



# Sugar Beet Varieties 2025

SEEDING  
THE FUTURE  
SINCE 1856





# Welcome to KWS' Sugar Beet Varieties 2025

With the increasing need for resilience in the arable rotation we're pleased to share the choices provided by KWS UK for your sugar beet crop in 2025.

While we strive for yield improvement, we continue to see other characteristics take on additional importance in protecting the sugar beet crop – particularly as more of our important active ingredients are at risk.

Our recent developments such as CONVISO® SMART and MARUSCHA KWS continue to offer choice, both for innovative weed control and tolerance to BMVYV respectively. Our most recent development CR+, offers growers vastly improved tolerance to Cercospora whilst maintaining very high yields, with and without disease infection.

KWS' breeding and development work is underpinned by our trials capability in the UK. Look out for a few facts throughout the booklet on the cutting edge work our Trials and AgroService Teams are carrying out. Please do get in touch if you would like to see or hear more about what we are doing.

Best wishes for a productive and safe crop in 2024.



**Martin Brown**  
AgroServices Manager Sugar Beet UK



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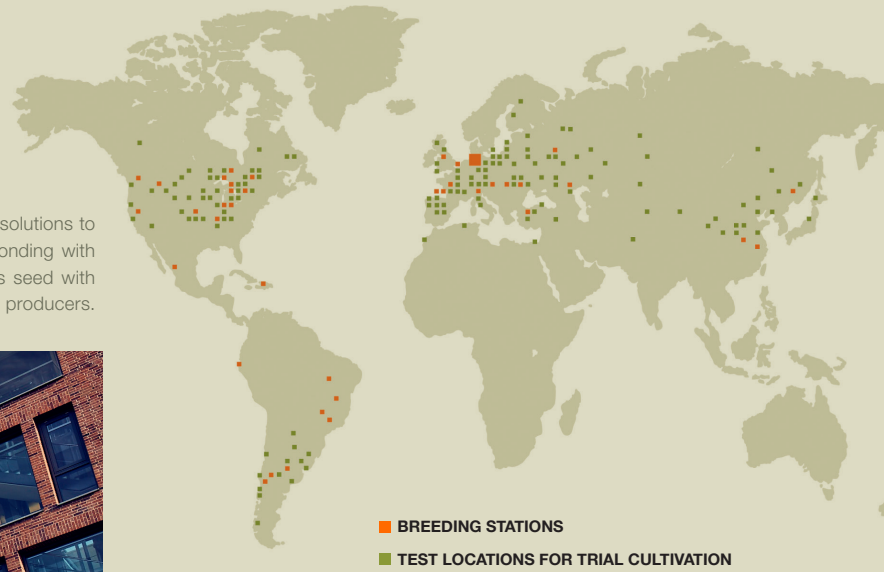
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# KWS GROUP

Serving farmers  
for **over 165 years**

KWS is one of the world's leading seed suppliers offering innovative solutions to farmers in 70 countries. Focusing on grower's challenges and responding with innovative tools, technology and hybrid performance, KWS provides seed with high-performing genetics supporting today's progressive farmers and producers.



## KWS seeds the future

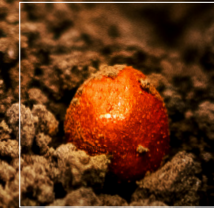
Our high-yield seeds and extensive knowledge make us a trusted partner of farmers – for generations. In this way, we contribute to solutions for the nutrition of a steadily growing world population. KWS invests almost 20 % of its net sales on research. Our portfolio includes 11 from the 13 most cultivated crops worldwide.



# Focus on Your Growth



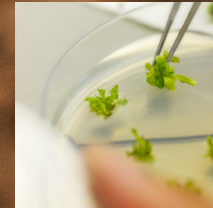
SOLUTIONS



PERFORMANCE



INNOVATION



RESEARCH



SERVICES

For more than 165 years, KWS is focused on your growth.

