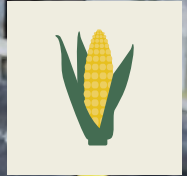


myKWS MAIZE

NEWSLETTER | ISSUE 12 | SUMMER 2022



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Benefit from our range of FREE online tools for help and advice throughout the growing season
- 4 Focus on KWS EXELON**
Farm case study: Maize for beef production
- 6 Harvest Advice**
Getting the timing right has never been more important

SEEDING
THE FUTURE
SINCE 1856



Welcome...

...to issue 12 of the myKWS quarterly newsletter.

This series aims to help you to get the best out of your maize crop, by offering timely advice, agronomy tips and grower case studies.

In this edition, we have a seasonal summary and some thoughts on the run-up to harvest from Andrew Cook, our KWS maize product and technical sales manager. We also focus on one of our flagship varieties, KWS Exelon and learn about how it fits in to a large scale farming operation which includes a beef finishing unit.

Reflection on the 2022 maize season

ANDREW COOK, KWS

Will 2022 produce bumper yields? Well, the season's start could not be more different compared with 2021.

If we cast our minds back to last year, the wet, cold start with little sunshine resulted in many delayed sowings and led to some pretty stressed crops. This carried through to late harvests and disappointing yields and quality on some farms. The year 2021 highlighted the true benefits of early-season hybrids, which allowed for a degree of 'catch up' and generally managed to reach potential.



Andrew Cook

Contrast that with the start of 2022, when we had ample sunshine and most soils were warm and moist, with heat units

rising above the five-year average. Almost without exception, maize was sown in good time into ideal seedbeds and the rainfall was perfectly timed on the majority of farms. Early-drilled maize got off to a good start, while later-drilled fields tracked the five-year trend and the crops romped away.

Obviously the situation will continue to change as the season progresses, but an excellent foundation for a good maize year is in place. However, crops will need careful monitoring because ultra-early varieties could potentially be fit to harvest from early September; this would be a whole month earlier than last year.

KWS EXELON FAO170

Drive your silage output!

Suitable for livestock feeding or AD

- 2022 NIAB List DM yield 18.9t/ha (105%)
- Starch 34.1%, ME 11.73 MJ/KG
- Special quality – KWS Exelon carries 20 grain rings instead of the usual 15-16, with the extra cob weight balanced with a low ear insertion height for improved stability
- Ideal for moderate to high (50-70%) dairy TMR inclusion and/or beef finishing



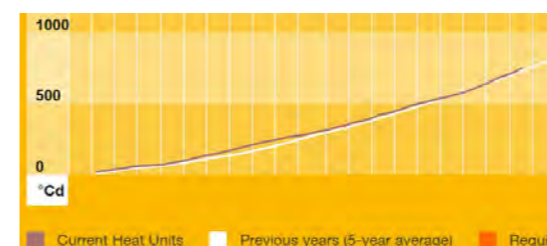
myKWS KWS Online Toolkit – Digital consulting for farmers

- Seed Rate Calculator
- Soil Temperature Tool
- Maize Seed Service
- Heat Unit Tool
- Field Vitality Check

At KWS we have a host of free, online tools to help you manage and track your crop's progress. The free, myKWS maize heat unit tool is an excellent aid to follow progress at a local level and help you with planning as your crop reaches maturity. Below you will see the heat unit chart for the maize crops at our farm HQ in Wollaston, Gloucestershire.

