

KWS beet varieties for anaerobic digesters and livestock 2020



**SEEDING
THE FUTURE**
SINCE 1856



KWS Energy Beet and Feed Beet varieties 2020

The active selection process of key characteristics enables KWS to provide high performing varieties suitable for feeding to anaerobic digesters and livestock. These varieties are bred using the principles of modern sugar beet breeding techniques and offer valuable characteristics specifically suited to the UK market, including:

- High dry matter (DM) yields per ha
- Higher methane / energy yield per ha
- The highest DM contents
- Superior agronomic traits
- Even plant stand for reduced harvest losses

All our varieties are provided with the KWS proprietary seed treatment Early Plant Development (EPD) allowing for a fast and even plant emergence.

This leaflet provides you with information to select the most appropriate variety. If you have any questions or require more details, please don't hesitate to contact me.

Kind regards,

Ben Bishop

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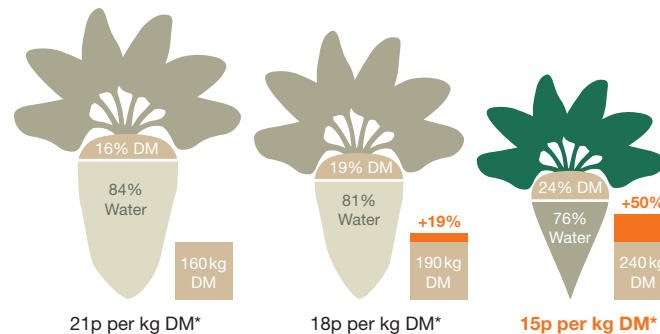
Country Manager Sugar Beet UK

The Importance of Dry Matter

Dry matter yield is the key characteristic to assess when selecting a beet variety's suitability for your operation.

Therefore targeting for high DM yields is the primary goal. Varieties providing high DM yields will be able to reduce your feed costs whether it be for biogas or livestock. Choosing a variety with a high DM content enables you to reduce your feed costs from £0.21 to £0.15 per kg DM.

Amount of DM per tonne of fresh weight and production cost



* Assuming 1 tonne of beet valued at £35/t fresh weight

KWS Energy and Feed Beet produce **up to 50% more DM** yield per tonne of fresh weight than lower DM fodder beet. Why grow water when you can harvest DM?



KWS Feed Beet and Energy Beet Portfolio 2019

Variety Name	Dry Matter Yield (rel.)	Dry Matter Content (%)	Fresh Root Yield (rel.)	Dirt Tare (grams/kg DM)
Control result*	17.9 t/ha		81.5 t/ha	
GERTY KWS	100.0	22.06	100.00	637
PIERINA KWS	99.8	24.84	88.5	513
ALISHA KWS	111.1	24.27	100.8	657
ELOQUENTA KWS	113.5	23.98	104.2	641

Source: KWS UK 3 year average trials data; 2017-2019

* GERTY KWS is the control

Reducing Dirt Tare

Alongside DM, we recognise the difficulties growers have at harvesting in keeping the soil off their beet and in the field. An important breeding trait is the production of a **smooth skinned beet** with a **reduced 'root groove'** and as a result, our best variety is PIERINA KWS.

You can be confident that with high DM contents and fresh weights our beet varieties are producing the higher DM yields and lower dirt tares you seek for feeding to livestock and to biogas plants.