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



**Sugar beet varieties for drilling in 2025 | Adapted from BBRO recommended list of Sugar Beet Varieties 2025**

Rz1 rhizomania varieties			DAPHNA	HARRYETTA KWS	KATJANA KWS	NEW CHYMA KWS	ANNATINA KWS	NEW JOSEPHINA KWS	Morgan	ST Tweed	Magpie
Status: (C) = control variety <sup>1</sup>	Y5 ( C )	Y8 ( C )	Y3	Y4(C)	Y1	Y3	Y1	Y3	Y1	Y1	
AYPR/BCN/ALS/VY as claimed by the Breeder <sup>6</sup>	-	BCN	BCN	BCN	CERC	-	-	-	-	-	
CROP YIELDS	MEAN										
Adjusted tonnes % of C=100% <sup>2</sup>	102.7 t/ha	102.2	101.3	101.3	100.6	101.0	99.3	99.5	98.6	98.2	97.7
Sugar yield % of C=100% <sup>2</sup>	16.4 t/ha	102.2	101.3	101.3	100.6	101.0	99.3	99.5	98.6	98.2	97.7
Root yield % of C=100% <sup>2</sup>	96.7 t/ha	102.2	101.1	101.7	99.4	101.1	97.8	96.9	97.4	97.5	96.4
Sugar content %	16.9%	16.9	16.9	16.8	17.1	16.9	17.2	17.3	17.1	17.0	17.1
BOLTERS per 100,000 plants/Ha	MEAN										
“X” Unsuitable for sowing BEFORE Mid March	X				X				X		
Early sowing, before 5 March <sup>3</sup>	4,012 /ha	9,990	3,345	2,273	2,443	10,298	3,853	1,576	8,376	1,944	[4,636]
Normal sowing	33 /ha	30	7	0	9	14	7	30	47	47	35
PRE-GAPPING ESTABLISHMENT <sup>4</sup>											
Control	100%	99.8	99.5	98.6	100.0	98.7	95.2	97.8	99.0	94.7	98.5
DISEASE (1 = high leaf infection 9 = very low leaf infection) <sup>5</sup>											
Rust	5.3	6.8	4.7	3.8	3.8	[6.5]	5.8	[6.2]	3.8	[5.4]	[4.1]
Powdery mildew	5.5	5.1	5.8	5.9	5.6	[6.4]	5.0	[1.5]	3.6	[6.3]	[4.3]
Cercospora	6.5	[6.7]	[6.7]	[6.4]	[6.4]	[7.2]	[5.9]	[6.6]	[5.6]	[6.5]	[6.9]

Mean of controls includes BTS1140 which is no longer listed

<sup>1</sup> Newly listed varieties (Y1/SY1) have results from three years using approximately 2 kgs breeders' seed. Thereafter commercial seed is used in RL trials.

<sup>2</sup> 33 trials were drilled and had data collected over the 3 years; 28 of these trials were harvested.

<sup>3</sup> Yields based on an average plant population of 102,500 plants/ha in these trials. Differences in adjusted tonnes of less than 3.3% should be treated with reserve.

<sup>4</sup> The ratings from normal sowings are applicable for sowing after mid-March in most seasons.

ST Trent	Wren	Button	Osprey	BTS3610	Stewart	Tawny	Adder	NEW SMART UMA KWS	BTS Smart 9485	SMART VESNICA KWS	MARUSCHA KWS
Y1	Y4(C)	Y3	Y2	Y3	Y3	Y3	Y3	SY1	SY3	SY2	SY4
-	-	BCN	AYPR	-	-	-	-	ALS	ALS	ALS	V
97.7	97.6	97.6	97.6	97.3	97.2	96.7	96.7	95.3	93.1	93.0	88.2
97.7	97.6	97.6	97.6	97.3	97.2	96.7	96.7	95.3	93.1	93.0	88.2
95.7	99.2	97.5	96.8	96.5	95.7	97.6	98.5	94.3	94.5	91.2	86.9
17.2	16.6	16.9	17.0	17.1	17.1	16.7	16.6	17.1	16.7	17.2	17.1
						X	X				X
2,981	6,129	3,266	[3,656]	5,516	4,117	7,356	7,511	3,325	3,055	4,000	10,324
12	54	7	23	0	40	45	9	14	19	12	69
98.8	100.5	99.8	99.8	98.2	98.5	99.5	100.2	96.9	95.2	99.9	96.5
[5.7]	5.4	4.7	[4.6]	6.1	3.6	6.1	5.8	[6.6]	6.1	[6.7]	6.4
[1.5]	4.9	5.1	[4.5]	5.5	3.7	5.2	5.2	[6.2]	6.7	[4.8]	3.3
[5.9]	[6.4]	[5.7]	[6.6]	[6.4]	[5.4]	[6.9]	[6.4]	[6.6]	[5.9]	[6.4]	[7.8]

<sup>5</sup> Differences in establishment of less than 3.6% should be treated with reserve. 14/33 trials were gapped.

<sup>6</sup> Cercospora ratings should be treated with caution with no available data in 2022.

<sup>7</sup> Breeder's claims are for tolerance to BMVY and has lower yield losses than susceptible varieties to BYV.

