myKWS MAIZE

NEWSLETTER | **ISSUE 19** | SPRING 2024

SEEDING
THE FUTURE
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KWS

Welcome…

…to the spring edition of the myKWS quarterly newsletter. In this issue, we offer some seasonal agronomy tips and feature the Webb family, who feed maize silage to the dairy and beef cattle on their Gloucestershire farm. They produced very good results from the KWS maize variety, Papageno, in 2023 and it will be sown again for this year.

We also take a look at how maize undersowing might fit into plans within the new Sustainable Farming Incentive, with advice from Tom Turner, who has recently joined us as KWS national maize sales manager. Online tools developed by KWS to help you get the most out of your maize crop are also outlined in this newsletter.

We are crossing our fingers for good weather for the forthcoming sowing season for all our customers, and for the maize planting at our demonstration sites in Lydney, Gloucestershire. Please look out for information about our annual field days at our demonstration sites in September in our next newsletter, which will be published in the summer. If you have not yet signed up for your regular copy, you can register at **www.kws-uk.com**

SEASONAL REVIEW

ANDREW COOK
KWS Maize Product and Technical Sales Manager

Now that the days are longer and the clocks have changed, spring has arrived, and it's time to look forward, and put the wet winter behind us.

Preparations for drilling are in full swing. Just be prepared to wait for the right conditions to arrive, in terms of both soil temperature and soil structure, to ensure that crops get off to the best start.

Maize seed is proving popular this spring, with some autumn cereal crops having struggled with viable emergence, or even still in the bag. With other spring crop seed in short supply growers are turning to maize as a profitable spring-sown option.

? DID YOU KNOW?

The effects of premature drilling include poor germination, uneven emergence and reduced nutrient uptake due to low soil temperature.

SFI maize undersowing/winter cover cropping options – SAM2 and IPM3

TOM TURNER
KWS Maize National Sales Manager

"Leaving soils bare over the winter is increasingly coming under scrutiny

SAM2

Post-harvest option for stitching in or establishing a multi-species seed mix.

Payment £129/hectare

IPM3

Spring SFI option for undersowing maize with a grass/clover mix.

Payment £55/hectare

Tom says: "Short-season hybrids are the most suitable for combining with the SAM2 winter cover option. They take as little as 130 days to reach maturity and fall into the FAO 150-170 or maturity classification range. This compares with 160 days for later-maturing varieties. An early harvest will allow more time for establishing the multi-species mix and these varieties are especially useful in regions which typically experience high autumn rainfall.

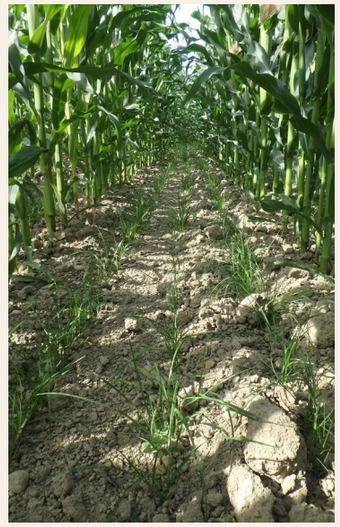
"Leaving soils bare over the winter is increasingly coming under scrutiny, mainly due to the heightened risk of water pollution and soil run-off. The practice is also bad for soil health in general, so these two new options may offer a solution to maize growers, as well as helping to offset the decline in BPS support."

SAM2

- Can be taken up in conjunction with IMP3 or as a stand-alone
- Two post maize harvest options: multi-species mix stitched into previously established undersown crop or the establishment of a new multi-species mix
- Choose from a minimum of two different species from the list: brassicas; herbs; grasses/cereals; legumes. For example, sanfoin and Italian ryegrass or Westerwolds ryegrass and white clover. Avoid Italian ryegrass in arable rotations with a blackgrass problem
- Establishment costs will vary, according to selected species

IPM3

- Approximate establishment cost £100/hectare for seed, fuel and labour
- Provides grazing or silage ground in winter or early spring
- Potential advantages: soil structure benefits; greater nutrient uptake in following crop; improved harvest travel
- Supplies about 30kgs nitrogen/ha for the following crop
- Undersowing mix drilled at 5-6 maize leaf stage (usually in June)



Risk factors – avoid damage to young maize plants when sowing. Ensure adequate soil moisture to limit threat to maize plant growth.

? DID YOU KNOW?

Buttress roots should be covered on 90% of the plant stand for optimal root anchorage.

