

myKWS MAIZE

NEWSLETTER | ISSUE 14 | WINTER 2022/23



3 Focus on KWS PASCO

The ultimate all-rounder, top of the DL for starch yield!

4 Maize undersowing and post-harvest cover cropping

John Morgan (MGA) takes a look at these increasingly popular techniques as growers look to reduce agriculture's effect on the environment.

6 Talking biogas

Andrew Cook discusses your options for a biogas crop.

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Welcome...

...to the fourteenth issue of the myKWS quarterly newsletter, which provides you with topical advice and relevant information to help you to maximise the yield and quality of your maize crop.

In this issue, our own Andrew Cook gives a seasonal review and picks out three of our top varieties for energy production, while a Cheshire grower explains how KWS Pasco fits into the system on his large dairy farm. We also have some tips on maize undersowing from Maize Growers Association expert, John Morgan.

SEASONAL REVIEW

ANDREW COOK, KWS

There is no doubt that variability was the word that dominated the 2022 maize season. There were some excellent results in some of the more marginal areas including Cumbria and Cheshire, where yields beat the five-year average. Meanwhile, disappointing yields were recorded in the regions most severely affected by the summer droughts.

However, maize quality was generally good and all the reports indicate that maize silage is feeding out well on livestock farms. Nevertheless, a minority of growers experienced conditions which had a negative effect on cob production and some crops also suffered from rapid dry-down.



One lesson we can perhaps take away from 2022 is to try and minimise the time between seedbed preparation and drilling, where possible. Some seedbeds dried out between operations and the young maize plants did not get off to the best start. Preventing seedbed moisture losses will be a primary concern in the forthcoming season, but as always we will be at the mercy of the weather to some extent.

On the positive side, lodging was not an issue in 2022 and the maize harvest went smoothly. Anecdotal evidence suggests that some dairy farmers in the North of England who have traditionally relied on grass silage may be trying maize for the first time in 2023, as high livestock feed prices are encouraging an increase in the percentage of home-grown feed production.

Every year is different, but ultra-early varieties continued to prove their useful role in providing growers with a degree of flexibility. They require fewer days to reach maturity compared with mainstream types and therefore they can cope with late sowing and still be ready in time for an early harvest.



Andrew Cook

Focus on... KWS PASCO FA0170/180



Scan the QR code to watch a video review of KWS PASCO

The ultimate all-rounder, top of the DL for starch yield!

KWS Pasco is one of three KWS maize varieties that have made it to the BSPB Forage Maize Descriptive List (DL) for 2023. Suitable for forage, biogas or corn cob mix production, it holds the number one position across the DL for starch yield at 6.66 tonnes/hectare, with no compromise on yield at an average 19.3 tonnes/hectare for dry matter potential.

An ME of 11.77 MJ/kg/DM and silage starch percentage of 34.5 makes it ideal for high-yielding dairy cows and for beef cattle in the late finishing period. The variety is classified as an early/maincrop and has shown excellent early vigour on a range of soil types, as well as good resistance against lodging and eyespot.

However don't just take our word for it. **Ben Lowe** (Agrii's national forage product manager)

recommended KWS Pasco to his client, Andrew Griffiths, who has been so delighted with the results from his 2021 and 2022 harvests that it will be the only variety he sows on his dairy farm for the forthcoming season.

“

KWS Pasco represents the next generation of top-quality hybrids. I have been monitoring the variety and it looks very impressive, offering high yields combined with early maturity.”



