

# Maize Variety Portfolio 2022

[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856

**KWS**



# Welcome!

**The KWS Maize portfolio is designed to help you select the right hybrids for your farming situation.**

The guide is divided into 4 key sections:

- **Ultra Early FAO 150-160**  
Ultra early hybrids, for maximum drilling or harvest security.
- **Early / Maincrop FAO 170-220**  
For all mainstream growing areas & maximum starch yield.
- **CCM (Corn Cob Mix) & Grain Maize FAO 180-190**  
Grain hybrids selected for maximum standing ability & later harvesting.
- **Energy FAO 200-260**  
Maximum DM yield, and lowest cost per tonne for biogas production.

**Please contact the KWS team, if you would like further information.**

**[www.kws-uk.com](http://www.kws-uk.com)**

# Variety List

Below are our key variety selections for next season. They are arranged in maturity order and by market sector.

Other varieties are available – for more advice please contact a member of the KWS team.

06	ULTRA EARLY	FAO	Forage	Grain	Biogas
08	CITO KWS	150	✓		
09	AUGUSTUS KWS	160	✓		
10	RUBIERA KWS	160	✓		
11	SERGIO KWS	160	✓	✓	
12	PEREZ KWS	160	✓		✓
14	EARLY/MAINCROP	FAO	Forage	Grain	Biogas
16	AVITUS KWS	160/170	✓		✓
17	KWS CALVINI	170	✓		✓
18	DEBALTO	170	✓		✓
19	AUTENS KWS	170	✓	✓	✓
20	KWS RESOLVO* (KXC0007) 	170	✓		
21	EDGARD KWS	170	✓		
22	KWS EXELON	170	✓	✓	✓
23	RODRIGUEZ KWS	170	✓	✓	
24	KWS PASCO	170/180	✓		✓
25	AURELIUS KWS	180	✓	✓	✓
26	CCM & CRIMPED MAIZE	FAO	Forage	Grain	Biogas
28	KWS ANASTASIO* (KXB9009) 	180/190	✓	✓	✓
29	KWS CURACAO* (KXB9014) 	190	✓	✓	✓
30	ENERGY/BIOGAS	FAO	Forage	Grain	Biogas
32	KWS KAMPINOS* 	200/210	✓		✓
33	KEOPS	210/220	✓		✓
34	BENEFITO* 	230			✓
35	AMAROC	240			✓
36	KILOMERIS	260/270			✓

The FAO number is a relative index of maturity. The lower the number, the fewer heat units that are required to reach harvest time. You can check your farm's heat units and FAO suitability on the KWS website.

\*Proposed name. Hybrid subject to a Pre NL Marketing Agreement.



# A virtual experience...

## Maize 360

The Maize 360 gives an online virtual experience of our KWS Maize Demonstrate Site at Lydney.

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

**Visit our website or scan the QR code to experience Maize 360!**



[www.kws-uk.com](http://www.kws-uk.com)



**KWS**



# Tips for choosing maize varieties based on end use



## Maize for Forage

- High dry matter
- 30%-plus starch
- Limit choice to a maximum of 180-190 FAO (maturity rating) range
- For TMR diets, ultra-early hybrids help to ensure an all-year-round supply, by bringing harvest forward into early September

## Maize for AD

- Use a range of FAO varieties to spread drilling and harvest workload
- Target high freshweight yield and good disease resistance

## Maize for Corn Cob Mix (CCM)

- Requires a compact or semi-compact hybrid with an FAO of 150-210, as well as a grain:stover ratio of 50%+ and good standing power

## Maize for Crimping

- Ultra-earlies are not recommended, due to the risk of brackling
- As with CCM, a grain:stover ratio of 50%+ is desirable, together with good standing power







## Maize Selection

# Ultra Early

A selection of the earliest-maturing hybrids available

## Characteristics and Suitability

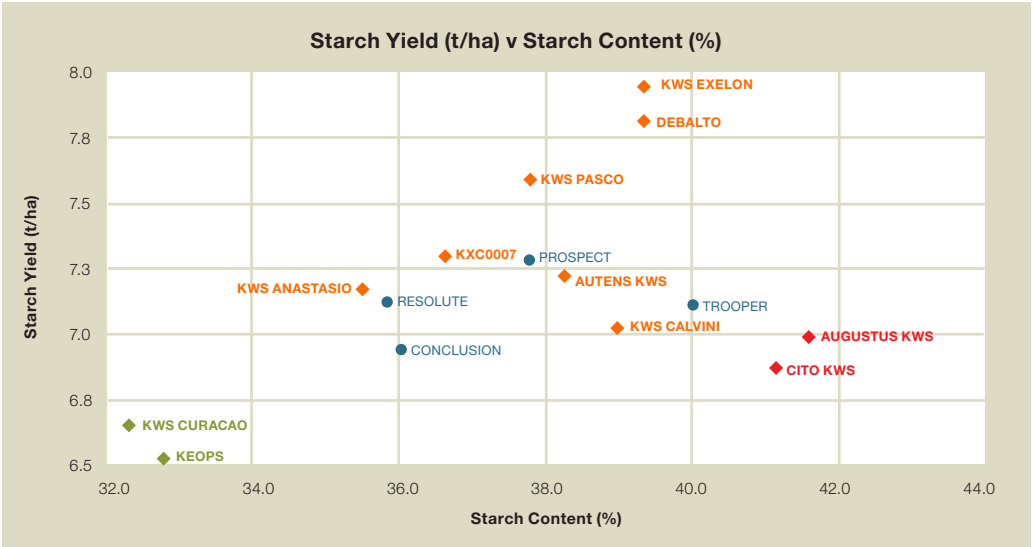
- Early harvest potential – require fewer days to reach maturity compared with standard varieties (130 days v 160 days)
- Ability to extend drilling window – useful for heavier soils
- Many can match (or even exceed) early/mainstream variety yields
- Ideal for cool sites/low heat areas, where later types may struggle to mature
- High starch content (ideal for a dairy TMR at 50% maize inclusion or beef finishing)
- Superb energy density (ME/Kg)
- Rapid dry-down qualities

**NB: May not reach yield potential: on very sandy soils; in high heat unit areas; on sheltered sites**

# How do they compare?

We have compiled the results below to show starch yield (t/ha) and starch content (%) – these are the key targets we look for in ultra early hybrids.