FARM CASE STUDY

PAPAGENO: Maize Silage – Dairy and Beef Cattle

THE WEBB FAMILY, UPPER LEY FARM, WESTBURY-ON-SEVERN, GLOUCESTERSHIRE


Dave and Chris Webb

> *Maize silage helps to promote our yield from forage figure... in our estimation it boosts production by about 1,000L/head*
>
> **DAVE WEBB**

The Webbs milk 275 Holsteins at Upper Ley, where yields average 11,350kgs at 3.95% butterfat and 3.3% protein. Milk from the four Lely robots that were installed a decade ago is sold to Sainsbury's, while several hundred crossbred calves are finished annually.

Managing the fully housed herd is a family affair, with brothers, Dave and Chris, working alongside their brother-in-law, Matt Wooding and Chris's daughter Millie. The team also includes cowman, Marcus Tompkins and college student, Liam Dunne.

Maize has been grown on the farm since 1997 and some 170 acres were sown last year. The crop is usually followed by short-term grass leys or winter wheat, which necessitates harvesting by mid-October at the latest. The soil type varies from clay to a medium loam and some of the more free-draining fields are vulnerable to summer droughts.

The early/maincrop KWS variety, **Papageno**, played a key role in forage production for both the dairy and beef cattle last year. It will be grown again for the 2024 season.

"It is difficult to pinpoint our average maize yield, because each season is different," says Dave. "We would normally expect about 20 tonnes of freshweight per acre and the Papageno produced 23 tonnes an acre in 2023. Growing was straightforward and the silage had a high starch content, so we were more than satisfied with its performance. Just as importantly, the cows have been milking very well off it."

The aim is to feed maize silage throughout the year. A range of other ingredients (see TMR ingredients) make up the total mixed ration, which is fed for 27kgs of milk, while the diet is topped up with concentrates in the robots. The herd is calved all year round.

"Ideally, we will leave freshly ensiled maize in the clamp for at least a month according to recommendations, although it does not always work out that way because of the weather. Last year was phenomenal for maize, but the situation was very different in 2022, when lack of rainfall had a negative impact on yields.

"Maize silage helps to promote our yield from forage figure, which currently stands at 2,400L, and in our estimation it boosts production by about 1,000L/head," says Dave. "It fills the clamp and is very beneficial for cow health, particularly in terms of rumen function."

The lower end of the herd is put to the Aberdeen Angus and additional calves are purchased, to make up the 800 head of beef crossbreds finished annually. They receive maize silage in the ration for the final four-month period, with its high starch content complementing the wheat element of the diet. It also promotes growth rates and puts a bloom on the cattle, he comments. Steers and heifers are taken to 18-24 months at weights of 560-600kgs and are sold deadweight via a Sainsbury's contract.

Dave and Chris' parents, Gordon and Sue, moved to Upper Ley in 1974 with just 18 cows and the business has changed significantly, with the farm now comprising 700 acres of owned and rented land. However, one element that is unlikely to change is the maize cropping.

"Maize silage may not be the lowest-input feedstuff that is grown on the farm, but it has earned its place in the rotation. As long as the crop is managed with attention to detail, it gives a lot back and makes a very valuable contribution to our dairy and beef rations. Papageno meets our main priorities of high yields and good rumen digestibility, which is why it will be sown again for the coming season," says Dave.

MAIZE AGRONOMY 2023 – UPPER LEY

Maize drilling was delayed by the high spring rainfall in 2023, he reports. In preparation for sowing on 26th May, the land was ploughed in March, followed by the power harrow. Crop nutrition was supplied by an application of farmyard manure, followed by fertiliser 'down the spout' at drilling, with both pre and post-emergence herbicides used for weed control. The crop was ensiled without the use of an additive, having been cut on 10 October.

PAPAGENO FAO 190

- Excellent dry matter yield potential
- Superb early vigour
- Exceptionally high starch
- Provides a wide drilling window
- Multi-use variety suitable for cattle rations, grain maize and biogas production

TMR INGREDIENTS – UPPER LEY

Dry matter	**44.5%**
Maize silage	
Grass silage	
Soya	
Milled home-grown wheat	
Biscuit meal	
Rape meal	
Ground maize	
Liquid protein by-product (Trafford Syrup)	
Minerals	

MAIZE SILAGE 2023 ANALYSIS – UPPER LEY

Dry matter	**37.5%**
D-value	75.7
Starch	30.4%
Protein	8.0%
ME (MJ/kg/DM)	11.9

MAIZE SPRING AGRONOMY TIPS...

ANDREW COOK, KWS

SEEDBED PREP

It is essential to make sure that maize is sown into a friable, well-oxygenated seedbed and there is no substitute for a taking a spade and digging a hole to examine the soil profile, when making plans for seedbed establishment techniques.