<sup>8</sup> BTS = Betaseed, KWS = KWS UK Ltd, LG = Limagrain UK Ltd, STR = Strube Sugar Beet UK Ltd, SV = SESVanderHave UK Ltd

[ ] denotes limited data



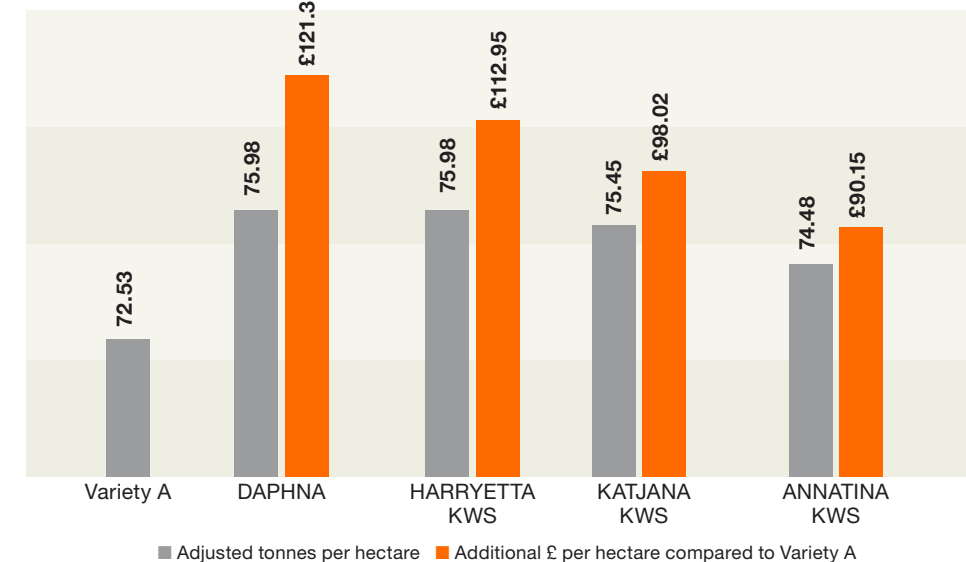
# Overview of varieties and resistances

	NEW FOR 2025 <span style="background-color: #008000; color: white; border-radius: 50%; padding: 2px;">NEW</span>	Rhizomania Protect	Nematode Protect	Virus Yellows Protect	CR+	CONVISO® SMART	INITIOEarly-Power	Suitable for early drilling
DAPHNA		✓	✓				✓	✓
HARRYETTA KWS		✓	✓				✓	✓
KATJANA KWS		✓	✓				✓	✓
CHYMA KWS	✓	✓			✓		✓	
ANNATINA KWS		✓					✓	✓
JOSEPHINA KWS	✓	✓					✓	✓
SMART UMA KWS	✓	✓				✓	✓	
SMART VESNICA KWS		✓				✓	✓	
SMART NELDA KWS	✓	✓	✓			✓	✓	
MARUSCHA KWS		✓		✓			✓	

## DID YOU KNOW?

KWS has over 40 sites with observational strip trials or whole field demonstrations of current and new varieties and products in 2024.

## Margin over seed cost



**Seed cost Variety A:** £271.37 (£226.14 per unit x 1.2 units/ha)

**Seed cost DAPHNA:** £263.87 (£219.89 per unit x 1.2 units/ha)

**Seed cost HARRYETTA KWS:** £272.27 (£226.89 per unit x 1.2 units/ha)

**Seed cost KATJANA KWS:** £269.87 (£224.89 per unit x 1.2 units/ha)

**Seed cost ANNATINA KWS:** £245.57 (£204.64 per unit x 1.2 units/ha)

**Assumed beet price:** £33.00 per tonne

75 t/ha used as base yield. Varieties that yield more than 100% of controls do yield more than 75 t/ha in this example. Seed cost taken from the Seed Price List in British Sugar's Seed Information Pack 2024/25 for drilling in Spring 2024

Source: KWS calculations July 2024





# INITIO EarlyPower

The initial spark for better growth

#KWSINITIO

## INITIO EarlyPower The new, efficient seed treatment technology.

**INITIO EarlyPower builds on the success of our EPD 2.0 technology.**

We have combined two new biological products to partner with EPD 2.0, to improve the early development of plants. KWS have partnered with 3 external companies to allow these new technologies to be tailored to the requirements of specifically sugar beet plant growth.

These innovative additions aid the plants development for longer into the season than the benefits offered solely of EPD 2.0.



