



The creation of an even seedbed will ensure maize seed is sown to a consistent depth.

The second article in our KWS-sponsored Maize Matters series takes a timely look at seedbed preparation, crop nutrition and weed control.

Getting seedbeds and treatments correct for this year's maize crops

Drilling dates are expected to be delayed this year and Giles Simpson of Pearce Seeds says some of his clients in the South West are expecting to wait until at least the last week in April/first week in May, before sowing.

The maize acreage may be increased in some parts of the country, he says, because soil structures have suffered due to the prolonged wet spells and are not suitable for wholecrop cereals.

Ideally, seedbeds should be fine and firm, although he admits this may not be easy to achieve.

"Sub-soiling will help to alleviate compaction, if ground conditions permit," says Mr Simpson. "The creation of an even seedbed will ensure seed is sown to an even depth. But if at all possible, it is better to restrict passes to a minimum.

"We may run into problems



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GILES SIMPSON

later in the season if we experience several consecutive days without rain. If this occurs, the top few centimetres of soil could bake out and deprive the seed of the water it needs to germinate. But it seems unlikely that lack of moisture is going to be a problem."

The standard seed rate is 111,200 per hectare (45,000/acre) and this should be used in cases where the soil is wet and cold. However, on late-drilled land which has warmed up and dried out, the seed rate should be set

at about 103,785/ha (42,000/acre). This reduced level can help to bring harvest forward by one week.

He stresses soil temperatures will need careful consideration.

"Some people believe that sowing can go ahead once the soil temperature reaches eight degrees C, but plant breeders are still recommending that growers wait until it gets to 10 degrees C and rising, in order to maximise crop potential."

Fertiliser

Starter fertilisers will be more important than ever this year, as maize crops will need every advantage, according to Brendan Paul of Agrii. The addition of mono ammonium phosphate (MAP) or di-ammonium phosphate (DAP) at sowing will provide an easily accessible source of nutrients in the initial stages, boosting root growth and general development.

Phosphorus in particular does not move easily in the soil, so placing an accessible form of the

SEED RATES

SEED rates should be adjusted in the run up to planting in accordance with seedbed conditions.

John Burgess, maize product manager for KWS UK, says 2012 highlighted the vast difference in yield and maturity between drill date and seed rate. "Many later drilled crops out-

performed those sown at the beginning of April despite the relatively warm, early spring," he says.

He adds the optimum plant density for bulk yields of forage maize is about 112,000 plants/ha (45,325 plants/acre) or if a higher starch level is a key aim, 105,000 plants/ha

(42,490 plants/acre).

Grain maize, in contrast does better from a plant population of 95,000/ha (38,445/acre) and the more aggressive bio-gas varieties grown for bulk should be established at 105,000-110,000 plants/ha (42,490-44,515 plants/acre), advises Mr Burgess.

nutrient close to the seed will get it off to a good start. The technique has additional value where temperatures are low and on heavy soils. It can also encourage early maturity.

Most maize growers will have large quantities of organic manure they need to spread on the land, but Mr Paul advises caution.

"Normal rates should be cut by about 50 per cent," he says. "This may sound extreme, but applying FYM or slurry to cold, wet soils will result in a layer which will not break down easily in the soil. It can be ploughed in, but a rotavator would be my preferred choice. Another idea is to use two applications, instead of one. Seedbeds may need to be left fairly open to allow for the evaporation of excess water.

"Over-feeding the crop can also delay harvest. This situation must be avoided, especially if growers are intending to plant wheat and require an early entry."

Herbicides

Pre-emergence herbicides have a place in the management of maize crops, whether they are used as a stand-alone or as part of a two-spray programme, says Neil Potts of Matford Arable. The main threat to maize crops comes from weeds such as knot-grass, redshank, fat hen and white nightshade. Docks can also cause serious problems on some farms.

"Maize is highly vulnerable to any form of competition, so most crops will require a robust herbicide programme, including a pre-emergence and post-emergence treatment," advises Mr Potts.

"A pre-emergence herbicide

should only cost about £20/ha, which I consider is a worthwhile investment. Hitting the weeds at early emergence will pay dividends, by reducing the first flush of growth. This will make them more sensitive to a second application later in the season and reduce the weed burden in general."

Mr Potts points out the difficulties faced during the 2012 growing season indicated how fine-tuning the management of maize crops can significantly enhance yields.

"Growers paid a heavy price if they got it wrong with any one aspect of maize agronomy last year. Poor soil preparation, too little nitrogen and failure to control weeds were some of the mistakes that were made.

"Nevertheless, where careful attention was paid to the crop and timely decisions were taken, some maize emerged virtually unscathed. A number of farms recorded 20t/acre yields, despite delays to maturity, while the average only reached 12-13t/acre." He urges growers not to give up on maize.

"Maize is a very good feed for livestock. Sowing grass may be perceived as a simpler option, but there won't be any productivity until late summer or even early autumn. Admittedly, maize was not an easy crop to cope with last year, but although many holdings



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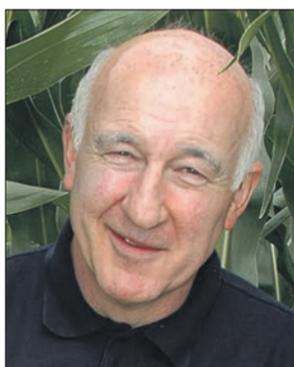
NEIL POTTS

grew grass reasonably successfully, quality fell below expectations in several areas of the country and forage stocks this winter were low. Maize can make a valuable contribution towards the ration, and I think it is worth persevering with the crop this time around."

SEED RATE CALCULATOR

■ A seed rate calculator – available on the maize product pages on www.kws-uk.com – will also help those

working across a range of drilling dates and soil conditions to adjust seed rates accordingly.



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BRENDAN PAUL