

myKWS MAIZE

NEWSLETTER | ISSUE 10 | WINTER 2021/22



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An exciting new variety to keep an eye on!

SEEDING
THE FUTURE
SINCE 1856



Welcome...

...to the Winter 2021 issue of the myKWS quarterly newsletter. This series provides you with timely tips on maize management and aims to help you get the most out of your crop.

In this issue, we cover the topical subject of undersowing maize with grass, with advice from an agronomist involved in an interesting undersowing project, as well as a farmer/contractor case study from a grower who is very pleased with our variety, Rodriguez KWS.

We also have news of the Maize 360, which allows you to tour our Gloucestershire maize demo site from the comfort of your home office, or even your tractor cab.

The KWS Maize Team would like to wish you a very merry Christmas and a happy New Year!

STOP PRESS

KWS EXELON^{FAO170} has made the list!

We are really proud of KWS Exelon and delighted to announce that it has been added to the British Society of Plant Breeders' 2022 Forage Maize Descriptive List for 2022.

KWS EXELON joins the List for favourable sites...

- One of the highest-quality varieties in its class at 11.73 ME and starch at 34.1%
- Yield average 18.9t/ha DM
- Superb vigour
- Suitable for all soil types

Seasonal Review Summary

JOHN BURGESS KWS

It has been a slightly disappointing year for maize, with yields and quality down on the five-year average. We were hoping for a repeat of the bumper year in 2018, but it was not to be and there was simply not enough sunshine and too much rain. This season has underlined the benefits of ultra-early and early hybrids, which require a shorter growing season compared with mainstream types.

Some AD growers in particular must have been recalling the highs of 2018 when they made their selections, but choosing late-maturing varieties with the aim of maximising yields did not work out this time. Our ultra-early variety, Cito KWS, stood out this year and I have heard no reports of starch dilution in its crops, while some starch yields were depressed by as much as 2% for other commercially-available varieties. The reason for the dip in quality is the lack of heat units, which had a negative effect on grain-fill.

Cito KWS, Debalto and KWS Resolvo are examples of varieties which fall within an FAO (maturity rating) of 150-170. They can manage comfortably with 10% fewer heat units, compared with their counterparts in the mainstream and late bracket.

The less-than-ideal weather also affected trials, especially where ground conditions were relatively poor; both in our own trials and those conducted by NIAB. In a few trial locations, the crop went past the point of ripeness but we could not access the fields.



John Burgess

Nevertheless it was not a disaster and we will have some robust figures to make decisions on our breeding programme for the coming year.

I would advise milk producers to stagger the transition from the old maize silage to the new for as long as possible, as the majority of 2021 material is likely to be at 10.8-11 ME, compared with the 11.5 we have come to expect over the past few seasons.



John Morgan

CONSIDER END USE

The considerations of end use should be a priority when it comes to choosing the right variety. The KWS breeding programme has responded to demand for increased flexibility, by developing new hybrids for a range of purposes.

- Maize for Forage – High DM; 30%+ starch; inclusion of a % of late-maturing types for superb energy + moderate starch, to minimise acidosis risk
- Maize for AD – Range of FAO varieties to spread workload; target high freshweight yields
- Maize for Corn Cob Mix – compact or semi-compact hybrid; FAO 150-210; grain:stover ratio 50%+; good standing power
- Maize for Grain Maize – Avoid ultra-earlies due to brackling risk; grain:stover ratio 50%+; good standing power

SITE SELECTION

Site selection has a key role in determining maize yield and quality. A sheltered site will permit earlier drilling and maintain soil temperature for longer in early spring.

- Choose sheltered fields; ideally with a south-facing aspect
- Avoid drilling on open, exposed sites
- Recommended maximum altitude – 1,000 feet (300m) above sea-level

Which KWS VARIETY is right for you?

JOHN MORGAN KWS



SOIL TYPE

Maize favours sandy/sandy loam soils, a well aerated soil structure and no compaction.