**A high starch yield makes maize economic to grow in marginal areas, when combined with the protein and sugar from grass silage.**



Data source: KWS LP250 2020 Average of all Sites.  
Ultra Early (FAO 150-160)   Early (FAO 170-190)   Intermediate (FAO 200-220)



# CITO KWS

Ultra Early: FAO 150



## Step up your forage performance!

### Characteristics / Quality

- Strong yield performance in the ultra-early segment – (93%) across marginal sites
- Rapid early vigour (7.1) ideal for early or late drilling
- Short season hybrid with full cob sheath coverage
- High starch (38.3%) and ME (11.97 MJ/Kg) content
- KWS top selling ultra-early hybrid

Data source: NIAB Forage Maize Descriptive List. First choice varieties for less favourable sites (2022).

**CITO KWS** gives farmers more options for early feedout or late planting, plus maximum starch content in low heat unit areas.

**Breeder's view**

Scan this code to watch  
our video review of  
CITO KWS







# AUGUSTUS KWS

Ultra Early: FAO 160



## A born leader!

### Characteristics / Quality

- No.1 DM yield in its segment – (94%) across all marginal sites
- Rapid early vigour (7.1)
- Full cob sheath coverage
- Excellent starch (36.8%) and ME content (11.78 MJ/Kg)

Data source: NIAB Forage Maize Descriptive List. First choice varieties for less favourable sites (2022).

### AUGUSTUS KWS

delivers high starch content silage, ideal for all TMR systems, where short season maturity is essential.

#### Breeder's view

Scan this code to watch  
our video review of  
AUGUSTUS KWS



# RUBIERA KWS

Ultra Early: FAO 160



## The silage athlete!

### Characteristics / Quality

- Class leading DM yield – (93%) across all sites
- Rapid early vigour (7.0)
- Semi dry down for low effluent risk
- Full cob sheath coverage
- Excellent starch (37.3%) and ME content (11.86 MJ/Kg)

Data source: NIAB Forage Maize Descriptive List. First choice varieties for less favourable sites (2022).

### RUBIERA KWS

offers high kernel content, and is noted for its ripening stability, particularly at altitude.

**Breeder's view**

Scan this code to watch  
our video review of  
RUBIERA KWS



# SERGIO KWS

Ultra Early: FAO 160



## Exceptional ME and early vigour!

### Characteristics / Quality

- Above average DM yield for its maturity – (95%) across all sites
- Good early vigour (7.5) for early or late drilling
- Above average starch (36.7%) and ME (11.79 MJ/Kg) content

Data source: NIAB Forage Maize Descriptive List. Second choice varieties for less favourable sites (2020).

**SERGIO KWS** provides rapid early vigour, early maturity & proven ripening stability.

**Breeder's view**

Scan this code to watch  
our video review of  
**SERGIO KWS**





# PEREZ KWS

Ultra Early: FAO 160



## Gain higher yields faster!

### Characteristics / Quality

- Strong DM yield in its segment – (98%)
- Ideal for late drilling on favourable sites to encourage earlier feedout
- Excellent starch (35.5%) and ME content (11.58 MJ/Kg)

Data source: NIAB Forage Maize Descriptive List. Second choice varieties for less favourable sites (2022).

**PEREZ KWS** rewards growers with an early harvest – suitable for silage or AD use.

**Breeder's view**

Scan this code to watch  
our video review of  
**PEREZ KWS**



# Our top maize tools

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



## Maize Seed Service

offers growers a 50% discount towards the cost of re-sowing any KWS **INITIO BIRD PROTECT** treated seed that suffers damage from bird predation or frost in the coming season.



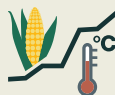
## Soil Temperature Tool

provides growers with a clear indication of soil temperature changes to help select the right sowing window to ensure strong germination and emergence.



## Seed Requirement Calculator

assists growers on seed rates, row spacing and seed volume requirements.



## Heat Unit Tool

allows growers to check predicted harvest date based on FAO and the average heat units for your location.



## Variable Seed Rate Calculator

defines the ideal planting density for maize on the basis of specific field conditions, using satellite images and breeder knowledge.



## Field Vitality Check

Check crop development throughout the season. Highlight areas of disease, compaction and other plant stress factors, using satellite imagery to pick out any differences within the field.