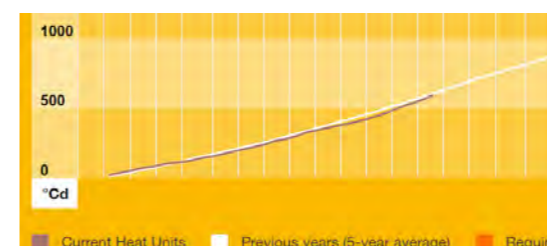
Maize Heat Unit Tool

– maize sown 15 May at Woolaston



Maize Heat Unit Tool

– maize sown 15 April at Woolaston



HEAT UNIT TOOL – SUMMARY

User-friendly tool providing data on your likely harvest start date

- Available from Apr-Oct
- Uses local meteorological data to monitor crop progress against 10-year mean to calculate real-time heat unit numbers (updated weekly)
- Assess harvest dates according to maturity rating or FAO.
- Enter your full UK postcode to find your predicted harvest date *calculation based on the crop reaching a grain kernel moisture content of 35% and using the five-year average (actual harvest date is about 3-4 weeks before this, depending on ripening conditions)

FIELD VITALITY CHECK

Another useful KWS online tool is the Field Vitality Check

- It utilises NDVI to assess areas of crop damage or suspected field problems
- Draw in your chosen field online to access the NDVI information
- Check: herbicide damage; nutrient deficiency (typically nitrogen or phosphate); disease spread; lodging; stem breakage; dry down; over-ripening

? DID YOU KNOW?

NDVI stands for normalised difference vegetation index, a method which uses satellite information to estimate the density of green on an area of land. It is an indicator of plant health and maturity. Best results are achieved on with low or no cloud cover.

Sign up to myKWS...

Access free online tools specifically designed to help you to maximise your maize crop's potential (www.kws-uk.com select the maize option). You can also download the myKWS app straight to your phone, available on both Apple and Android devices.



Focus on...

KWS EXELON FAO170



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

“

KWS EXELON did very well last year, producing almost 20 tonnes/acre and fulfilling quality expectations. It coped well on the heavier soils, so I decided to drill a larger block for this season and included some of the lighter land, to see how it fares. The 2022 Exelon went in on 27 April and showed vigorous establishment.

Martin Smart, Spiers Piece Farm



Martin Smart

FARM CASE STUDY

Maize for beef production

SPIERS PIECE FARM, TROWBRIDGE, WILTSHIRE

MAIZE

Matching maize variety to soil type is a top priority for **Martin Smart**, who manages a large number of share farming arrangements for P and J Awdry and Son. The business sows 200-300 acres of maize annually, in order to feed the farm's large beef herd and to sell to other livestock producers.

Each year, Martin trials a range of maize varieties, along with cereals and oilseed rape. These are grown on two sites, with the soil ranging from a light loam to a heavy clay. In 2021, he included 15 acres of KWS Exelon maize and this season the area has been increased to 70 acres. He is also strip-trialling several other KWS varieties: Debalto (FAO 170); Augustus KWS (FAO 160); Keops (FAO 210/220) and Kilomeris (FAO 260/270).

“My farm trials are not officially monitored, but the yield results for each variety are measured accurately,” says Martin. “In my opinion, matching variety to soil type and location suitability are key elements of maximising yields in any crop species.

“All the maize trial varieties look good so far and Exelon is a strong contender, but there is everything

to play for at this stage. I always liken the crop trials to a Formula 1 race; after the first four or five laps the pace tends to settle down. The varieties which show the most initial promise can sometimes end up being overtaken by their rivals as we head towards harvest. I visit the plots very regularly and it is interesting to witness the minute changes which occur in the plants.”

When it comes to varietal selection, Martin is looking for a flexible, fairly early-maturing type, to allow time to follow with an autumn wheat crop. The farm provides a maize contracting service and it is not unusual for the in-hand land to be “pushed to the back of the queue” at harvest time, he comments. Maize yields need to be up around the 20t/acre mark, as there is considerable demand for maize silage for the beef cattle, while a high starch content is required to maximise feed value.

Land earmarked for maize growing after the winter wheat is given a liberal application of farmyard manure, before being prepared using a Vaderstad TopDown. It is followed by a Vaderstad Tempo drill, which this year was set at 42,000 seeds/acre.