- Clay soils are slow to warm up and have a high water-holding capacity. Maize can perform well on heavier soils, as long as the clay content does not exceed 25%
- Chalk should be avoided, but chalk downland is acceptable if soil depth is adequate
- Poorly aerated soils are unsuitable, as conditions limit root structure

OTHER CONSIDERATIONS

- Maize under plastic is moving to high-cost biodegradable product. Consider an ultra-early or early variety - FAO (maturity rating) of 170 or below, to bring forward harvest date as a plastic alternative
- Ultra-early and early varieties allow for early-season feed-out
- Ultra-earlies and earlies require fewer days to reach maturity compared with mainstream types (130 days compared with 160 days)
- Genetic progress means ultra-earlies and earlies can match (or even exceed) mainstream variety performance

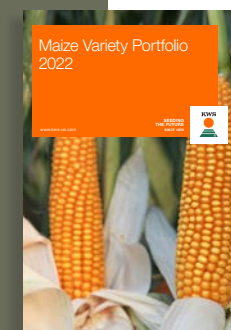
KWS Maize Portfolio 2022

NEW

Our maize portfolio will help you select the right variety for your farm. Packed with details on our wide range of top-performers, with varieties to suit every farm situation.

It is divided into 4 key sections:

- Ultra-early (FAO 150-160)
- Early (FAO 170-220)
- Corn Cob Mix & Grain (FAO 180-190)
- Energy (FAO 200-260)



Undersowing maize

RHYS OWEN, FIELD OPTIONS



Rhys Owen

There are many good reasons for undersowing maize with grass, according to Rhys Owen, who works with Field Options (part of the Procam Group).

? DID YOU KNOW?

FAO

The FAO number assigned to each variety is an indication of its maturity rating.

"It is practical, cost-effective and good for the environment," says Rhys. "By encouraging soil nutrient retention, it offers a potential saving on bought-in fertiliser inputs while also providing additional early spring grazing. An over-wintered cover crop can retain about 40kgs of nitrogen/ha. This is worth about £72/ha and the practice will also enhance potash retention.

"Undersowing supports the soil biology over the winter period, by providing a living root system. It will improve machinery travel during harvest and will take up water, possibly allowing for earlier field access in the spring, compared with a bare maize stubble."

Field Options was one of the first companies to look closely at maize undersowing and was involved with the development of the Weaving Inter Row drill for the purpose, he adds. Trials using the machine in a collaborative project with the Wye and Usk Foundation adopted the drill for sowing Italian ryegrass at a reduced rate of 7-8kgs/acre. There is now a fleet of four machines in the catchment areas, providing an undersowing contracting service at a cost of about £30/ha. Broadcasting and inter-row harrowing offer alternative options, although broadcasting requires adequate moisture conditions, he notes.

"Undersown IRG can yield 3-4t of DM/ha," says Rhys. "This can supply valuable winter/spring grazing; approximately 1,500 grazing days/ha for ewes, with a figure of 300 for heifer grazing. IRG was chosen because there is no risk of plant heading, which would lead to seed return. It is also

vigorous and will grow at relatively low temperatures. Nevertheless, some growers opt for white clover, which is left as an under storey for a following wheat crop. It is non-competitive and fixes nitrogen.

"Drilling with a disc coultter, followed by a press wheel, has produced the best undersowing results to date and it has the added benefit of leaving the soil structure intact and retaining moisture during the mid-summer period. Some 800ha of maize was undersown in 2021; mainly in the Wye and Usk catchment area, North Wales, as well as a considerable area in Pembrokeshire while working in partnership with Welsh Water. We continue to promote and develop the practice."

Undersown IRG can be incorporated or grazed. However grazing is preferable, he comments. Incorporation will increase soil organic matter, but the nutrients will take longer to become available compared with grazing.

UNDERSOWING TIPS

- Introduce IRG when the maize reaches 4-10 leaves (optimum = knee high)
- Recommended timing 7-10 days post-herbicide application (depending on chemistry)
- Don't adopt the system in fields with a high grass weed burden
- Some machines offer a one-pass system, but maize yields may suffer due to the increased early competition when it is sown with a companion cover crop.



Glyn Jones grows 100 acres of maize of his own as a cash crop, as well as cutting a further 800 acres as part of his wide range of contracting services. His fields are undersown with Italian Ryegrass to provide spring grazing for his sheep, with the maize sold standing to local dairy farmer customers.

Rodriguez has been a feature of the portfolio for the past five years, as it produces a reliable crop with good analysis. It also offers a wide harvesting window, which is important as his maize can be the last to receive attention at harvest time.

The crop has performed well for Glyn, who grows the crop at home and on fairly light rented land close to sea-level.

"The season was a bit dry early on but the maize has done well, with yields at about 18-20t/acre," says Glyn. "I have had the same two customers for my maize for almost a decade and they are looking for high starch + ME, which the Rodriguez delivers.