Ben Lowe

FARM CASE STUDY

KWS PASCO Maize Harvest 2022

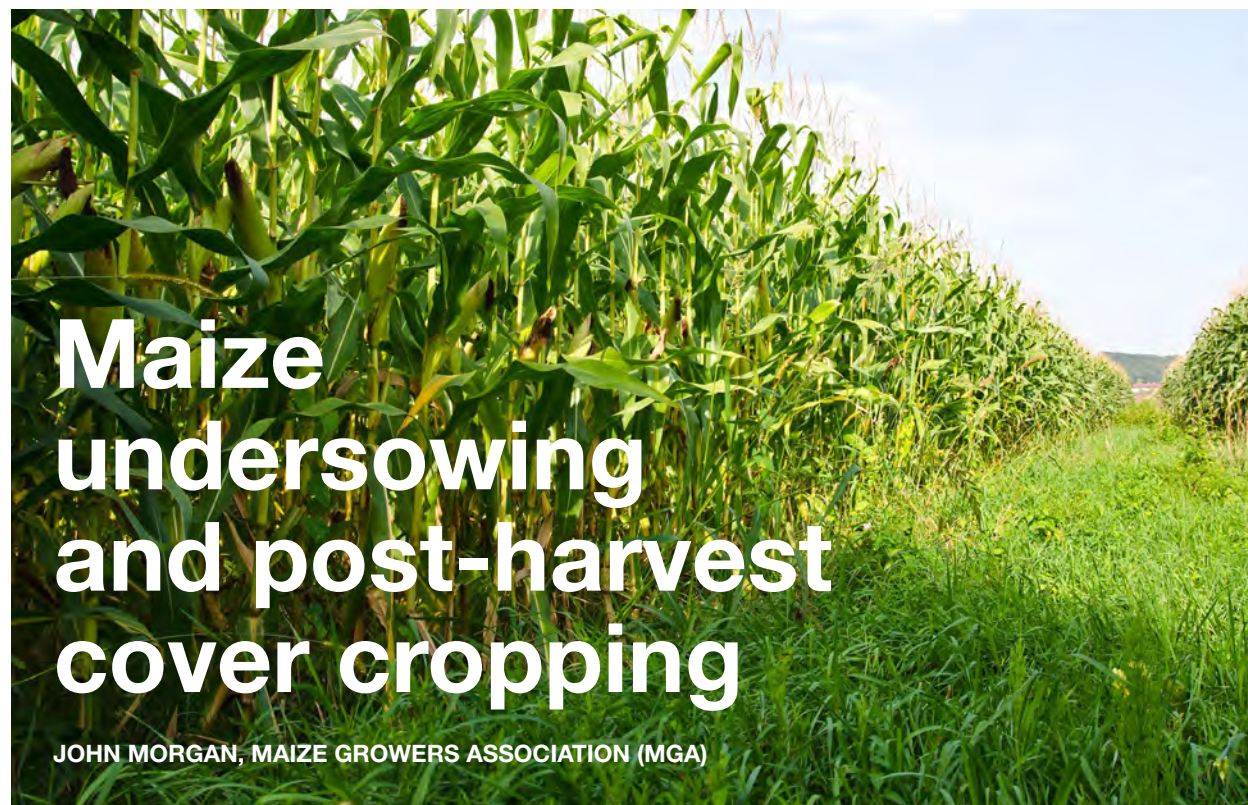
ANDREW GRIFFITHS, BULLS GREEN FARM, CHESHIRE

Maize silage is a staple ingredient in the total mixed ration for Mr Griffiths' 350 Holstein Friesian milkers at Bulls Green, with the land producing almost 3,000 tonnes of maize silage annually. The herd is milked through Lely robots to achieve an average 11,500kgs yield.

KWS Pasco made up 20% of the total varieties that were sown on the farm in 2021 and its success has ensured its place in the 2022 rotation and beyond.

Mr Griffiths says, "The KWS Pasco proved its worth in 2021, because the weather turned and harvest was delayed by almost a fortnight. The variety held its quality due to its stay-green trait and it yielded 25t/acre at 38% dry matter and 34% starch when it was cut on 15 October. That was very pleasing.

"The emphasis on getting the best results from an early harvest is increasing. We are looking for additional forage and to minimise any damage to the soil. Our system of sowing forage rye between our maize lines has not resulted in a yield penalty, but I would mention that getting the right advice on techniques and varietal selection from Agrii has been very helpful. It has effectively almost doubled the amount of forage produced from our maize ground."



Undersowing continuous maize with grass and leaving it over the winter, or sowing a cover crop post-maize harvest in the autumn are techniques that are increasing in popularity as growers look to reduce agriculture's effect on the environment. They also offer a range of potential benefits for the farmer, according to Mr Morgan.

The undersown crop is usually planted in early June and growers have the option of leaving it untouched following the maize harvest, when it will act as a cover crop to avoid leaving the ground bare over winter. The secondary crop can be grazed in late autumn or early spring, cut for silage and/or destroyed by an application of glyphosate.

"There is some discussion over whether the use of glyphosate may be restricted in the future, but we still have access to the chemical to date," comments Mr Morgan. "However, I am a huge fan of grazing winter cover with livestock in February; as long as it fits into the farming system. The animals will process the organic matter and return manure to the soil. Both cattle and sheep can be grazed and while sheep cause less poaching, it may be easier to contain cattle by using electric fencing."

The 2022 summer droughts have raised concerns that undersown crops may remove vital soil moisture, but he believes that the risk is minimal as long as his recommendations are followed.

"The key is to wait for at least six weeks after the maize has been

drilled, before undersowing the secondary crop. Maize roots will have reached down as far as half a metre by that stage and will have the capacity to access moisture deep in the soil. In addition, young maize plants do not respond well to competition and the delay means they will be well forward by the time the secondary crop emerges."

The percentage of maize growers who currently practise undersowing is relatively small, but he predicts that it will become more commonplace.

