

Making maize pay its way

Clear targets will help to minimise the cost of maize and ensure it remains a valuable additional forage

Is maize the most cost effective forage to grow on your unit? And how can you maximize yields and keep costs to a minimum? We spoke to two industry experts and discovered that there's more to success than simply choosing the most suitable variety for your farm conditions.

Full production costs for forage maize typically average between £80 and £90 per tonne of dry matter, according to Kingshay, but considerable variation can occur above and below this estimate depending upon a whole range of factors.

The biggest driver of costs – upwards or downwards – is variety selection, according to Paul Billings of British Seed Houses, and this, he says, should start with having a defined objective for your maize and, equally importantly, a clear understanding of your likely growing conditions.

“The wide range of maturity classes now available to UK producers means that it is more important than ever to adopt a system approach and match your varieties to that system.”

“I believe that varieties now fall into three distinct groups – later maturing

varieties; mainstream varieties; and ultra early varieties. It is important to decide which group suits your system first and foremost,” he says.

Maximising yield

For those in the most favourable maize growing areas, the primary aims of growing forage maize should be a high starch component and maximum dry matter yield. Many of the later maturing varieties do offer the potential for clamp-busting yields, but there is still a need for careful selection, according to Mr Billings.

“Plant breeding progress is being made throughout the spectrum of maturity classes and not just with the varieties showing extreme earliness,” he says. “It is important to look at what's new on the market, as some of the yield advances are quite significant and could

really reduce your overall cost per tonne by producing more dry matter for the same growing costs.”

A good example is the maturity class 5 variety Gladi, which is being introduced to the UK market in 2008 by British Seed Houses and offers a 9% lift in yields on control varieties in official trials. Grown in the Kingshay maize trials in 2007, Gladi produced an estimated crop value of £653 from mainstream sites, significantly higher than the average of more than a dozen comparable varieties that averaged £594.

Maximising starch

The majority of maize is grown in areas that generally offer a safe harvest window and where earliness – which makes high starch yield more certain – is an important factor. Again, the variety choice within maturity class 6, 7 and 8 continues to improve each year.

“With new varieties like Huski CS now available, with 104% dry matter yield compared to controls, and Goldclamp with 107% dry matter, it is clear how these varieties allow more maize to be grown for the same acreage, or for the same tonnage to be grown from a smaller acreage,” says Mr Billings. “In



Growing an ultra early variety can allow dry matter production from a second forage crop in the same year – increasing output per hectare and reducing overall cost per tonne

Should you be growing maize?

There are UK producers growing maize who, if they looked at the figures, probably shouldn't be. “On some units the cost per tonne of dry matter of maize silage is greater than the cost of two or three cuts of grass silage. And in these circumstances producers should either raise their game and grow a better crop of maize, or stick with grass,” says Promar International consultant Derek Gardner.

“It's vital that those growing maize do it well. If they do, a maize crop will produce dry matter more cheaply than several cuts of grass silage.

“Think like a grain producer – it's

all about cobs and starch, not stem.” Some of this is down to the variety, but not all. “Much of the success with maize is down to selecting a suitable field – in terms of aspect and soil type, and other factors such as seed bed preparation, time of sowing and soil temperature.

“It's vital that the maize gets off to a good start and gets plenty of ‘warmth’ to get good cob yield. If it's too cold and too wet, sometimes the result of over liberal slurry application which keeps the soil temperature down, then the maize will just sit there and it will be slower to germinate,” he adds.

Growing maize under plastic is an

option in colder, wetter areas. Recent trial work at Hillsborough, Northern Ireland, had considerable success with plastic. “It does increase the cost of growing the crop, but it will help to guarantee a good yield, high starch density and high cob weights, so in some areas it would be money well spent. But don't assume that you have to grow maize just because everyone else is. There are producers in the north east achieving phenomenal milk yields feeding just good quality grass silage. Maize isn't a magical solution. Good forage, whatever it is, is the key to successful feeding.”

the latter case, the additional land available can be used for alternative high protein silage crops, thereby creating a better balance to the overall forage ration.”

Ultra early

While not the biggest category, the fastest growing segment in the UK maize market is known as ‘ultra early’, and he believes this is the area where greatest innovation and overall cost reduction is possible.

“These are maturity class 10 and 11 varieties that offer a mature crop within a shortened season,” he says. “This category is growing as a result of the quality of the varieties available, with

recent newcomers like Revolver, Camelot and Scimitar offering extreme earliness without yield penalty, and because they allow maize to be grown in areas previously thought to be too marginal. There is also a greater requirement for earlier harvest dates for a variety of reasons.

“Cross compliance is one factor, with there being an incentive to harvest before the end of September, but equally influential is the desire to maximise forage acres. Growing varieties such as Revolver, Scimitar and Camelot does allow either a later drilling date – perhaps following an early silage cut – or a harvest date several weeks earlier than mainstream varieties. There are

more and more cases of growers splitting their harvest dates, with an ultra early variety being grown as part of the overall acreage and cut early to bridge the forage gap at the end of the summer.” Whether you assess your forage maize on the basis of minimising cost per tonne or maximising overall forage production per hectare, there is clearly merit in first defining your system and then matching your variety choice to your target objective. If you do, with cereal starch as expensive as it is, forage maize should then continue to be a very cost effective feed source.

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