"This is the second time that I have undersown the crop with IRG and it has not established quite as well as it did in 2020, mainly due to a dry spell just at the wrong time. However undersowing is a good system and I have purchased a Weaving drill, so that I can offer the service to my customers. We lamb at Christmas time and the grass will give us some good grazing for the flock just in time for the lambs to be ready for the Easter trade."

Glyn farms with his wife, Lona and two sons, Tudur and Lewys. The family contracting service trades under the name of G and L Jones Ltd and supplies a full range of operations, from silage-making, to

combining and slurry spreading. The 50-acre home farm supports a flock of Texel cross ewes and a group of stirks is purchased each autumn, to sell as forward stores.

"We are fortunate to have land that is suitable for maize-growing. As soon as the crop has been cut I will confirm with my customers that they are planning to purchase the following year's harvest. Several dairy farmers in the area have tried switching from maize to wholecrop cereals, but they have returned to maize because the silage makes such a good feed for dairy cows," says Glyn.



Glyn Jones with Tudur (left) and Lewys (right)



RODRIGUEZ KWS



SERGIO KWS



KWS RESOLVO

Variety Appraisal

RHYS OWEN, FIELD OPTIONS

RODRIGUEZ KWS

A proven variety which has shown consistent performance year in, year out, even in cooler seasons. Offers a wide harvest window, as it dries down slowly after reaching 30-32% DM and stays green, retaining yield and quality. Extends the optimum harvest period by about a fortnight, compared with its rivals.

SERGIO KWS

Another reliable performer. It has good starch and ME figures and can be grown in marginal areas; one client grew it at 500 feet above sea-level and both DM and starch were in the mid-30s.

KWS RESOLVO

A new offering, has looked very impressive in the field and in our maize trials this season. Definitely one to look out for.



Rocketing fertiliser prices have highlighted the fact that maize is a crop that makes the best use of organic manures.

Maize Nutrition

RHYS OWEN, FIELD OPTIONS

APPLICATION RECOMMENDATIONS

- Sample soils and analyse the material (FYM, slurry, broiler litter, digestate)
- Incorporate within 24 hours, to reduce potential losses

Leaf tissue tests are recommended, as leaves may look healthy but they can be low in macro/micronutrients, which will have a negative effect on yields. High potash levels can suppress magnesium uptake.

Phosphate deficiency most commonly occurs on cooler soils and in low temperature years. The use of an appropriate starter fertiliser would be recommended.

? DID YOU KNOW?

A group of Field Options clients in North Wales have been using N-min testing on fields with a long history of organic manure application, with the aim of identifying potential savings on chemical nitrogen. Some producers have already significantly reduced (and on some farms almost eliminated) their nitrogen input on maize.

One to watch out for...

KWS RESOLVO FAO170



Scan the QR code to watch a video review of KWS



KWS RESOLVO is an exciting new hybrid which is being launched for 2022 sowing. KWS Resolvo did well in trials, delivering a high starch output with good dry matter yields. Its early-ripening qualities offer a distinct advantage in many farm situations, although seed stocks will be limited for its first season.

John Burgess KWS

KWS RESOLVO FACTS & FIGURES

FAO 170

Early/maincrop forage variety

High DM yield 18.5t/ha (2020)

Produces energy-dense silage

Starch 31.6% (2020)

ME 11.50 MJ/Kg (2020)

- Noted for its stability in trials
- Excellent vigour across all soil types
- High grain:stover ratio (ears are much larger than average)
- Ideal for moderate to high TMR inclusion and/or beef finishing
- Due to make the RL in 2024

MAIZE 360



We have a long-held tradition of opening up our Gloucestershire-based maize demonstration site during September, when we welcome growers and merchants to tour the variety plots, old and new, and hear the results of our latest trials.

During the Covid outbreak in 2020 we launched a virtual tour of the demonstration site. It was so well-received that for 2021 we decided to do both – we hosted numerous visitors this September and also updated the Maize 360 site which you can watch from the comfort of your home/office.

View the crops, walk the trial fields and listen to our experts up-to-date information on maize growing at www.maize360.com or scan the QR code to experience Maize 360



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KWS

Our top maize tools...



Maize Seed
Service



Seed Requirement
Calculator



Variable Seed Rate
Calculator



Soil Temperature
Tool



Heat Unit Tool



Field Vitality Check

Sign up to myKWS to gain access to **free online tools** to help with the cultivation of your maize crop throughout the year.



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