**SPA**  
Stress Protection Agent



A consortium of 6 defined bacterial strains, selected for their beneficial effects on sugar beet

- Strengthen rooting systems
- Improved early nutrient uptake



**AgRHO®**  
S-Boost



Biobased polymers from plant extracts

- Improved tolerances to biotic and abiotic stresses; improving seed germination, promoting water and nutrient uptake, mitigating drought affect



**More resilient and robust plants**



**Supports germination under dry conditions**

Both the living organisms and the biobased polymers are applied on to the seed, before the pellet. This allows both aspects to be well placed to either colonise around the seedling roots after germination or to favour water absorption.



# INITIO EarlyPower in the UK

## The benefits of SPA in controlled conditions.

The benefits of a biostimulation package are best seen when the plants are stressed, rather than being in a more ideal environment. The UK springs are becoming variable, the past few years are ideal examples and we have no way to foresee what the next spring will bring. INITIO EarlyPower will help early vigour in many situations where plants have struggled.

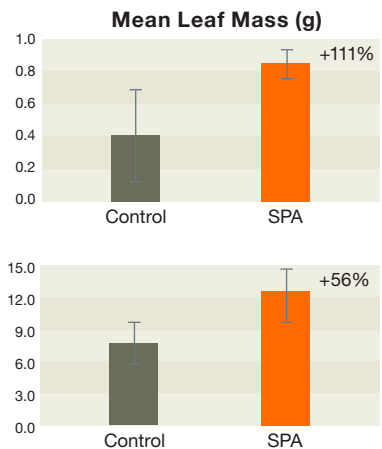
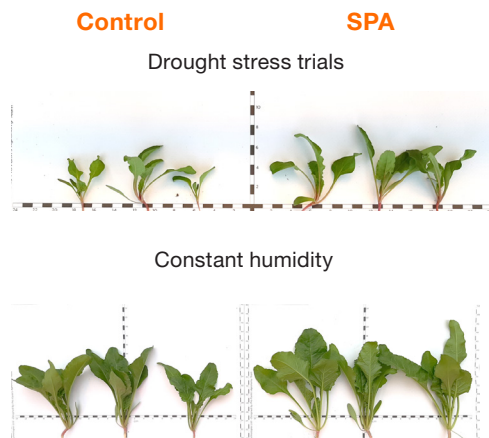


Figure: Assessment of early plant development without seed treatment (control) and with biostimulant, in greenhouse after 41 days at appr. 14-18°C under different soil moisture conditions.



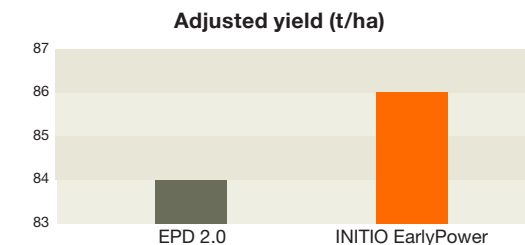
## UK field trials with INITIO EarlyPower.

Multiple trials have shown INITIO EarlyPower to emerge faster than EPD 2.0. The average period from sowing to 100% emergence was 29 days. To help with getting the best possible yielding crop, sugar beet growth wants to be as quick as possible. As solar radiation increases in the spring and summer months you need a quickly emerging and vigorous plant to intercept as much solar radiation as possible.

	Speed of emergence – plants per trial plot			
	25%	50%	75%	100%
EPD 2.0	47.3	86.8	129.4	151.6
<b>INITIO EarlyPower</b>	<b>49.6</b>	<b>90.3</b>	<b>131.8</b>	<b>152.3</b>
% increase over EPD 2.0	+4.9	+4.1	+1.8	+0.5



Source: Independently managed and analysed replicated trial data from 6 sites in 2023



## Yield increase over EPD 2.0.

INITIO EarlyPower has show an outstanding 2.4% yield increase over EPD 2.0 - This equates to nearly 2t/ha more for a grower currently with 75t/ha.

Source: Independently managed and analysed replicated trial data from 6 sites in 2023

***“The introduction of INITIO provides growers with improved germination and stress tolerance, giving a phenomenal opportunity to improve their beet performance paired with KWS varieties.”***

I'VE GOT THE POWER  
to save time with  
a single application.



Push the button for **more efficient weed control** in sugarbeet.



## INTEGRATED RESISTANCE MANAGEMENT

### Rotation is the key!

Reduce the risk of resistance by alternating herbicides with different modes of action in your crop rotation.

#### Chemicals



Use herbicides with different modes of action.

- Maximise herbicidal efficacy with:
- Use the full rate.
- Proper timing of application.
- Optimum application conditions.

Avoid using ALS herbicides in your rotation after growing CONVISO® SMART varieties.

#### Cultural



Make a diversified rotation including spring and autumn crops.