## Maize Selection

# Early / Maincrop

High-yielding hybrids for all mainstream growing areas

## Characteristics and Suitability

- Low production cost/tonne
- Suitable for all mainstream sites and moderate-to-high heat unit areas
- Balanced starch content (ideal for a dairy TMR at up to 70% maize inclusion)
- Excellent for biogas growers seeking to stagger harvest operations
- Superb for the production of crimped grain (valuable by-pass starch source)
- Slow dry-down allows wide harvest window

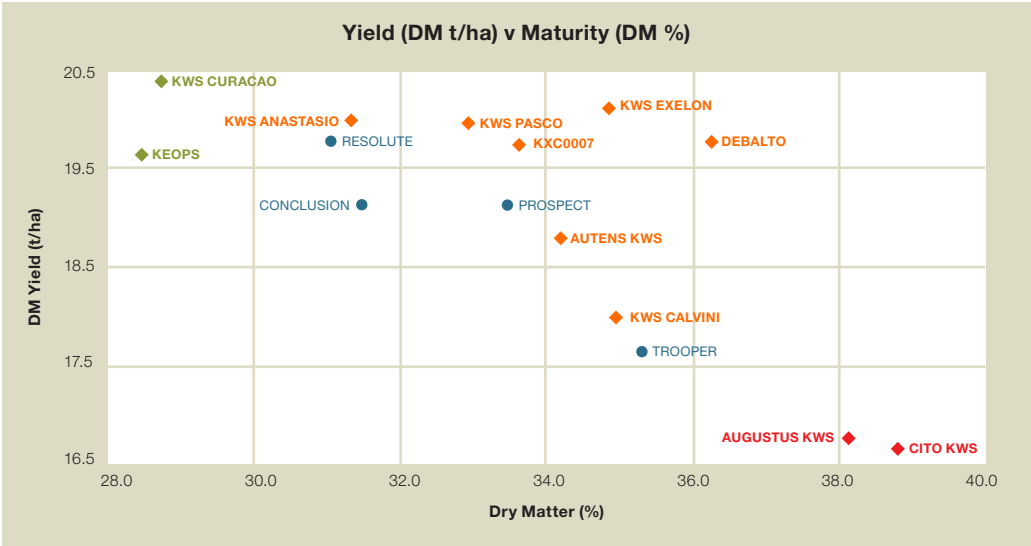
**NB: May not reach potential on: very warm sites; sheltered sites; heavy or chalk soils**



# How do they compare?

We have compiled the results below to show DM yield (t/ha) and DM content (%) – these are the key targets we look for in early hybrids.

An economic yield of dry matter and early maturity are the priorities for the mainstream grower.



Data source: KWS LP250 2020 Average of all Sites.  
Ultra Early (FAO 150-160) Early (FAO 170-190) Intermediate (FAO 200-220)



# AVITUS KWS

Early: FAO 160/170



## Forage performance to reign supreme!

### Characteristics / Quality

- High DM yield in the early segment – over 18 t/ha DM on the NIAB 2022 List
- Top early vigour 7.4
- Very high starch 36.0 and ME content 11.85 MJ/Kg
- Full cob sheath coverage
- Moderate stay green for faster ripening

Data source: NIAB Forage Maize Descriptive List. First choice varieties for favourable sites (2022).

**AVITUS KWS** offers high DM & starch output, plus rapid early vigour. Seed rate management is advised to maximise harvest security, on exposed sites.

**Breeder's view**

Scan this code to watch  
our video review of  
AVITUS KWS





# KWS CALVINI

Early: FAO 170



## Drive your ration performance – maturity, yield and starch in one!

### Characteristics / Quality

- Top DM yield in its class – across all NIAB trials
  - 2022 DL: 18.2 t/ha DM
- Top early vigour 2022 DL: 7.7
- Very high starch content
  - 2022 DL: 35.0%
- Superb ME content
  - 2017: 11.49 MJ/Kg
  - 2022 DL: 11.74 MJ/Kg
- Full cob sheath coverage
- High kernel content and ripening stability

Data source(s): KWS LP250 ("2016 + "2017) & FERA NL Trials for Forage Maize – All sites (2017).  
NIAB Forage Maize Descriptive List. First choice varieties for favourable sites (2022).

**KWS CALVINI** suitable for all maize growing areas, drive your ration performance – maturity, yield and starch in one.

**Breeder's view**

Scan this code to watch our video review of KWS CALVINI





# DEBALTO

Early: FAO 170



## Push your starch yield ...keep your harvest on track!

### Characteristics / Quality

- Strong DM yield (2019: 104% – 19.8 t/ha DM )  
– 2020: 18.0 t/ha DM
- High grain : stover ratio for energy dense silage  
– Starch % (2019: 32.6 %) – 2020: 33.2%  
– ME content (2019: 11.39 MJ/Kg) – 2020: 11.54 MJ/Kg
- Ideal for moderate to high (50 – 70%) TMR inclusion  
and/or beef finishing
- Equal ripening to KWS CALVINI in KWS screening trials
- Excellent vigour (2019: 7.5) for all soil types

Data source(s): FERA/NIAB National List Trials (2019 + 2020), KWS LP250 2019.

Hybrid subject to a Pre NL Marketing Agreement.

Initial seed availability is limited.

**DEBALTO** offers leading starch yields, high grain density & lower ear insertion height, for better agronomic stability at harvest.

**Breeder's view**

Scan this code to watch  
our video review of  
**DEBALTO**



# AUTENS KWS

Early: FAO 170



## Outstanding field performance!

### Characteristics / Quality

- Stable yield performance – 2022 NIAB List – 100% of controls 18.1 t/ha DM
- Faster dry down with good standing power
- Outstanding early vigour on all soil types (2014: 8.2; 2015: 7.6, 2018 DL: 7.4) – 2022 DL: 7.5
- Full cob sheath coverage
- Very high starch (2015: 35.2%, 2016: 34.6%) and ME content (2015: 11.6 MJ/Kg; 2016: 11.5 MJ/Kg) – 2022 DL 34.3% Starch, 11.74 ME (MJ/Kg)

Data source: NIAB Forage Maize Descriptive List. Second choice varieties for favourable sites (2022).

