

Get your soil in good shape for maize

Lifting prospects for 2009 maize relies on early preparations

A challenging season in 2008 for forage maize ended with the majority of growers harvesting better crops in the autumn than they feared in August and early September. What steps can you take to minimise the risks and ensure success in 2009?

Soil preparation is key to getting your maize crop off to a flying start. It lays the foundations for a successful maize growing season. And, since many growers will have found ground conditions difficult throughout the 2008 harvest period, carrying out cultivations now to rectify the rutting and compaction problems that will have been created in many cases is more important than ever. It's also vital to address soil fertility and any weed problems in a timely fashion. Being ahead of the game on these crucial aspects of preparation for the 2009 crop is key to making a success of forage maize this year.

Soil structure

According to British Seed Houses' Helen Mathieu, potential soil problems will be

both on the surface and deeper down, and the most appropriate action will depend on soil type.

"It's important to avoid run-off if possible," she says. "On lighter soils there is nothing better than a chisel plough to open up the surface to allow water to permeate into the soil. On heavier soils the ideal solution is to plough, but if conditions are too wet to plough the whole field you should at least plough the bottom headland to stop the soil being washed off the field."

The key point with rectifying deeper compaction problems is to take action at the right time.

"Dig a hole or use a compaction meter to establish at what depth you have a problem, and then go in at the right time and at the right depth," says Ms



Helen Mathieu: "Growing maize requires forward planning and timely preparations"

Mathieu. "Sub-soil when the soil is dry enough to 'crack and heave'. If you go when the soil is too wet it is simply a waste of time - and diesel - and could potentially cause irreparable damage.

"If you are on heavier land, I would always recommend winter ploughing and don't plough too deep. Plough deep enough to bury the trash and then sort out the sub-soil after you've ploughed - this will be more fuel efficient and it will rectify any problems that may be created by ploughing."

Even if conditions don't allow cultivations to take place, there's no excuse for not doing a soil test to check



Soil damage: conditions in 2008 left many maize fields rutted and suffering from compaction problems. The advice is not to leave it too late to rectify fields that are going back into maize

Seed treatment maximises dry matter

Maize growers can gain up to 5.5t/ha more dry matter yield - and improve the consistency of silage in the clamp - by using the most fully-effective seed treatments against seedling diseases. French trials have shown that the use of Syngenta's Maxim XL can cut plant loss in extreme disease and weather conditions to less than 10%.

In comparison untreated plots were a write off with more than 90% of the plants dying off. And the nearest competitor fungicide left the crop with between just 55% and 85% plants standing.

"Seedling blight diseases are particularly prevalent in the UK and

similar responses to using the seed treatment have been seen here," says the company's Will Holmes.

"Maize growers often have to compromise establishment by getting the crop in, in good time, in seedbeds that are cold and wet. These conditions encourage soil and seed borne disease," he says.

"But growers recognise that by drilling as early as possible, they can maximise dry matter production and boost energy levels in the clamp.

"The result is disease risk and slow growth that can compromise plant counts and establishment."

He points out that while growers have

been able to use the seed treatment bought in on imported maize seed, it is only now, following UK Approval that the company is able to promote the product.

"It's a globally recognised brand - one that is a market leader across Europe and it's already used in two thirds of the UK maize area," he says.

"There are also benefits from reduced stem rot due to lower carry-over of fusarium. This means crops are less prone to lodging later on in the season," he adds.

"Similarly, by reducing the levels of disease at the base of the plant, treated crops are less susceptible to fusarium."

pH and soil nutrient levels. Also, if you are planning to plough up an old pasture to grow maize, it's still important to do soil test in good time.

Maize really needs a pH of no less than six, so make plans to apply lime if necessary, ideally after the plough.

Phosphate (P) and potash (K) indices of 2 are ideal for maize, and use as much livestock manure (preferably analysed for P and K) as possible, but be aware of the new NVZ requirement and don't exceed your maximum nitrogen limit.

In the case of forage maize, this means that nitrogen from applications of manufactured fertiliser or crop available nitrogen from applications of livestock manure should not exceed 150kgN/ha on average across your unit. As soon as temperatures warm up

sufficiently in the spring, any grass weeds that have established and are growing should ideally be sprayed off with glyphosate. Such timely action will help overcome problems in an establishing crop, when control is more difficult and more costly.

Best variety

And reduce the risk of a poor growing season - and a poor crop - by selecting the best variety for your unit.

Ultra early varieties (maturity class 10 and 11) have the ability to reach maturity in a shorter season and so offer a significant advantage in a number of different situations, including seasons with less-than-ideal weather conditions.

The performance of ultra early varieties such as Revolver, Scimitar and Camelot

in 2008 proves this point. At maturity class 11, Revolver again tops the Recommended Lists for 2009 - offering extreme earliness without any significant loss of yield. This is good insurance against another poor season, but there are other advantages, as Ms Mathieu explains.

"Ultra early varieties do reduce the risk of disappointment in a difficult season, but they are also a good option in the best of seasons if, for example, you are drilling maize later, after first cut silage," she adds. "Ultra earlies are of course the best options in marginal areas, or where heavy soils really make life difficult if harvesting late into the autumn."

Rachael Porter