Follow the maize – preparing for harvest

Welcome to 'Follow the Maize' – a series of Volac advertorials looking at maize through the season. This first advertorial introduces Shropshire grower, Mark Fitton, and his harvesting approach.

Forage maize is an important crop for Mark Fitton. Farming nearly 400 acres with partner Lucy Pye, near Whitchurch, maize and grass silages are fed in a 50/50 ratio in the winter TMR, along with a concentrate blend – although maize inclusion can reach 60% or even 70% in some years.

With some of the milk from the farm's 250 year-round-calved Procross Swedish Red x Montbéliarde x Holstein cows sold into the powdered market, maize is good for pushing up butterfats, says Mark. The farm achieves up to 5.3% fat and 3.8% protein, with yields averaging 9,000 litres/cow and up to 4,000 litres of this coming from forage.

"We've grown maize for 20 years or more," Mark explains. "The cows thrive off it. They're in good condition and the butterfat does well on it.

"Maize yields vary with the weather. In a good year we can get at least 28 t/acre, or down to 18-20 t/acre in a poor year. You've got to get maize and grass right, so that you're not buying as much concentrate."

Additive protection

With this in mind, close attention to detail is paid to maize harvest, including: cutting at the optimum time; leaving a sensible stubble length to avoid soil contamination; consolidating and sealing the clamp well; and protecting with a suitable additive.

After trying Ecosyl on some multi-cut grass silage, sister additive, Ecocool, is being used on maize this season. This contains the same fermentation-boosting 'MTD/1' bacterial strain as Ecosyl, plus a second strain, 'PJB/1', targeted at preserving maize by keeping it cool.

"With the money you spend on growing maize, why skimp on the last part?" says Mark, as to why he views an additive as an integral step. Ease-of-use is also an important criteria in his additive decision.

The farm's target for harvesting maize is 32-35% dry matter, when the cobs are ready, but before the crop has started dying off.

"We harvest around the end of September or early October. People are often focused on not harvesting maize while it's still green. But the worst thing you can do with maize is get it too dry; the cows will sort out the stalks. If the cobs are ready, then go while it's green. If you get it early, before rains arrive, you also leave less mess in the field."

In the clamp, the crop is rolled with two machines. No side sheets are used. Instead, clamp walls have been sealed with resin. Mark also prefers a combined multi-layered top sheet, topping off with gravel bags for weight and netting to prevent damage from birds.

Follow Mark and Lucy on Instagram: **@thefarmslife**

volac

"With the money you spend on growing maize, why skimp on the last part?"
says Mark Fitton

Follow the maize – preparing for harvest

With maize crops varying this season – from very good to those that struggled with lack of heat – 2024 has provided plenty of lessons, including for harvest.

You might be lucky enough to have already harvested a healthy green maize crop at the ideal % dry matter (DM) with mature cobs. Or, you might be yet to harvest and facing maize that is dying back.

Either way, ensiling with an additive to minimise losses is a no-brainer, suggests Volac silage specialist, Peter Smith.

"A greener maize crop will contain more moisture," says Peter, "and the more moisture, the bigger the fermentation required. Also, green crops still contain some dead material – such as decaying tassels in leaf joints – which introduce spoilage bacteria, yeasts and moulds into the clamp.

"Alternatively, if the crop is dying back significantly, levels of these spoilage microbes will be far higher. And these types of drier crops are at risk of heating and mycotoxins."

In both cases, Ecocool additive is a good option, says Peter, because it's designed to boost fermentation and inhibit the yeasts and moulds that cause problems. "This is important because about 10%, or even up to 20%, of maize DM is lost through spoilage, with about half this due to heating losses and half due to poor fermentation.

"Also, it's not just DM that's lost. The feed value of the remaining DM is lower. If you need maize to prop up low D value grass silage in rations this season, protecting its feed value is paramount. The beneficial 'MTD/1' bacteria, which make up just part of Ecocool, have been shown to reduce D value losses. And treating with Ecocool has been shown to keep maize cool and reduce the growth of mycotoxin-causing mould in maize silage," he adds.

Attention to detail

Shropshire dairy farmer, Mark Fitton, pays close attention to maize harvest.

Before this year's harvest, he'd had the crop analysed to check DM and starch, had his contractor and Ecocool organised, and new silage sheets and gravel bags ready.

Pre-harvest analysis showed the 2024 crop was already edging above 30% DM, with 28-32% starch and 11.3-11.4 ME around mid-September.

Moreover, straight after harvest, Mark has learned to prepare his continuous maize ground ready for the next crop – beginning with cultivations and applying muck to build soil nutrients and organic matter.

"I've got a Sumo to take care of wheel ruts and loosen the soil. If the weather allows, we'll then apply slurry then plough to allow it to break down. Alternatively, we put separated solid muck on in March if it's dry. If it needs lime, we apply Calciprill.

"Producing good maize is not easy. It's an expensive crop so you need the tonnage," Mark adds.

Follow Mark and his partner Lucy on Instagram: **@thefarmslife**

volac

"If you need maize to prop up low D value grass silage in rations this season, protecting its feed value is paramount"
says Peter Smith

Helping farmers produce **consistently** better maize silage

www.cuttoclamp.com

Cut to Clamp
A Volac initiative

Follow the maize – sowing seeds for silage success

Good establishment is key with forage maize. And for Shropshire farmer, Mark Fitton, his crop certainly ticked that box.