- Sow cover crops, as green fertilisation, fix N, reduce weeds and nematodes.
- Have a competitive crop, with adequate density and good establishment.



Efficient weed management is in your hands: choose the best strategies according to the weed population in your fields.



## STEWARDSHIP PRINCIPLES

### The three key principals of stewardship for CONVISO® SMART weed control system for sugar beet are:

- To prevent seed return – minimising the weed seed bank
- To protect the Mode of Action – retaining the use of the active ingredient
- To ensure accurate use of the system – reducing resistance risk

### STEWARDSHIP PROGRAMME

Users and advisors of the CONVISO® SMART system will need to manage and record activities to the Stewardship Principles.

#### 1. Traceability of CONVISO® SMART sugar beet

Record the location and variety to ensure the crop can be managed affectively (e.g. correct herbicide applications, following crop choice etc.)

#### 2. Control of bolters and groundkeepers

Prevention of beet seed return to prevent herbicide tolerant weed beet in following and/or subsequent crops. This may include but not limited to ploughing after the sugar beet crop and using hormone based herbicides.

#### 3. Correct use of CONVISO® One herbicide

Following the label recommendations to maximise the efficacy of CONVISO® SMART.

#### 4. Actions to minimise risk of weed resistance

CONVISO® SMART should be used as a weed control tool across the whole rotation along with other control methods to reduce resistance risk (e.g. choice of rotation, alternative Modes of Action etc.).

#### 5. Keep sufficient records

Record actions taken to demonstrate responsible use of CONVISO® SMART – particularly the points above.

#### 6. Provide information to users

Giving all users and operators suitable and sufficient information to maximise the efficacy of CONVISO® SMART.



## HOW TO APPLY CONVISO® ONE CORRECTLY

### Standard recommendation

- Maximum yearly dose rate 1.0 L/ha as a single application
- Registered application window: 4 - 8 true leaves of sugar beet
- Apply using a pressure of 2.5 - 3.0 bar and a spray quality of fine to medium (BCPC category)
- Correct application timing: max. 4 true leaves of fat hen
- If no fat hen is in the field: apply when the first plants of other weed species reach max. 4 true leaf stage (BBCH 14)

#### single application

1.0 L/ha  
CONVISO® ONE

4 true leaves of fat hen  
(*Chenopodium album*)

cotyledon



Too small

Aiming for two to four true leaves of the fat hen



Correct target size



Too big

! Always follow the label recommendations of CONVISO® ONE.





**NEW**

## The next step in performance with CONVISO® SMART



### CONVISO® SMART VARIETIES

## Get the Power with SMART UMA KWS

Highest yielding SMART variety

Well rounded disease profile

Good tolerance to powdery mildew and cercospora

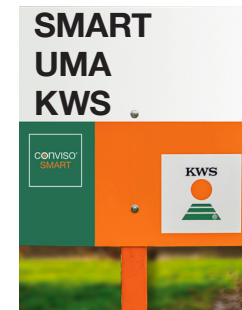
New for sowing 2025, SMART UMA KWS offers growers a large step forwards in yield, compared to older SMART varieties. When used with the dedicated CONVISO® ONE herbicide, SMART UMA KWS will deliver yields above control varieties!

With below average normal sown bolters and a disease profile which scores above average for the major 3 diseases. SMART UMA KWS is a variety which will give growers peace of mind.



### DID YOU KNOW?

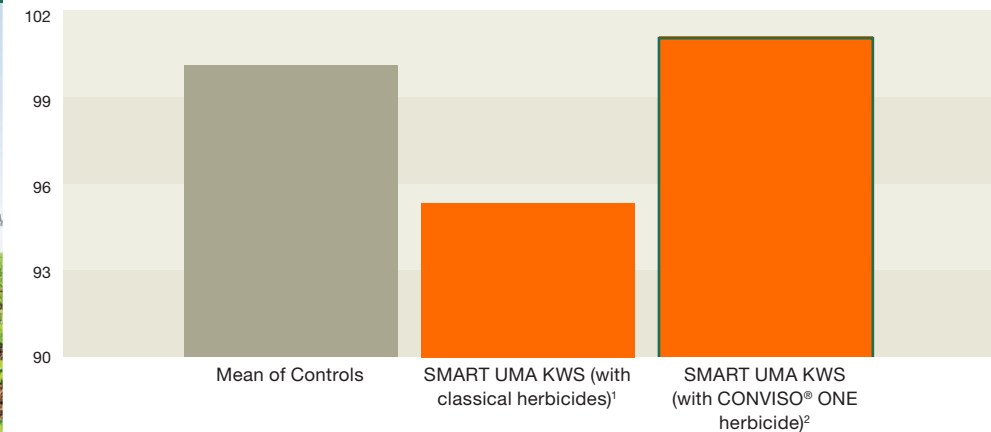
KWS will complete replicated plot trials at 4 locations in 2024 to measure the yield benefit of using the CONVISO® ONE herbicide with SMART KWS varieties.



