

# It pays to stick with maize

Forage maize continues to offer growers consistency, as well as other feeding advantages

Despite the poor conditions for growing and harvesting maize in 2007, producers shouldn't be put off this high quality, valuable forage crop.

We spoke to a leading UK maize expert to find out why you should consider the benefits of growing and feeding maize this year.

While 2006 was one of the best years for growing maize in this country, 2007 was probably one of the worst – certainly for the past decade. Producers are feeding maize silages that are wetter than is preferable with starch contents generally down from the desirable 30% plus.

Yet even these silages will be providing valuable feed to dairy cows this winter, according to MGA nutrition consultant Chris Savery.

“Maize silage offers a level of consistency, from the front of the clamp to the back, that is seldom possible to achieve with multi-cut grass silage, particularly in years like last year,” he says.

“And, due to this, producers looking to maximise the total milk yield from high-yielding herds would benefit from feeding maize silage throughout the lactation – if they had enough to do so. The usual complaint about maize silage is that it runs out too soon.”

## Feeding value

Thanks to advances in forage maize breeding during the past 10 years, early maturing varieties are no longer considerably lower yielding than those that mature later. To ensure the highest feeding value, crops must be mature at harvest.

“With the current variation in summer weather, I would suggest that early maturing varieties continue to have an important role. Earlier harvesting potentially benefits the rotation and environmental management and, more importantly, it means that maize is available in the cow diet sooner – allowing producers to reap the benefits

of feeding a mixed forage diet much earlier in the autumn,” adds Mr Savery. Inclusion rates on farm have often dropped back in recent years – from very high levels of more than 70%, back to a more balanced 50:50 with grass silage – perhaps because producers are trying to feed it for longer.

“But optimal maize inclusion levels depend on the forage options on individual farms and may now be influenced by the supplementary feeds available.”

## Smashed grains

There's a lot of debate about chop length but this really only becomes an issue at higher levels of inclusion, particularly where supplementation is high. “If maize accounts for 60% or more, a chop length exceeding 15mm is advisable to help prevent acidosis.

It is also essential that all the grains are adequately smashed – particularly in high dry matter crops. This releases the starch within the kernel, making it more readily available for digestion,” says Mr Savery.

He adds that high quality maize/grass silage diets deserve to be supplemented with high quality feeds – soya and rapemeal to supply protein, and cereals, beet pulp and soya hulls to supply additional energy.

“Alternative feeds such as palm kernel or wheat feed will never match the quality of the primary supplements. And moist feeds may not be as cheap a source

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## Energising rations and keeping feed costs down

Cheshire-based producers Alan and Tanya Winstanley, of Highfields Farm near Market Drayton, use a combination of home-grown and locally grown forages to support the 10,000-litre yield of their 320-strong pedigree herd and to keep bought-in feed costs down.

As well as grass silage, the Winstanleys grow around 28 hectares of their own forage maize – growing starch-rich varieties Kingdom and Rosalie. The silage clamp is topped up further with local purchases of standing maize crops – equivalent to another 12 hectares.

More maize is included in the diet in the form of Crimped Gold. This is crimped maize, grown on contract for local merchant BCW Agriculture as an alternative crop to sugar beet, following the closure of the Allscott beet factory in 2007.

The maize is combined, yielding between 4.5 tonnes and six tonnes of grain, and this is immediately treated with a preservative, before being transported to the farm where it is to be fed. Care is needed when ensiling this moist feedstuff – the clamp is sheeted first with a layer of plastic that prevents any oxygen diffusing in, followed by two layers of silage sheeting. This crimped maize is 60% DM, with 60% starch in the dry matter, resulting in a metabolisable energy of 15MJ/kg DM.

of energy and protein as people think, once they work out their true value on a dry matter basis.”

With cereal prices rocketing, some producers are wondering whether they should be crimping their maize crops to provide a home-grown concentrate feed. “Crimped maize is a good feed and will suit some farms well, but my feeling is that maize silage offers most producers the total product and that the greatest

During the past two winters, fodder beet has also been grown.

“Rising prices for wheat and beet pulp made us look again at growing fodder beet,” says Alan.

“It's an attractive crop being both high yielding and very palatable – the cows love it. We've now replaced the sugar beet with fodder beet pulp by 5:1 on a dry matter basis. And the plan is to increase the area sown from nine to 12 hectares next year so more can be included in the ration.”

## Fodder beet

Fodder beet varieties Blaze and Kyros are grown. These average a dry matter content of 18% DM. Normally fresh-weight yields at Highfields Farm are in excess of 74t/hectare, but this year's weather has lowered yields.

Alan's contractor will make about five visits in all to harvest the beet, with the first lifting in November and the last in February. It then keeps for feeding through to May.

This year Alan also wants to put more maize into the diet, both Crimped Gold and forage maize.

He has also just purchased a beet washer to thoroughly clean the beet so that it can be ensiled with last year's maize and grass silage, and the combination of forages used for feeding through the summer, as he plans to zero-graze the herd.

value lies in feeding the whole plant. “Maize is an excellent forage and the aim should be to make as much quality maize silage as possible and to use it well, so reducing the amount of expensive concentrates that need to be bought-in to feed with it.”

Sara Gregson