**AUTENS KWS** offers stable yield performance & high kernel content, for proven starch yield in favourable areas.

**Breeder's view**

Scan this code to watch our video review of AUTENS KWS



# KWS RESOLVO\*

(KXC0007)

Early: FAO 170



NEW



## The key to unlock higher starch yields!

### Characteristics / Quality

- Strong DM yield (2020: 18.5 t/ha DM )
- High grain : stover ratio for energy dense silage
  - Starch % (2020: 31.6 %)
  - ME content (2020: 11.50 MJ/Kg)
- Ideal for moderate to high (50 – 70% TMR) inclusion and/or beef finishing
- Equal ripening to AUTENS KWS in KWS screening trials
- Excellent vigour (2020: 7.6) for all soil types

Data source(s): FERA/NIAB National List Trials (2020), KWS LP250 2020

\*Proposed name. Hybrid subject to a Pre NL Marketing Agreement

Initial seed availability is limited

**KWS RESOLVO\*** is an exciting new hybrid with agronomic stability in all conditions. It delivers high starch output combined with early ripening and high dry matter yields.

**Breeder's view**

Scan this code to watch  
our video review of  
KWS RESOLVO





# EDGARD KWS

Early: FAO 170



Good early vigour, DM yields and feed value...

## Characteristics / Quality

- High DM yield in its class – across NIAB trials (2014: 106% Rel. DM Yield)
- Good early vigour on all soil types (2014: 7.6)
- Full cob sheath coverage
- Very high starch (2014: 34.3% and ME content (2014: 11.36 MJ/Kg)

Data source(s): FERA NL Trials for Forage Maize – All sites (2014).

**EDGARD KWS** has given stable yield performance in KWS and NL screening trials in both the UK and Denmark since its introduction.

**Breeder's view**

Scan this code to watch  
our video review of  
EDGARD KWS



# KWS EXELON

Early: FAO 170



## Drive your silage output!

### Characteristics / Quality

- Leading DM yield (2018 – 19 mean: 19.4 t/ha DM \*)
  - 2022 NIAB List DM Yield – 105% 18.9 t/ha DM
- High grain : stover ratio for energy dense silage
  - Starch % (2018: 36.2%), 2022 DL 34.1%
  - ME content (2018: 12.24 MJ/Kg), 2022 DL 11.73 MJ/Kg
- Ideal for moderate to high (50 – 70%) TMR inclusion and/or beef finishing
- Approx. 4 days earlier than AURELIUS in KWS screening trials
- Excellent vigour (2018: 7.6) 2022 DL 7.4 for all soil types

Data source(s): FERA/NIAB National List Trials (2018), \*KWS LP250 2018 & 2019.  
NIAB Forage Maize Descriptive List. First choice varieties for favourable sites (2022).

**KWS EXELON** has a lower ear insertion height resulting in greater stability. The potential to carry 20 grain rings gives superb grain density leading to high starch yields combined with excellent DM yield and early maturity.

**Breeder's view**

Scan this code to watch  
our video review of  
**KWS EXELON**





# RODRIGUEZ KWS

Early: FAO 170



## Versatile for silage or grain!

### Characteristics / Quality

- High DM yield (99%)
- Reliable early vigour (6.8)
- Full cob sheath coverage
- Stay green plant type for good eyespot resistance
- Excellent starch (35.7%) and ME content (11.83 MJ/Kg)

Data source: NIAB Forage Maize Descriptive List. First choice varieties for favourable sites (2022).

Versatile for grain or silage production, **RODRIGUEZ KWS** is stable, particularly when grown at altitude or on heavier soils.

### Breeder's view

Scan this code to watch  
our video review of  
**RODRIGUEZ KWS**





# KWS PASCO

Early: FAO 170/180



## Excellent yield performance for silage or CCM!

### Characteristics / Quality

- Leading DM yield (t/ha DM ) and quality
  - 2019: 19.2 t/ha DM – 18.93 t/ha DM
  - Starch % (2019: 34.3%) 2020: 33.7%
  - ME content (2019: 11.67 MJ/Kg) 2020: 11.63
- Ideal for CCM or high starch silage for beef finishing
- Equal ripening to AUTENS in KWS screening trials
- Good early vigour (2019: 7.2, 2020: 7.4) for all soil types

Data source(s): FERA/NIAB National List Trials (2019 + 2020), KWS LP250 2019

**KWS PASCO** is a stable single – cross silage hybrid suitable for moderate to high maize inclusion in all TMR systems.

**Breeder's view**

Scan this code to watch  
our video review of  
**KWS PASCO**



# AURELIUS KWS

Early: FAO 180



## A dynasty in maize growing!

### Characteristics / Quality

- Reliable DM yield in its segment – 101% DM Yield 2022  
Descriptive List – Favourable sites
- Rapid early vigour (7.5)
- Full cob sheath coverage
- Balanced starch (32.7%) and ME content (11.67 MJ/Kg)
- Ideal balance of forage yield and energy content for 60 – 70%  
+ maize inclusion

Data source: NIAB Forage Maize Descriptive List. Second choice varieties for favourable sites (2022).