Despite the dry spring, Mark Fitton's 35ha of continuous maize drilled on 26 April emerged in just 9-10 days this season. By mid-May, it was already at 5-6 leaves thanks to warm soils. And although the soil surface was dry, Mark reckons there was just enough moisture further down.

"Maize coming up in nine days is a record for us. It's normally 12-14 days. It looked fantastic," he explains.

Prior to power harrowing and drilling, potash had been applied to maize fields. Diammonium phosphate (DAP) was then applied as a starter fertiliser with the seed. A brief rain spell in early May also arrived at an ideal time to activate the pre-emergence herbicide, admits Mark, giving the crop a clean start.

"We then applied a foliar feed plus trace elements with the post-emergence herbicide on 30 May, which really greened the crop up."

A big change this year was to increase the farm's standard maize seed rate from 45,000 to 50,000 seeds/acre. "We're going for extra tonnage," Mark explains. "But it will be interesting at harvest to see if it matures a bit later than normal."

Meanwhile, he reports that last year's maize silage – his first ever made with Ecocool additive – has continued to feed well. Summer buffer feeding has comprised two small TMR mixes a day of a 60%/40% ratio of grass silage to maize silage with a small amount of protein blend.

Silage survey results

A poll of 44 producers by Cow Management last year revealed that while 98% recognised that moulds can cause losses in maize silage, nearly a fifth (18%) did not identify bad bacteria as causing losses, and nearly a third (32%) did not recognise yeasts as causing losses.

Moreover while 93% recognised that unwanted microbes can reduce silage quality and palatability, nearly four out of 10 (39%) did not identify that they can also cause dry matter (DM) losses, and 14% did not identify that they can cause mycotoxins.

"In reality, unwanted bacteria, yeasts and moulds can all cause maize silage DM and quality losses," says Amanda Clements, technical business manager for Volac who were involved with the survey, "while certain moulds also produce mycotoxins.

"Also in the survey, while there was 100% understanding that maize silage can suffer losses from heating, there appeared some confusion about whether it can also suffer losses due to inefficient fermentation.

"Again, losses can actually occur due to both problems, which is why a dual-acting additive is such an important consideration to help protect the investment that goes into producing maize. Ecocool, for example, was developed to not only tackle heating but also aid fermentation – by targeting yeasts and mould growth and providing a boost from efficient fermentation bacteria."

volac

"Maize coming up in nine days is a record for us. It's normally 12-14 days."
says Mark Fitton

Boost milk with smart maize silage

Unpredictable markets make high-quality silage crucial. Up to 20% of maize silage can be lost to microbes during storage. Here's how to avoid key mistakes:

1. Harvest at the right time for optimal nutrition and fewer microbes.
2. Use additives to promote good bacteria and reduce dry matter loss.
3. Cut at the proper height to avoid low-nutrient, microbe-filled parts.

1. Harvesting maize too late

Harvesting maize too late, when the plant is already dying back, not only reduces its nutritional value, but also increases the risk of unwanted microbes coming into the clamp on the dead foliage.

"Ideally, maize should be harvested when it reaches 30-33% DM, while the leaves are still green," advises Mr Stroud. "This ensures a good balance between starch in the cobs and the higher nutritional value of living foliage."

2. Thinking maize 'conserves itself'

Skipping additives is risky. Natural microbes in silage can be beneficial or harmful, and bad ones lead to losses.

Maize silage suffers from heating (yeasts/moulds) and poor fermentation (inefficient bacteria). Both waste dry matter and energy. Additives like Ecocool promote good bacteria and stability, even after air exposure and also release greenhouse gases.

"You can't control the types of microbes that come in with the harvest," explains Mr Stroud. "But using a dual-acting additive like Ecocool can tip the scales in favour of a good fermentation process, giving you more control over the quality. Ecocool has also been shown to keep maize silage cool and stable for over 10 days after exposure to air."

3. Harvesting maize too low

Although tempting to cut maize low to the ground, the stem base is low in nutritional value and typically higher in unwanted microbes, says Mr Stroud.

"Leave at least 15cm of stubble, make sure they chop the crop short enough to aid consolidation, especially with drier crops, but long enough for it to perform in the cow's rumen. Consider a 1.5-2.0cm chop length, or 1.2cm if needed," he suggests.

Return on investment

Growing a crop of maize typically costs around £700 per acre for a yield of around 17 tonnes. Treating it with Ecocool costs only £1.42 per tonne, which translates to roughly £24 per acre. Let's look at the potential losses:

- 10% loss: 1.7 tonnes at £55/tonne = £93.50 loss per acre
- 20% loss: 3.4 tonnes at £55/tonne = £187 loss per acre

Even if you value your maize silage at a lower price of £50 per tonne, treating it with Ecocool is still a wise investment.

volac

Make sure maize feed value does not slip through your fingers in the clamp, **says Volac silage expert, Ken Stroud**

Helping farmers produce consistently better maize silage

www.cuttoclamp.com

Cut to Clamp

A Volac initiative