DRILLING TIME

As always, patience is key, when it comes to making decisions on whether to start drilling maize. The soil temperature must have exceeded 10°C for five consecutive days before sowing on standard soils, with 8°C for light soils and 12°C for heavy soils. We have made it easy to monitor soil temperatures on your farm with our free, online soil temperature tool. The service will give the soil temperature at 10cms depth for your own region.

HOW TO USE THE KWS SOIL TEMPERATURE TOOL

- Find it online by clicking on the maize section at **www.kws-uk.com**
- Enter your full farm postcode (space needed)
- Data updated daily in the sowing season
- Optimum drill timing will also depend on soil conditions and seedbed moisture

SEED RATES

If the wet weather persists in your region, it may be worth cutting seed rates by about 5,000 seeds/hectare, because a lower plant density will allow for greater light interception following challenging sowing conditions.

Recommended Seed Rates

Silage – sheltered site	**100–110,000 plants/ha**
Silage – exposed site/late planting	**90–95,000 plants/ha**
CCM	**95–100,000 plants/ha**
Crimped grain maize	**85 - 90,000 plants/ha**
Dried grain maize	**75 - 85,000 plants/ha**
Biogas – short season hybrid (FAO 180 –)	**100 - 110,000 plants/ha**
Biogas – long season hybrid (FAO 200 +)	**85 - 95,000 plants/ha**

*1 Unit = 50,000 seeds

DRILLING DEPTH

If sowing is delayed, I would recommend drilling down to soil moisture levels and this will also help to protect the seedbed from bird damage, and allow buttress roots to fully anchor when the plant is growing rapidly. Most of our varieties will have been treated with our own product, Initio Bird Protect (IBP), which acts as a bird deterrent. In 2024 we released Initio Pro, which is IBP with the addition of Force 20 CS (tefluthrin), to provide protection against wireworm. Initio Pro is available in limited quantities for this year and may be considered where wireworm is believed to pose a threat to the crop.

Recommended Drilling Depth

Early to mid-season (April to early May)	**3-5cms**
Mid-season (early to mid-May)	**5-7cms**
Late (mid-May onward)	**7-9cms max**

WEED CONTROL

Getting maize established and away from weed competition is crucial if the crops potential is to be met. A robust and comprehensive weed control strategy is advisable. There is a significant body of evidence to support pre and post-emergent control delivers the best results. Whilst pre-emergent control can vary in its efficacy, depending on soils moisture conditions, it certainly buys you a wider window for effective post emergent application if spray opportunities are restricted. Aggressive weed growth can quickly reduce yields and even a relatively low weed burden can reduce yields by 10% or more, and every effort should be given to minimise competition.

CROP NUTRITION

Nitrogen – Maize recommendations vary based on the soil nitrogen supply (SNS Index), with recommendations from 0 to 150kg/ha. In areas where NVZ restrictions are in place, 150kg/ha is the N-MAX legal limit, which includes all organic manures and crop available nitrogen. Maize responds well to nitrogen available from organic sources of nutrition, which can also be a cost-efficient way of managing crop nutrition, and well planned and good use of digestate and manures can go a long way to meeting the requirements of the growing crop.

Phosphate
Rapid growth is essential for weed suppression and ensuring the crop produces a canopy to protect the soil surface, soil health and condition. Establishment may be encouraged by the entire phosphate recommendation being placed below the seed at drilling. Phosphate recommendations go up to 115kg/ha, however, similarly to nitrogen, recommendations are based on the SNS Index in RB209. The recommended DAP requirement is 125kgs/ha.

Potash
Potash is an essential maize nutrient, as such, it is vital that it is available to the crop through the growth stages of the crop. As such, potash should be applied ahead of seedbed preparation and worked in. Application rates vary, but maize has a very high requirement and recommendations can be as high as 235kg/ha.

All fertiliser recommendations should be conducted by a FACTS qualified advisor to ensure the grower is compliant with guidance set out in RB209 section. In addition to consulting a FACTS advisor, growers should consider using the MGA nitrogen predictor tool to assist in recommendations. Growers in England have access to funding through the Sustainable Farming Incentive action NUM1 to fund nutrient recommendations.

MAIZE SEED SERVICE

Share the risk with us – 50% resowing discount!