SMART UMA KWS with a single application of 1 x 1LT/Ha of CONVISO® ONE

Improved yield through better crop safety and weed control.

Adjusted tonnes (% of controls)



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023) using classical herbicides; 2 includes 5.95% yield benefit from using CONVISO® ONE measured in CONVISO® SMART System Trials, 2018 – 2020 conducted by KWS UK (plots harvested and analysed by BBRO).





# Proven SMART performance



## CONVISO® SMART VARIETIES

### Get the Power with **SMART VESNICA KWS**

High yielding herbicide tolerant variety

Good tolerance to Rust and Cercospora

For use as part of the CONVISO® SMART weed control system for sugar beet

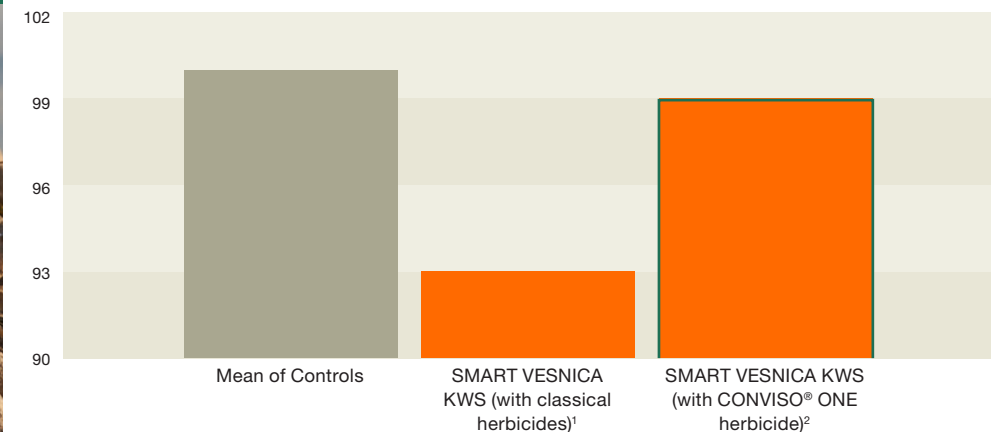
After a warm welcome by growers in 2024, SMART VESNICA KWS continues to offer a range of attractive benefits to growers. When used with the dedicated CONVISO® ONE herbicide, SMART VESNICA KWS will deliver yields close to controls.



SMART VESNICA KWS with a single application of 1 x 1LT/Ha of CONVISO® ONE

Improved yield through better crop safety and weed control.

Adjusted tonnes (% of controls)



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023) using classical herbicides; 2 includes 5.95% yield benefit from using CONVISO® ONE measured in CONVISO® SMART System Trials, 2018 – 2020 conducted by KWS UK (plots harvested and analysed by BBRO).





**NEW**

# The evolution of breeding solutions from KWS



4 roots of SMART NELDA KWS on the left and 4 roots of SMART RIXTA on the right.  
Source: KWS UK



CONVISO® SMART VARIETIES

## Get the Power with SMART NELDA KWS

- Tolerance to BCN
- Herbicide tolerant variety
- For use as part of the CONVISO® SMART system

Given the changes in UK seed supply we can offer SMART NELDA KWS to growers for sowing in 2025. SMART NELDA KWS is on the GB Variety List but not yet on the BBRO Recommended List. New for sowing in 2025, SMART NELDA offers growers an exciting opportunity to use the CONVISO® SMART system with the added benefit of beet cyst nematode tolerance. Where the nematode populations associated with beet being grown for a long time in a tight rotation exist, SMART NELDA KWS can help solve this issue.



## Improved yield with BCN tolerance

Improved yield through better crop safety and weed control.

The image on the right shows SMART NELDA (right) vs. SMART VESNICA (left) - UK Observation field, Suffolk, 2023.

During 2023 KWS held CONVISO® SMART observational trials on a field with a BCN population. Results from the hand digs can be seen below. Note the higher roots weights and sugar content. Under infected conditions the yield protection offered by the tolerance is expected to significantly outperform a non tolerant SMART variety.