GERTY KWS

- Nine years in the UK
- High DM yields
- Low dirt tare levels

ALISHA KWS

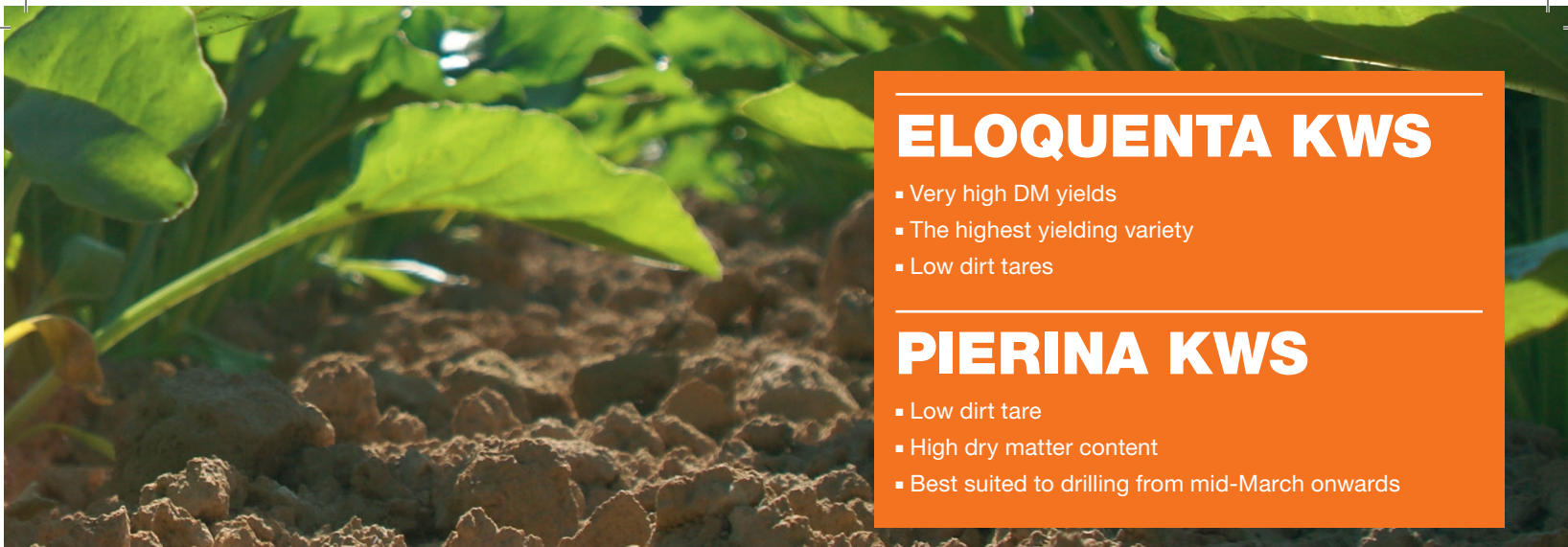
- High dry matter yield
- Good foliar disease resistance
- Best suited to drilling from mid-March onwards

GERTY KWS: The consistent performer

GERTY KWS is the best established Energy Beet in the UK and is grown from Inverness to Cornwall. Introduced nine years ago, GERTY KWS combines **high DM yields** with low dirt tares and on the back of its consistency over contrasting seasons it has been widely adopted on farm. GERTY KWS sits slightly higher out of the ground than other varieties and this, combined with its smooth skin, will help to minimise dirt tares on farm. **The corner-stone variety for all UK growers.**

ALISHA KWS: For great yields and good disease resistance

ALISHA KWS offers **excellent dry matter yields** to deliver high gas yield per hectare. Delivering its best performance from mid-March drilling onwards and with **good performance against rust and powdery mildew**, ALISHA KWS will tick many boxes for UK energy beet growers.



ELOQUENTA KWS

- Very high DM yields
- The highest yielding variety
- Low dirt tares

PIERINA KWS

- Low dirt tare
- High dry matter content
- Best suited to drilling from mid-March onwards

ELOQUENTA KWS: The next generation

ELOQUENTA KWS is the next step in our breeding programme designed to bring high dry matter yields which in turn bring high gas yields per ha. Where the biogas operator wants high DM content, high yields and low dirt tare then ELOQUENTA KWS can offer it all.

PIERINA KWS: Keep it cleaner with PIERINA KWS

New for 2020, PIERINA KWS offers our **lowest dirt tare** along with **excellent dry matter content**. Best suited for drilling from mid-March, PIERINA KWS will appeal to growers looking to gain high DM yields and reduce cleaning costs before using their beet.

Drilling Guide 45 cm rows

Plant Spacings (cm)	Units / ha (1 unit = 100,000 seeds)	Plant Establishment Target based on 45 cm rows – 000's			
		60 %	70 %	80 %	90 %
15	1.5	88	104	118	133
16	1.4	83	97	111	125
17	1.3	79	92	105	118
18	1.25	74	86	98	110
19	1.2	70	82	94	105
20	1.1	67	78	89	100
21	1.05	64	74	85	95

■ = Optimum plant population (85,000–95,000 plants/ha)



Drilling Guide 50 cm rows

Plant Spacings (cm)	Units / ha (1 unit = 100,000 seeds)	Plant Establishment Target based on 50 cm rows – 000's			
		60 %	70 %	80 %	90 %
15	1.3	80	93	107	120
16	1.25	75	88	100	113
17	1.2	71	82	94	106
18	1.1	67	78	89	100
19	1.05	63	74	84	95
20	1	60	70	80	90
21	0.95	57	67	76	86

■ = Optimum plant population (85,000–95,000 plants/ha)



Early Plant Development (EPD)

Backing our better field agronomics, all of our KWS Energy Beet and Feed Beet varieties will come with the KWS proprietary seed activation treatment, EPD. This will:



- Increase the speed of germination
- Provide earlier emergence and boosting establishment
- Ensures more even plant stands
- Contribute to higher yields

Seed Packaging

Variety	EPD Pellet	Vibrance	Force	Pack Size
GERTY KWS	Yes	Yes	Yes	1 unit - 100,000 seeds
PIERINA KWS	Yes	Yes	Yes	1 pack - 50,000 seeds
ALISHA KWS	Yes	Yes	Yes	1 unit - 100,000 seeds
ELOQUENTA KWS	Yes	Yes	Yes	1 unit - 100, 000 seeds

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