“There is no fixed depth for maize drilling, as it all depends on soil moisture levels; conditions were very favourable this year,” says Martin. “I used 75cms row spacings, with the machine consolidating the soil behind. Drilling can be quite challenging on some of the heavier soils, but I am always prepared to wait until conditions are right.”

The fields receive a pre-emergence and a post-emergence herbicide.

“Grass weeds are the main issue and unfortunately there has been some herbicide resistance in the blackgrass. I have tried a number of different spray methods to tackle this, but I am now wondering whether the very hard water in this area may be partly responsible. A water conditioner has always been added to the granular mix, but the rate has been increased for this season.

“I have also experimented with spray techniques and the best solution seems to be a medium-to-fine nozzle with a wide-angled jet; I use a flat fan nozzle in an angled body. This approach hits the weeds at an angle, instead of spraying the liquid vertically. It has improved results, but the herbicide has still not been 100% effective. The blackgrass showed signs of deterioration post-spraying and turned dull in appearance, but the plants soon regained their healthy shine. It is a relief to know that the rows have closed and the main threat is over for this season.

“I may end up with a return to inter-row weeding and I have an ambition to build my own cultivator one day. I tried an inter-row machine in 2021 and it was effective to an extent, but it was both expensive and complicated. My version would be a simple machine based on an eight-row cultivator and built to match drill width.”

The Awdry family offers a farm contracting service and run concreting and haulage businesses alongside the farming operations.

BEEF HERD



Sam Awdry

Sam Awdry looks after the beef herd, which includes a 280-cow, spring calving suckler herd based on a three-way cross using the Aberdeen Angus, Charolais and Simmental. In addition, the farm buys in Aberdeen Angus-sired steers and heifers from the dairy herd, finishing a total of 300-350 head each year.

Sam says: “Maize is a good feed for beef cattle and at Spiers Piece it is used to speed up weight gain in the latter stages and put a good finish on the cattle. Maize silage feeding starts when they reach roughly 18 months old, with steers and all the Continental types fed at 12kgs/head/day and the Aberdeen Angus-cross heifers given 6kgs.

“The other ingredients in the diet are grass silage with a high inclusion of red clover, plus home-grown barley and beans. Red clover has been associated with an increased risk of bloat, but it has never been a problem in our herd.”

Finished animals are sold deadweight, with the Aberdeen Angus cattle leaving to fulfil a contract with Dovecote Park. Angus steers are taken to the maximum specification of 380kgs deadweight where possible and the average figure is 375kgs at 21-22 months. Meanwhile, the heifers reach 20-21 months after being taken to an average 300kgs deadweight.

KWS EXELON is a winner!



Mark Sheridan, ACT

ACT are delighted to have KWS at the forefront of our maize variety portfolio for 2023 and beyond. We have been involved with KWS Exelon since 2018 and have customers from North Yorkshire, to Kent, to Cornwall and Cumbria with all areas in between.

We always see tall, stable, high yielding crops in all situations and KWS Exelon is one that you can pick out due to its characteristic low cob insertion height which visibly reduces the risk of lodging and full grain fill – right to end of the cob, each cob!

We are delighted to have supplied Spiers Farm with maize, farm and crop inputs for several decades. Martin's rationale of testing a wide range of varieties in his own farm strip trials is very much aligned with my ethos of always testing new varieties in a range of geographic locations before we offer them for sale onto farm. For example we tested KWS Exelon in 6 locations and immediately we knew we had a winner!

Harvest advice

ANDREW COOK, KWS



These simple steps will help ensure your attention to detail throughout the season is reflected in your business performance.

With all crop inputs and purchased feed costs on the rise, there has never been a better time to ensure that you optimise your crop performance, as well as your animal performance. Harvesting your crop at the correct dry matter and quality will have a positive effect on your business.