**AURELIUS KWS** offers stable DM yields & is ideal for a higher maize inclusion in modern TMR systems.

**Breeder's view**

Scan this code to watch our video review of AURELIUS KWS





## Maize Selection

# CCM & Crimped Maize

Two high quality silage alternative maize feedstuffs

## Characteristics and Suitability

### CCM (Corn Cob Mix)

- ME average 13.0 MJ/Kg DM
- Comprises ripe maize ear (grain, spindle & sheath)
- Production requires row-dependent grain maize header & forage harvester
- Late cutting date (2 weeks later than maize silage) can be offset by sowing early-maturing varieties
- Ensiled in clamp or ag-bag
- Typical starch content 40-45% (high % by-pass starch)
- Highly palatable to livestock, with superb 'scratch factor'
- Storage requirement 50% lower than maize silage
- Low effluent risk (DM 45-55%)

### Crimped Maize

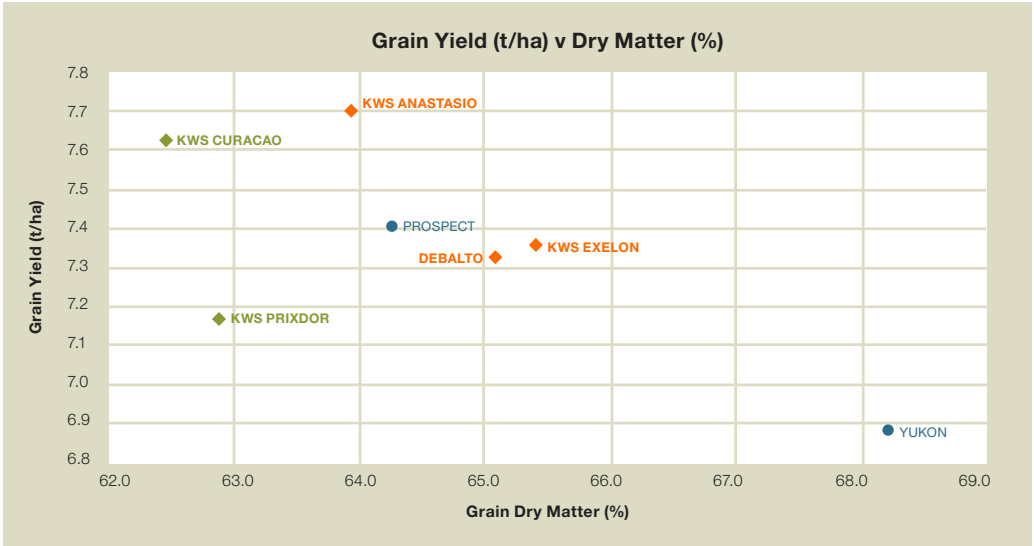
- ME average 14.5+ MJ/Kg DM
- Only the ear enters the feeder house, with stover left on ground
- Many contractors are equipped with relevant kit (combine+maize picker header attachment)
- Clamp or ag-bag storage
- Typical starch content 65-70% (high % by-pass starch)
- High yield potential (9-12 t/ha of fresh grain)
- Zero drying costs
- Low effluent risk (DM 65-70%)



# How do they compare?

We have compiled the results below to show grain yield (t/ha) and DM content (maturity) – these are the key targets we look for in our grain maize hybrids.

Candidate varieties are trialled extensively to ensure they are suitable with standing power, grain yield and threshability being the key criteria.



Data source: KWS LP248 DK (KWS SCANDINAVIA A/S) 2020 Average of all Sites.  
Ultra Early (FAO 150-160) Early (FAO 170-190) Intermediate (FAO 200-220)



# KWS ANASTASIO\*

## (KXB9009)

• Early / Maincrop: FAO 180/190



## Maincrop silage and grain hybrid for every season

### Characteristics / Quality

- Leading DM yield (t/ha DM ) and quality
  - 2020: 18.9 t/ha DM
  - Starch % (2020: 31.6%)
  - ME content (2020: 11.47 MJ/Kg)
- Ideal for CCM or high starch silage for beef finishing
- Equal ripening to AURELIUS in KWS screening trials
- Good early vigour (2020: 7.4) for all soil types

Data source(s): FERA/NIAB National List Trials (2020), KWS LP250 2020

\*Proposed name. Hybrid subject to a Pre NL Marketing Agreement

Initial seed availability is limited

**KWS ANASTASIO** meets the demands for harvest flexibility, ideal for silage, CCM or crimped & dried grain maize at harvest.

### Breeder's view

Scan this code to watch our video review of KWS ANASTASIO



# KWS CURACAO\*

## (KXB9014)

Maincrop: FAO 190



NEW

## Silage and grain maize hybrid for maritime climates!

### Characteristics / Quality

- Leading DM yield (t/ha DM ) and quality
  - 2020: 18.8 t/ha DM
  - Starch % (2020: 26.7%)
  - ME content (2020: 11.39 MJ/Kg)
- Ideal for CCM or high starch silage for beef finishing
- Equal ripening to AMBROSINI in KWS screening trials
- Good early vigour (2020: 7.5) for all soil types

Data source(s): FERA/NIAB National List Trials (2020), KWS LP250 2020

\*Proposed name. Hybrid subject to a Pre NL Marketing Agreement

Initial seed availability is limited

**KWS CURACAO** is a clear winner for yield, stability and breeding innovation. The hybrid delivers top yields for silage, CCM & grain in the maincrop segment.