	Plant population (000's/ha)	Sugar percentage	Average weight of 10 roots (kg)	Yield estimation (Adjusted t/ha)	% decrease from SMART NELDA KWS
<b>SMART NELDA KWS</b>	<b>105</b>	<b>16.3</b>	<b>9.5</b>	<b>99</b>	
SMART UMA KWS	108	16.1	5.6	58	-41
SMART RIXTA KWS	122	15.9	6.5	77	-22
SMART VESNICA KWS	116	15.4	7.7	82	-17

Source: CONVISO® SMART observational trials, Suffolk; KWS, 2023



MARUSCHA  
KWS



# The alternative approach to controlling Virus Yellows

## CLASSICAL VARIETIES – VIRUS YELLOWS

### An integrated approach to managing Virus Yellows

Control of Virus Yellows requires an integrated approach including the development of tolerant sugar beet varieties, agronomic good practice and crop protection.

MARUSCHA KWS is the first generation of KWS Virus Yellows tolerant sugar beet and shows excellent tolerance to Beet Mild Yellowing Virus (BMV) and a competitive response to Beet Yellowing Virus (BYV).

#### DID YOU KNOW?

KWS has conducted Virus Yellows trials in the UK since 2017 and in 2022 alone used 400,000 aphids to inoculate sugar beet plots at three locations.



Source: Bayer AG – Division Crop Science

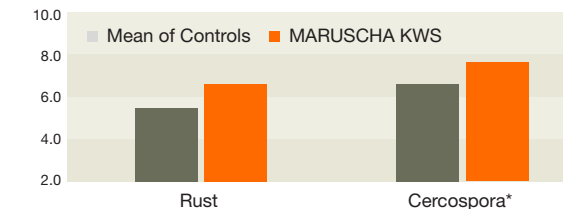
MARUSCHA  
KWS



### A visibly greener canopy

- Competitive yields
- Strong tolerance to BMV
- Best drilled from mid-March onwards

Disease scoring (1 = high leaf infection, 9 = very low leaf infection)

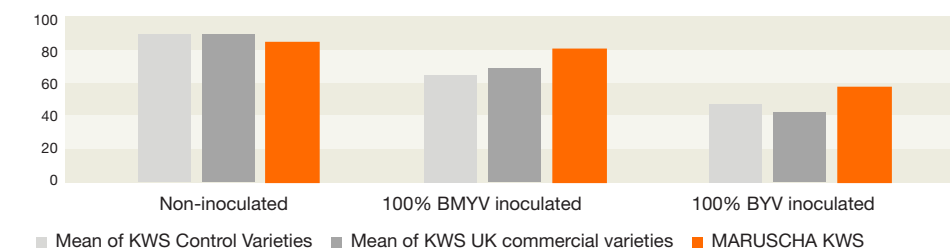


MARUSCHA KWS strip trials in field 2022  
Source: KWS

Source: <sup>1</sup> BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)

#### MARUSCHA KWS yield performance in UK trials (adjusted tonnes per hectare)

Note: BMV results are 3 year mean from 2018-20 and BYV is 2019 only so should be treated with reserve



Source: KWS UK replicated VY plot trials from 2018-2020: 100% inoculated trials.

# Beet Cyst Nematode – a small pest with a huge impact

## CLASSICAL VARIETIES – BCN

### Yield losses of 30 – 60% may be possible

- The first 10% often show no visible symptoms

### Typical Symptoms

- Patches of wilting leaves under midday sun
- Stunted and deformed root growth
- Roots with a “bearded appearance”
- Visible white or brown cysts on root hairs

### WHAT TO DO TO PROTECT AGAINST BCN

- 1. Choose a tolerant variety**  
There are no yield penalties with KWS
- 2. Use a wide crop rotation**  
Non-host plants reduce BCN by c. 40% per year
- 3. Test**  
Regular soil and crop checks for BCN



### DID YOU KNOW?

KWS tests potential trial fields before selection to ensure they are free from BCN.

## DAPHNA



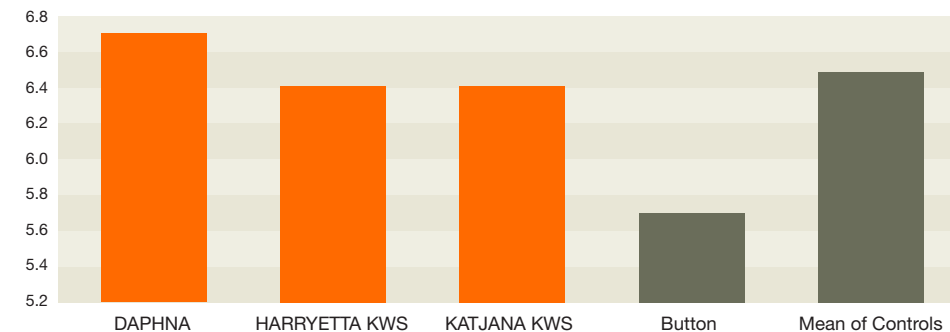
### Proven performance across many years

- A very popular and proven variety over 8 years!
- Joint second highest yield for 2025
- Low bolting
- Good leaf disease scores

For 8 years DAPHNA has delivered excellent yields in both RL trials and more importantly, on farms. DAPHNA has again set the benchmark for BCN protection without a yield penalty.