TIPS TO ENSURE THAT YOU ARE HARVEST-READY

- Clamps should be clean and ready to go. The removal of contaminated material will limit spoilage and dry matter losses
- Make sure that chop length and corn cracker have been correctly set for your crop
- Compact, compact, compact - get rid of the air!
- Sheet well – do not let the bad bugs rob you!
- Additives can be beneficial on high DM crops and for larger clamps
- Regularly assess your crop for harvest readiness

Influence of DM % on DM Losses in Maize Silage

Dry Matter Losses	Maize Silage Dry Matter %			
	28%	30%	35%	40%
Effluent	4.0	1.0	0.0	0.0
Fermentation	12.0	10.5	9.0	7.3
Silo, Surface & Face	5.0	7.0	8.5	10.0
Trough	1.0	1.0	2.0	2.5
Undigestible Grains	0.0	0.5	1.5	4.0

Source: Field Options Ltd Adaptation from Historic MGA Presentation

MOISTURE CONTENT TEST

Cut the plant above the first node, twist the stem. If liquid can be squeezed out, the crop is not ready (unless it is heavily septoria infected).

Grain maturity	Description	Cob DM (%)	Whole plant DM (%)
Milk	Grain immature Avoid premature harvesting	10-15	< 20
Soft dough	Grains become firmer. Husks remain green	20-28	20-27
Hard dough	Silage maturity reached at 'hard dough' stage. Reduced risk of clamp effluent	30-45	28-32
Hard ripe	Grain at 'hard ripe' stage. Crop ready for late cut silage or CCM	48-50	33-35
Fully ripe	Grain fully matured Husks died back Ready for crimped maize or late cut CCM	65-70	36-45

COB ASSESSMENT

Use the milk line test and look at grains half way down the cob, referring to the table above

If you harvest too early (<30% DM) you will:

- Lower your yield
- Dilute ME and starch content
- Increase ADF, leading to an acidic fermentation
- Increase sugar content
- Increase effluent levels

If you harvest too late (>40% DM) you will:

- Increase harvesting costs and field losses
- Increase NDF, reducing palatability and intake potential
- Have a clamp which is difficult to consolidate (reducing your chop length will help)
- Increase the risk of soil compaction
- Risk increased spoilage and losses at feed-out



Visit our **demonstration sites** in September

Did you know we have 2 demonstration sites approximately 10 minutes apart?

- One close to sea level reflecting favourable sites
- One at 500 ft showing less favourable conditions at altitude

What you can see:

- The KWS and UK's leading varieties
- New outstanding varieties for the future
- Population wheel and the effects of plant density
- Breeding demonstration



Wireworm A silent assassin!

Wireworms are the golden brown larvae of click beetles

The larvae feed on plant roots, causing die off. It is possible to lose most of the plants in a field, although more often the losses will occur in patches

The risk is at its highest in the second year after grass, as the larvae feed on the old turf in the first year and attack the new crop once this feed source is reduced

Current maize seed treatments may have variable efficacy. Crop rotation is currently the best strategy to protect crops

Using a cereal break with an effective seed treatment is one way to control and minimise wireworm damage in subsequent maize crops.

KWS Open Days

Lydney, Gloucestershire – Open during September

To book your visit please contact your merchant
or the KWS Maize Office.

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Meet the Team

KWS UK LTD – MAIZE

Atwoods Grange
Station Road
Woolaston
Lydney
Gloucestershire
GL15 6PN

www.kws-uk.com



Rob Hunt

Mobile:
E-mail:

Commercial Director
+44 (0)7979 290702
rob.hunt@kws.com



Andrew Cook

Mobile:
E-mail:

Maize Product & Sales Manager
+44 (0)7970 734363
andrew.cook@kws.com



John Morgan

Mobile:
E-mail:

Maize Sales Manager
+44 (0)7595 562943
john.morgan@kws.com



Alison Phipps

Telephone:
E-mail:

Maize General Enquiries
+44 (0)1594 528234
maize@kws-uk.com

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