**Breeder's view**

Scan this code to watch  
our video review of  
**KWS CURACAO**







## Maize Selection

# Energy/Biogas

**Maximise your energy yield per hectare with our varieties**

## Characteristics and Suitability

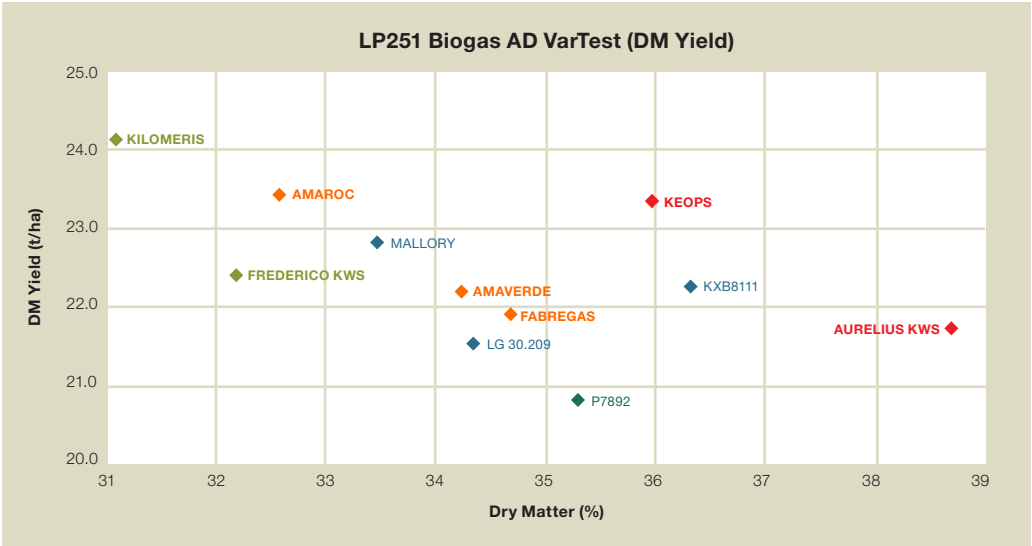
- KWS biogas varieties will maximise energy yields/hectare and optimise cost/tonne
- Stay-green nature and wide varietal choice allows flexible harvest window and workload spread
- Ideal for all mainstream sites, high heat unit areas and sandy soils, where drought tolerance and lower seed rate option can help to preserve yields
- Prolonged biogas plant retention times, due to maximised cellulose and hemicellulose properties

**NB: May not reach potential on: heavy or chalk soils; colder sites**

# How do they compare?

We have compiled the results below to show DM yield (t/ha) and DM content – these are the key targets we look for in our energy maize hybrids.

**A high DM yield is directly linked to methane yield. A key target for farmers looking to optimise their feedstock cost and achieve an adequate DM content suitable for anaerobic digestion.**



Data source: KWS LP251 2019 Average of all Sites.  
Early (FAO 190-210) Intermediate (FAO 220-240) Late (FAO 250-260)



# KWS KAMPINOS

Maincrop: FAO 200/210



## Continental yields with cold tolerance ...silage or AD use!

### Characteristics / Quality

- Heavy yield potential (50 – 55 t/ha)
- Ideal hybrid for spreading drilling windows
- High grain:stover ratio for stable ripening
- Approx. 3 – 4 days later maturity to FABREGAS\*
- Recommended seed rate: 42,000 seeds / acre (103,000 seeds / hectare)
- In low rainfall areas: 38,000 seeds / acre (94,000 seeds / hectare)

Data source: \*KWS Agroservice 2019 – 2020

Hybrid subject to a Pre NL Marketing Agreement

Initial seed availability is limited

**KWS KAMPINOS** adds more options for AD or silage growers looking for a wider drilling window, without losing yield potential in dry spring conditions.

**Breeder's view**

Scan this code to watch  
our video review of  
**KWS KAMPINOS**





# KEOPS

Maincrop: FAO 210/220



## Multi-use silage or biogas – wide drilling window...

### Characteristics / Quality

- Heavy yield potential (50 – 55 t/ha)
- Ideal for spreading harvest or drilling window
- High grain:stover ratio for more stable ripening in cooler seasons
- Rapid early vigour
- Recommended chop length: 7 – 9 mm
- Recommended seed rate: 42,000 seeds / acre (103,000 seeds / hectare)
- In low rainfall areas: 38,000 seeds / acre (94,000 seeds / hectare)

Data source: KWS Agroservice 2015 – 2016.

**KEOPS** combines exceptionally high yields and agronomic stability for silage or AD in favourable sites.

**Breeder's view**

Scan this code to watch  
our video review of  
**KEOPS**



# KWS BENEFITO

Maincrop: FAO 230

KWS  
ENERGY



NEW



## Benefit from greater harvest security in the later FAO segment

### Characteristics / Quality

- Heavy yield potential (55 t/ha + )
- Main crop hybrid with high silage and grain yield potential
- Approx. 2 - 3 days earlier maturity to AMAROC\*
- Recommended seed rate: 42,000 seeds / acre (103,000 seeds / hectare)
- In low rainfall areas: 38,000 seeds / acre (94,000 seeds / hectare)

Data source: \*KWS Agroservice 2019 – 2020

Hybrid subject to a Pre NL Marketing Agreement

Initial seed availability is limited

**KWS BENEFITO** is a stable single-cross main crop silage and grain hybrid. For UK growers looking for added harvest stability in the later AD segment.

**Breeder's view**

Scan this code to watch  
our video review of  
**KWS BENEFITO**





# AMAROC

Energy: FAO 240

KWS  
ENERGY



## Heavy yield potential

### Characteristics / Quality

- Heavy yield potential (55 – 60 t/ha)
- Ideal for spreading harvest or drilling window on lighter land
- Rapid early vigour
- Recommended chop length: 7 – 9 mm
- Recommended seed rate: 42,000 seeds / acre (103,000 seeds / hectare)
- In low rainfall areas: 38,000 seeds / acre (94,000 seeds / hectare)

Data source: KWS Agroservice 2015 – 2016.