"The roots and above-ground biomass of the undersown crop will return nutrients to the soil and boost its organic matter content. It will also enhance soil retention, especially on sloping fields. Estimates suggest that undersowing can cut purchased nitrogen inputs by approximately 20-40kgs/ha and with nitrogen prices hovering at around £2.70/kg, this represents a significant saving of £81/ha, assuming 30kg of nitrogen is retained. Undersowing costs, including seed, are in the region of £60-80/ha."



John Morgan

Mr Morgan points out that winter cover can benefit the grower by limiting run-off and soil nutrient losses during the most high-risk periods and will help to protect the environment. Ryegrass is one of the most commonly used plants, but a wide range of herbal seeds like mustard and chicory can also be sown to provide winter cover. However, the options for winter cover crops after maize are limited, as maize is harvested relatively late and therefore the growing conditions for the following crop are less-than-ideal.

The MGA is strongly encouraging its members to adopt undersowing and post-harvest cover cropping, in order to avoid leaving maize ground bare over the autumn and winter. There is plenty of research evidence to suggest that these techniques offer a win-win situation by benefiting the grower and the environment, especially on farms which grow continuous maize, he says.

UNDERSOWING / POST-HARVEST COVER CROPPING SUMMARY

"Undersowing and cover cropping should produce a return on investment and allow earlier field access in the spring, compared with preparing a seedbed on bare land. I have also heard growers suggest that they find the soil easier to work, due to the improvement in its structure.

"Another factor is that the warmer temperatures associated with climate change may be having a positive influence on the quality of winter cover. Finally, undersowing and post harvest cover crops are being included in a range of environmental scheme options. That is yet another reason for considering the implementation of the techniques."

UNDERSOWING – AT A GLANCE

Low, non-grass weed situations: tall fescues, perennial ryegrasses and clover are good options. Sow at a seed rate of 10-15kg/ha. Leave at least a fortnight between broad-leaved weed applications and sowing. Drill when maize reaches the 4-5-leaf stage.

High non-grass weed situations: consider Italian or Westerwolds ryegrasses at a seed rate of 12-14kg/ha. Two post-emergence herbicide treatments may be needed. Delay drilling the undersown crop until maize reaches 7-8 leaves and ideally leave as long as possible after the last broadleaf weed treatment.

? DID YOU KNOW?

Maize varieties in the higher FAO, or maturity range, do not have the same degree of cold tolerance, compared with those with lower FAO figures, which are classified as ultra early or early varieties.

- The ideal secondary crop sowing time is at the maize 4-8-leaf stage
- Inter-row drilling will produce the best results
- Plant the secondary crop seed between the rows
- For maize grown on rented land, check the date and type of the most recent herbicide application
- Pendimethalin is generally safe, but allow a six-week break before secondary crop drilling
- Early weed control will allow a reduction in herbicide application rates

After the maize harvest there is usually no need to encourage the growth of the secondary crop, as it should 'green-up' with the increased access to light.

Approach maize weed control on the principle that the secondary crop is not present – the success of the maize crop is the main consideration and its performance must not be compromised.

June Undersowing Costings

Expenditure

- Seed cost, for example 15kg/ha of Italian ryegrass seed at £2.70/kg = £41/ha
- Drilling costs – typically £50/ha

Potential Cost Savings

- Nitrogen uptake – typically £30kg/ha @£2.70/kg = £81/ha
- Grazing/cutting of secondary crop: example one tonne of silage dry matter worth £120/tonne
- Potential payments via environmental stewardship schemes
- Potential yield increase in following year's crop

SAVE THE DATE... MGA CONFERENCE

The 2023 MGA conference, to which all maize growers are invited, will be held on Wednesday, 8 February at Reading University. There will be a range of farmer speakers and research presentations, along with a visit to CEDAR (the Centre for Dairy Research).

The event can be booked on the MGA website at maizegrowersassociation.co.uk

Talking BIOGAS

WITH ANDREW COOK, KWS



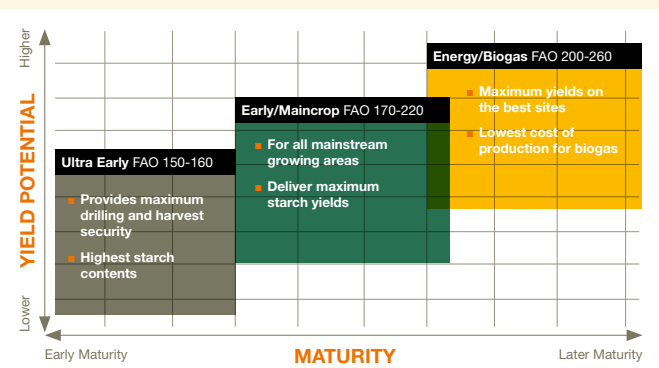
KWS has one of the most extensive ranges of top-performing maize biogas varieties on the market for spring 2023 planting. There are 16 to choose from and we have something to suit every farm situation for energy growers, with varieties from FAO (maturity rating) 160 to FAO 260.

