

Select for quality – not quantity

Growing varieties with 'vigour' is vital to a successful maize season

Don't base choice of maize variety on one year's fresh weight gain.

Look too for consistency in the field as this will be a good guide to its ability to produce high quality yields and a nutritional forage to see your herd through a productive winter.

Reliability year in, year out is key to ensuring forage supplies and forage quality. But these characteristics may not always be reflected in the variety that tops the Recommended List. So says Field Options' Francis Dunne. Talking to local growers at a maize meeting at Harper Adams University College, Mr Dunne says that he selects

varieties based on their consistency, vigour and ability to produce a high ME and starch contents. "While varieties like Nimrod, Agreement and Pretti have been placed in good positions on the list in recent years, they don't have a high ME. All growers are doing is buying bulk," he says. "Secondly, growers should also try to



Francis Dunne: "Select varieties that offer vigour"

avoid varieties that seem, in dry seasons, to have a suicide gene: those that look good all season but then simply die off too soon before harvest.

"NIAB no longer assesses cob ripeness or looks at the cob:stover ratios, both of which are key characteristics when measuring maturity and maize quality potential," he points out. "As a result, some varieties identified as 'very early' based on NIAB data alone, may simply be classed as such as a result of early senescence of the stover, while cobs may remain less mature. In contrast, other early types may have ripe cobs but slower die back of their leaves and stem.

Variety selection

While both would feature on the Descriptive List in the same maturity bracket, they are like chalk and cheese when fed to the cow. "And it is pretty obvious which one the herd will prefer, he says.

"As a result, it really is important to assess as many trials as possible to get a true handle on likely performance."

He says that variety selection was particularly important last season. "A star performer in the difficult season was Kaukas.

"Previous Irish and Danish trials have confirmed its consistent performance in marginal conditions and contrasting seasons – indeed it is now Provisionally Listed in Northern Ireland as one of the highest yielding varieties, but also with a clear 5% starch yield advantage over all other listed varieties.

"Our view was that if it does well in Northern Ireland, it'll do well here and this has been particularly noticeable this season over a range of conditions, where it has ensured growers have quality in the clamp whatever the season," he adds.

Alongside Kaukas, Mr Dunne points to NK Bull as suiting good maize growing areas. Its grain development is very early, similar to many early varieties and it tops the new descriptive list for favourable sites with the highest energy yield. However, by far and away the most exciting variety based on 2008



Standing crop: look for consistency in the field when selecting forage maize varieties

Report highlights best value crops

Despite the difficulty of the growing season, forage maize in the 2008 Kingshay trials delivered an average estimated crop value of nearly £1,482/ha compared to just under £1,087/ha in 2007, according to the independent dairy specialist's latest annual maize variety report published in December 2008.

While part of the increased value relates to higher feed prices, the 34 best and most promising varieties, evaluated under strictly commercial conditions in 2008, gave notably higher across-the-board outputs than those tested on a similar basis the year before.

Yields of fresh matter in arguably the

best independent field scale variety evaluations in the country were slightly higher this year but much higher dry matter contents boosted dry matter yields from less than 12.5 tonnes/ha to more than 14 tonnes/ha. Starch contents were also encouragingly up on 2007. The year-on-year performance differences were, however, minor compared to the differences recorded by the company between varieties during the past season, highlighting the critical importance of variety choice under the very much more challenging maize growing conditions of recent years (see table 1).

Crop values

"On what we term our intermediate maize growing sites, for instance, individual variety dry matter yields ranged from just 12 tonnes/ha to 18.5 tonnes/ha and starch contents from less than 25% to more than 35%," explains technical manager Martin Yeates, who heads up the testing programme. "This gave estimated crop values of well under £1,086/ha at the one extreme to more than £1,580/ha at the other – an

advantage many times greater than any difference in seed costs.

"The fact that one of the best performing varieties in our intermediate site trials delivered a decidedly below average performance under more challenging marginal site conditions further emphasises the need to match varieties carefully to sites," he adds.

On the evidence of recent company trials, Dr Yeates believes that most maize growers should refer to the performance of varieties on marginal sites, which roughly equate to the NIAB List's less favourable sites, these days. That way they have the assurance of knowing they are growing a crop best able to cope with climatic conditions which seem to be giving far less leeway with maize than ever before.

"Forage maize has certainly become more of a challenge to grow in recent years," he says. "But our independent field scale testing of the most promising modern varieties, however, clearly shows that with the right care and attention they can continue to deliver handsomely for dairy producers."

Table 1: Average annual Kingshay maize variety testing results

	2007	2008
fresh yield (t/ha)	47.42	49.40
dry matter content (%)	25.5	32.0
dry matter yield (t/ha)	12.10	15.50
ME (MJ/kg DM)	11.1	11.2
starch (%)	24.4	32.0
estimated crop value (£/ha)	1,079	1,442

experiences is Lapriora – coded KXA 5011 – from KWS UK. "In terms of earliness its in-built genetic vigour probably does half of the job that plastic does.

"As a result it's been ahead of all-comers in trials and its plots stood out like a green hedge in a yellow field last season," says Mr Dunne.

Lapriora is a dual purpose variety used for both silage and grain maize production across NW Europe. During the past two seasons it has produced

consistent fully developed cobs across a range of conditions, including very marginal sites, where competitor NIAB listed early varieties have failed to develop grain at all.

For next year he says growers need to aim for another 2.5 tonnes/ha of silage from their crops if they are to maintain similar cost per tonne produced.

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