**AMAROC** offers excellent DM yield for AD feedstock production on favourable sites and in high heat unit areas.

**Breeder's view**

Scan this code to watch  
our video review of  
**AMAROC**





# KILOMERIS

Energy: FAO 260/270

KWS  
ENERGY



## The ultimate in feedstock yield – ideal for light soils!

### Characteristics / Quality

- Ideal hybrid for drought-prone areas – yields exceed earlier hybrids\*
- Mass type, very high volume plant, strong stay green
- Excellent early vigour
- Recommended chop length: 7-9 mm
- Recommended seed rate: 40,000 seeds / acre (98,000 seeds / hectare)
- In low rainfall areas: 38,000 seeds / acre (94,000 seeds / hectare)

Data source: KWS Agroservice 2013 – 2016. \*(60 t/ha + in optimum conditions, 40 – 45 t/ha in dry areas depending on cultivation).

**KILOMERIS** offers top yield potential from lighter soils – exclusively for biogas use.

Breeder's view

Scan this code to watch  
our video review of  
KILOMERIS



# Drilling Tips

Optimum drill timing depends on **soil conditions**, **temperature** and **seedbed moisture**.

Modern hybrids have a high degree of cold tolerance but should not be drilled before soils have reached an **even temperature** for 3-4 days (8°C for light soils, 12°C for heavy soils) to give the best possible establishment.

## Drilling considerations

- Soil type (heavy, medium or light soils), temperature and moisture availability
- Site and yield potential (eg warm site with light soils, cold site with heavy soils)
- Short term weather forecast

## Effects of premature drilling

- Slowed germination
- Uneven emergence, necessity to increase seed rates
- Reduced nutrient uptake (low soil temperature)

## Effects of late drilling

- Delayed harvesting
- Requirement for earlier maturing varieties
- Increased risk of lodging



## Recommended seed rates

Plants/ha (acre)	Units*/ha (acre)	Deposition distance (cm)	
		at 75cm (30")	at 50cm (19")
85,000 (34,000)	1.8 (0.72)	14.9	22.4
90,000 (36,000)	1.9 (0.76)	14.1	21.2
95,000 (38,000)	2.0 (0.81)	13.3	20.1
100,000 (40,000)	2.1 (0.85)	12.7	19.0
105,000 (42,000)	2.2 (0.89)	12.1	18.1
110,000 (44,500)	2.3 (0.93)	11.5	17.3
115,000 (46,500)	2.4 (0.98)	11.0	16.6

\*1 Unit = 50,000 seeds

# Pros/Cons of 50cm v 75cm row widths

**Seed rate** and **row spacing** operate independently of each other.

Typical yield responses are difficult to measure when harvested for silage with the main effects being a difference in starch content and dry matter for the same hybrid at equal harvest time.

Closer row spacing produces a **denser crop** with higher freshweight yields and is best adopted on favourable sites. Thicker crops also show a faster dry down over standard row widths, but care should be taken to **avoid excess plant numbers**, as this is likely to induce lodging.

## Advantages

- Faster row closing and inhibition of weeds
- Reduced erosion risk
- Minimal risk of excess residual nitrogen
- Ability to tramline
- Drill utilisation between crops

## Disadvantages

- Higher risk of seed bunching if using a non-precision drill
- Potential for increased lodging on exposed sites
- Overall higher drilling cost
- Precludes crimping / CCM or dried grain maize harvesting
- Necessitates possible adjustment of starter fertiliser (DAP / MAP) rates



Standard 75cm row width (top) & non-standard 50cm row width (bottom) Images supplied courtesy Väderstad






# Harvesting Tips

The KWS UK portfolio focuses on offering farmers the flexibility of a wide harvest date range, demonstrated in two key areas:

- Avoiding rapid dry down of the leaf stover maintains a good level of stay green
- Early flowering and cob maturity



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

## Effects of harvesting too early

- Lower yield
- Reduced energy, starch and ME which results in lower intake potential
- Higher risk of clamp effluent – requires a longer chop length
- Poor dry matter intake and palatability resulting in acidic silage

## Effects of late harvesting

- Higher harvesting costs and increased field losses
- Low digestibility and palatability
- Excessive dry matter and poor clamp stability
- Difficult clamp consolidation will require a shorter chop length
- Soil damage/compaction



Join myKWS for free now and start enjoying tools for all your cropping needs to help you get the best from your farm.

Some of our top tools across our portfolio are listed below.

If you want to get started, register your account by scanning the QR code or visiting: <https://www.kws.com/gb/en/mykws/full-registration/>



## Beet Seed Service

Receive digital field-specific advice and financial support if you require seed for resowing on KWS sugar beet varieties.



## Variety Comparison

Neutrally compare KWS cereal varieties against others on the AHDB Recommended List to help you select the right variety for your farming situation.



## Seed Requirement Calculator

Calculate seed rates, row spacing and seed volume requirements for all KWS crops.



## Variable Seed Rate Calculator

Adjust and define the ideal seed rates for cereals and maize on the basis of specific field conditions, using satellite images and breeder knowledge.



## Damage Symptom Finder

Get a comprehensive overview of the most important damage and disease images throughout the season.