KWS VARIETIES SUITABLE FOR BIOGAS PRODUCTION

Here are details of just three examples of our superb biogas/forage varieties that we have available for this season and two are new entrants to the BSPB Descriptive List:

KWS Anastasio is a maincrop hybrid, while the brand new Papageno represents the considerable genetic progress achieved by our maize breeding programme. It has been showing tremendous promise in commercial situations. Debalto is another new and notable KWS variety that is worthy of consideration for any energy crop portfolio.

If you have any doubts over which variety to choose, or you have any agronomy queries, please don't hesitate to contact us at HQ. A good starting point would be to browse our 2023 KWS Maize Variety Portfolio – download it from our website: kws-uk.com or order a paper copy by email: maize@kws-uk.com / phone: **01594 528234**.



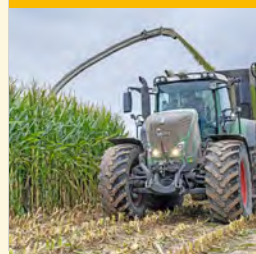
KWS ANASTASIO FAO 180/190 (Added to the BSPB Forage Maize DL for 2023)



- High DM yield of 19.6t/ha
- Leading early vigour across all soil types
- Offers superb harvest flexibility

PAPAGENO* FAO 190

* Proposed name. Hybrid subject to Pre NL Marketing Agreement



- Top DM yield performance of 21+t/ha
- Helps to spread drilling and harvest windows
- Excellent early vigour

DEBALTO FAO 170 (Added to the BSPB Forage Maize DL for 2023)



- High yield potential of 18.9t/ha DM
- Early/main crop offering harvest flexibility
- High grain : stover ratio produces energy-dense silage
- Tremendous vigour across all soil types

KWS Maize 360

A virtual experience



Fancy a tour of our maize demonstration farm from the comfort of your armchair?

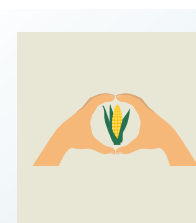
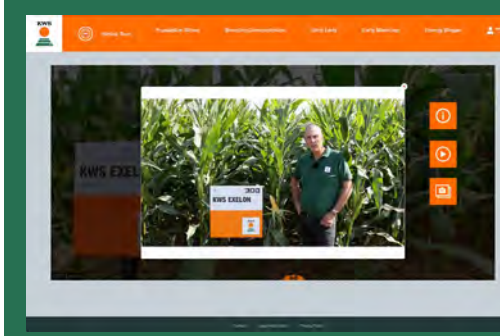
View the crop varieties, walk the trial fields, find out more and listen to our experts as they take you through all of our commercial hybrids, crop wheel and breeding demonstration.

The latest technology allows you to take the controls and 'virtually' step into each crop row at our HQ in Lydney, Gloucestershire.

New for the 2022 season we have added a gallery of images of each crop taken in September 2021 along with the ability to step into each row, just click the arrow on the floor.

We hope you find this way to view the demonstration site helpful and look forward to seeing you back at Lydney in 2023.

KWS Maize 360 can be found at maize360.com



Maize Seed Service

The aim of the maize seed service is to highlight the company's confidence in the INITIO BirdPROTECT seed treatment and to share establishment risks with growers. The treatment has been used across the majority of KWS maize seed varieties.

Maize Seed Service offers growers a 50% discount towards the cost of re-sowing any KWS INITIO BirdPROTECT treated seed that suffers damage excluding wire worm or drought.

Untreated maize seed is highly vulnerable to bird damage, which can cause total crop loss.

IBP has been found to be highly effective as a bird repellent.

IBP also contains nutrients which help to get the seed off to a great start and encourage healthy root formation. It benefits from a mixture of zinc, manganese and humic acids. Another ingredient is a phosphate mobiliser, which makes the nutrient available once the soil reaches a temperature of 3°C.

Register your field no later than 14 days post-sowing and upload proof of purchase (delivery note).

- Share risk of crop damage losses excluding wire worm and drought
- Receive a 50% discount of seed purchase costs for re-sowing
- Re-sow your maize crop to ensure yield and avoid crop losses.



New Year best wishes from the Maize Team

Wishing our readers all the best for 2023 and here's hoping for a good maize-growing year ahead.

We hope that you enjoy reading our myKWS Maize newsletter. If you haven't already signed up to receive regular copies, you can register at www.kws-uk.com. The next issue will be published in early spring, when the planting season will be almost upon us.



KWS MAIZE HARVEST PHOTO & VIDEO COMPETITIONS

OUR WINNERS!

Congratulations to **our competition winners** who both win a KWS goody bag and a £50 Amazon voucher for their stunning harvest imagery!



Freddie Bushby (photo)



Will Cheyney (video)

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