr, 7 sites.

On less favourable sites a variety such as P7326 is an ideal alternative. P7326 has excellent early plant vigour that helps the crop cope with cooler soils. It also has great standing strength at harvest combined with good disease resistance.

Pioneer has conducted 47 trials over the last 3 years comparing P7326 against competitor varieties e.g. Ambition. P7326 has shown a consistent yield performance advantage over Ambition on the Less Favourable sites. Combined with a good starch content and fibre digestibility P7326 delivers good ME silage and a very high per hectare energy yield without the year on year variability of competitor varieties.

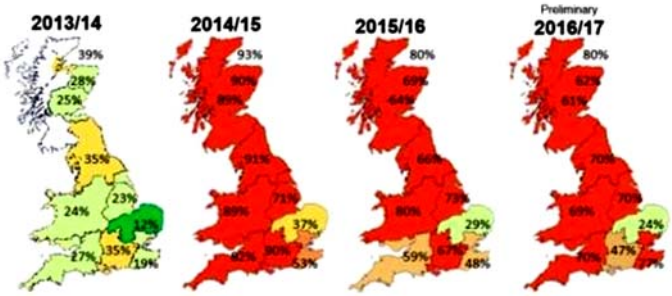


Contact your local ProCam SW agronomist for the latest information on the best maize varieties to suit your farm and management system and how variety performance can been optimised using Samco's Biodegradable Film.

Oilseed Rape

Light Leaf Spot 2017

The autumn Light leaf Spot (LLS) forecast showed that the risk to LLS development in oilseed rape in crops across the UK is high for the 3rd year in a row. Prepared by Rothamsted Research with support from AHDB and Bayer the forecast shows a broadly similar risk across all UK regions compared



with 2015-16. Crops, especially those made up of varieties with LLS ratings below 6 , need close monitoring from now on. The early spring period is an important period for LLS control, even more so if autumn sprays were compromised or missed. The standard spray threshold of 25% plants affected only applies at the stem extension stage. If LLS is found before this timing there is no threshold and early fungicide application is recommended to prevent the disease spreading within the crop. Check with your ProCam agronomist for the latest LLS risk and ensure your crops have the appropriate protection

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