## Field Vitality Check

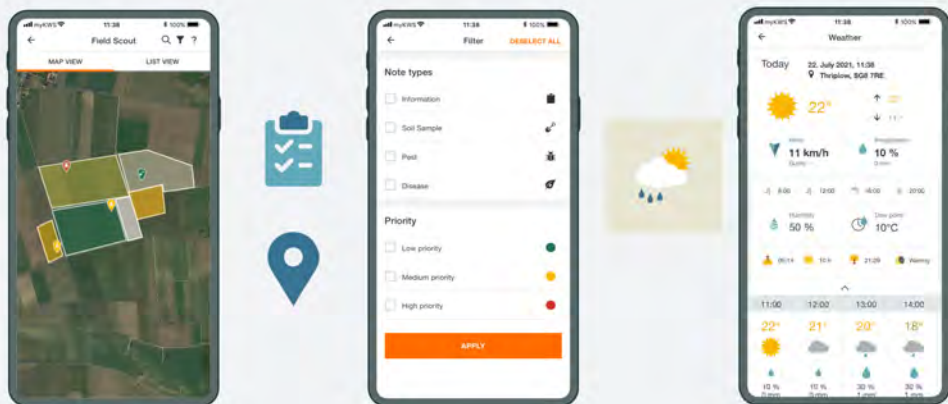
Track crop development throughout the season. Highlight areas of disease, compaction and other plant stress factors, using satellite imagery to pick out any differences within the field.

# Seed + Service: Increase your crop yields with the help of myKWS

Get even more with the myKWS app! You have free access to all basic functions such as the seasonal expert information, calculators, and field management. If you would like to use the Maize/Beet Seed Services for your KWS varieties, all you need to do is take a photo of your delivery note and register quickly at the beginning of the season.

Create important notes about your site-specific observations on the fields. For example, the detection of pest or disease infestation can be recorded at the exact location with the myKWS app. Use the Field Scout to manage important information and have a better overview of your fields and crops.

myKWS also offers damage symptoms finders, accurate weather data and much more!



## Download now!

Visit [www.kws-uk.com/mykwsapp](http://www.kws-uk.com/mykwsapp)  
for more information or download

Google Play:



Apple App Store:





# With you throughout the year...



**myKWS MAIZE** is our quarterly newsletter, keeping you up to date on topical issues during the growing season, varietal selection and other related subjects.

To sign up for a postal copy of myKWS Maize newsletter scan the QR code. For a digital copy, sign up for myKWS at [www.kws-uk.com](http://www.kws-uk.com) (select the maize option).



[www.kws-uk.com](http://www.kws-uk.com)



# Our KWS maize publications...

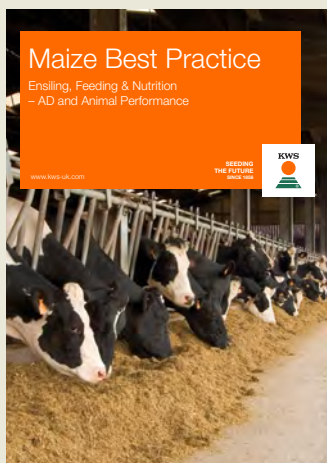


KWS has published a wide range of free, up-to-date information on maize, including advice on all aspects of agronomy, clamp management, livestock feeding and crops for AD. All of the booklets are available online and some can be sent to you as paper copies.

**Available online at [www.kws.com/gb/en/products/maize](http://www.kws.com/gb/en/products/maize) or contact the office on 01594 528234 to request a printed copy.**

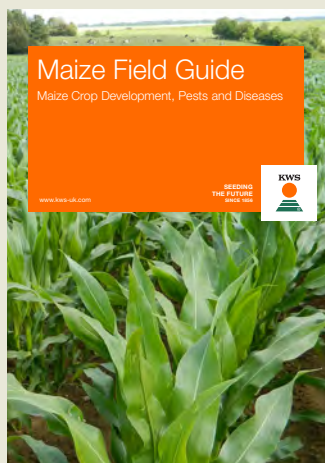
## MAIZE BEST PRACTICE

Ensiling, Feeding & Nutrition



## MAIZE FIELD GUIDE

Maize Crop Development, Pests & Diseases



## MAIZE BEST PRACTICE

Agronomy & Growing



## CROPPING FOR BIOGAS

A practical guide



# The importance of a good start

**INITIO BIRD PROTECT** seed treatment offers maximum root health and crop safety in maize

**INITIO**  
KWS SEED TECHNOLOGIES

**BIRD PROTECT**

**KWS**



## KWS UK LTD – MAIZE

Atwoods Grange  
Station Road  
Woolaston  
Lydney  
Gloucestershire  
GL15 6PN

## KWS UK LTD

56 Church Street  
Thriplow, Nr Royston,  
Hertfordshire  
SG8 7RE  
Tel: +44 (0) 1763 207300  
Fax: +44 (0) 1763 207310

[www.kws-uk.com](http://www.kws-uk.com)

## Rob Hunt

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

## John Burgess

Maize Product Manager  
Mobile: +44 (0)7766 258264  
E-mail: [john.burgess@kws.com](mailto:john.burgess@kws.com)

## John Morgan

Maize Sales Manager  
Mobile: +44 (0)7595 562943  
E-mail: [john.morgan@kws.com](mailto:john.morgan@kws.com)

## Alison Phipps

General Enquiries  
Telephone: +44 (0)1594 528234  
E-mail: [maize@kws-uk.com](mailto:maize@kws-uk.com)

Follow us on social media and share your stories!



@KWSUKLtd



@KWSUKLtd



@KWSUKLtd



KWS UK Ltd

The described varieties have reached these results / traits in practice and trials. The achievement of the results and the genetic causes of atypical expression in the plants also depends on uncontrollable factors. From there we are not able to assume any responsibility or liability that these results / traits will be reached under all environmental conditions. This booklet has been produced to the best knowledge available at the time of printing, no liability can be accepted for any mistakes or loss in relation to this booklet.