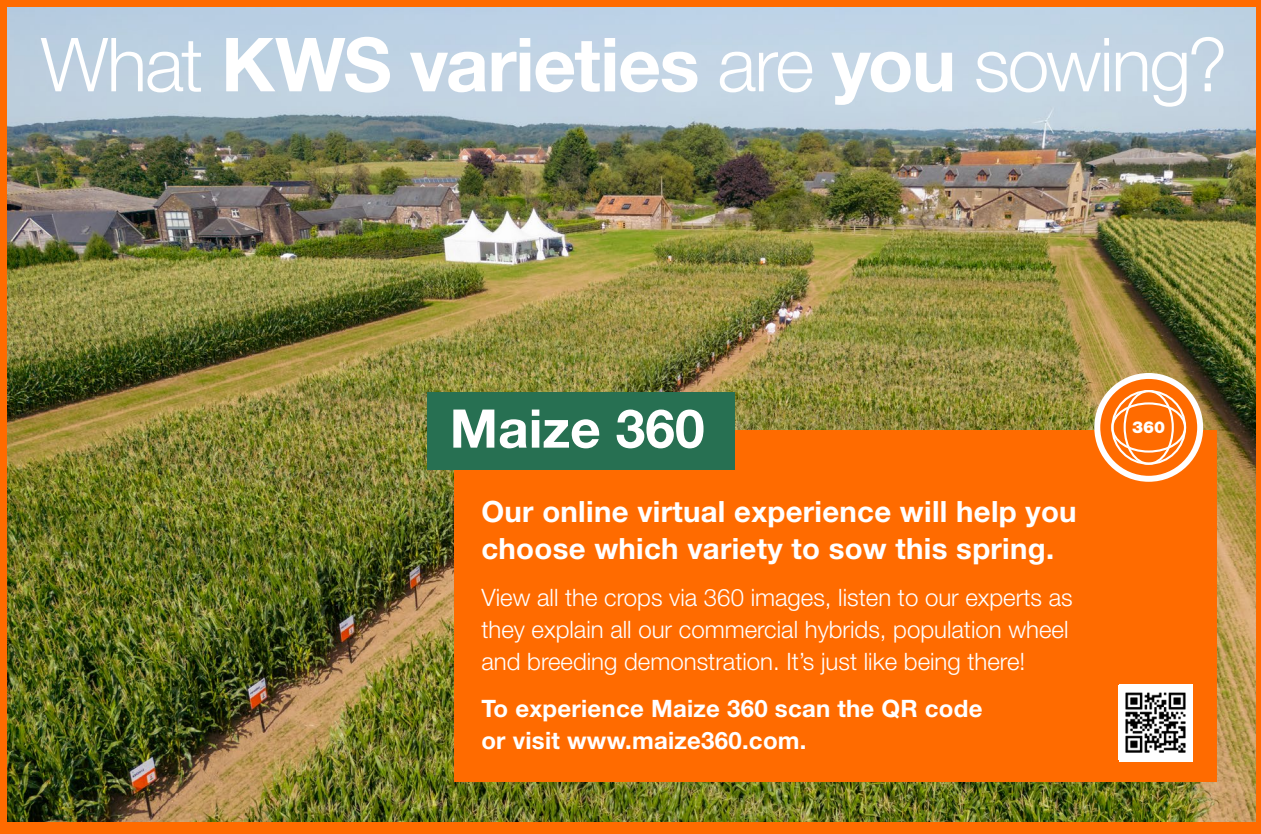
What is it?
KWS maize seed service shares the risk of bird, frost or flooding damage in your KWS maize crop.

How does it work?
KWS Offers a **50% discount** on KWS maize seed for the re-sowing of KWS maize crops lost due to frost, flooding or bird damage. Seed must be treated with **Initio Bird Protect** or **Initio Pro** seed treatments.

Qualifying criteria?
Fields must be registered online no later than 14 days post-sowing to be eligible for the discount. Service cut-off date 4th June 2024.

How to apply?
Go to **www.kws-uk.com**, sign up for the free myKWS service and click on the maize section.

What **KWS varieties** are **you** sowing?



Maize 360

Our online virtual experience will help you choose which variety to sow this spring.

View all the crops via 360 images, listen to our experts as they explain all our commercial hybrids, population wheel and breeding demonstration. It's just like being there!

To experience Maize 360 scan the QR code or visit www.maize360.com.

KWS UK LTD – MAIZE
Atwoods Grange
Station Road
Woolaston
Lydney
Gloucestershire
GL15 6PN

www.kws-uk.com

Meet the Team

Rob Hunt Commercial Director
Mobile: +44 (0)7979 290702
E-mail: rob.hunt@kws.com

Andrew Cook Maize Product & Sales Manager
Mobile: +44 (0)7970 734363
E-mail: andrew.cook@kws.com

John Morgan Maize Consultant
Mobile: +44 (0)7595 562943
E-mail: john.morgan1@kws.com

Thomas Turner Maize National Sales Manager
Mobile: +44 (0)7855 205624
E-mail: thomas.turner@kws.com

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