With very low early sown bolters and a good canopy late into the campaign DAPHNA is a great choice for growers wanting to spread their workload through the season. Through the past 8 years DAPHNA has proven to work across many farms and varying locations.

### Cercospora scoring (1 = high leaf infection, 9 = very low leaf infection) – BCN segment



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)



**HARRYETTA  
KWS**



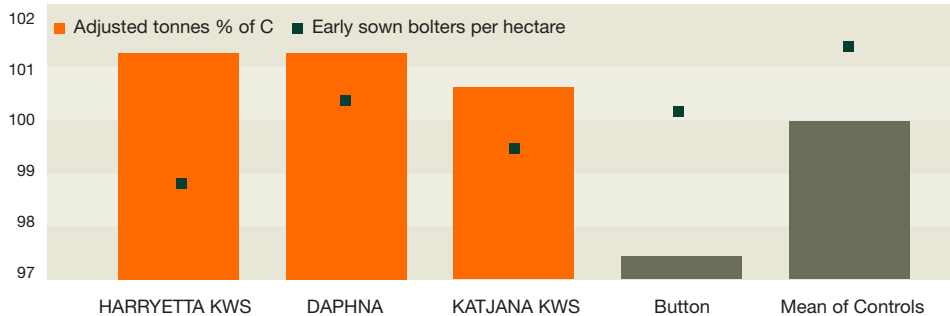
## Leading the pack for BCN tolerant varieties

### CLASSICAL VARIETIES – BCN

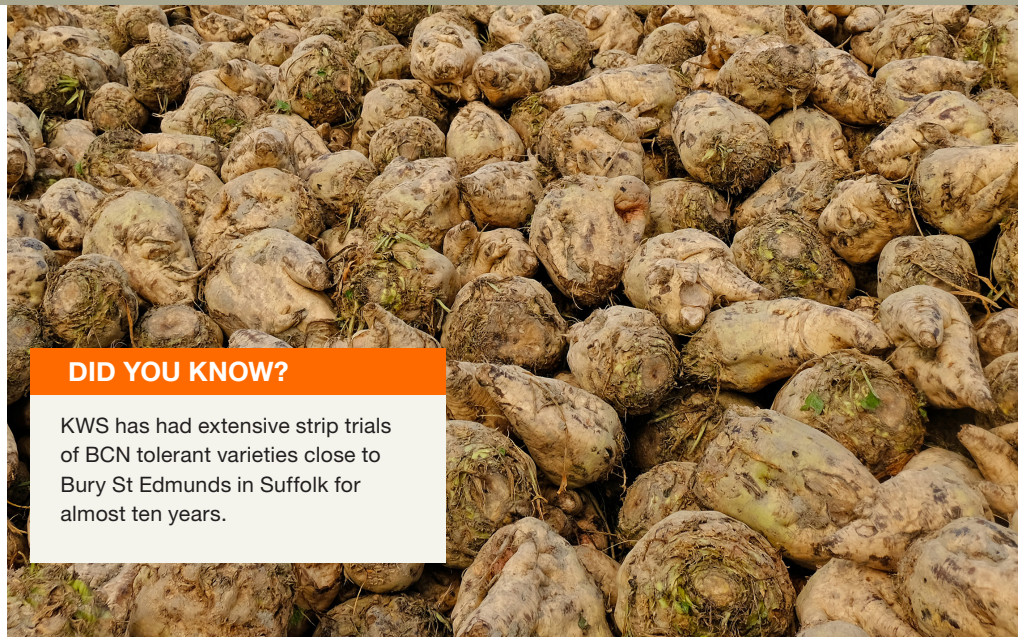
- Jointly the second highest yielding BCN tolerant variety for 2025
- Low bolting

With low bolters in both the normal and early sown windows combined with very high yields HARRYETTA KWS will again be a highly sought after variety for 2025 - whether BCN is an issue or not.

#### Adjusted tonnes and early sown bolters (% of controls) – BCN segment



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)



#### DID YOU KNOW?

KWS has had extensive strip trials of BCN tolerant varieties close to Bury St Edmunds in Suffolk for almost ten years.

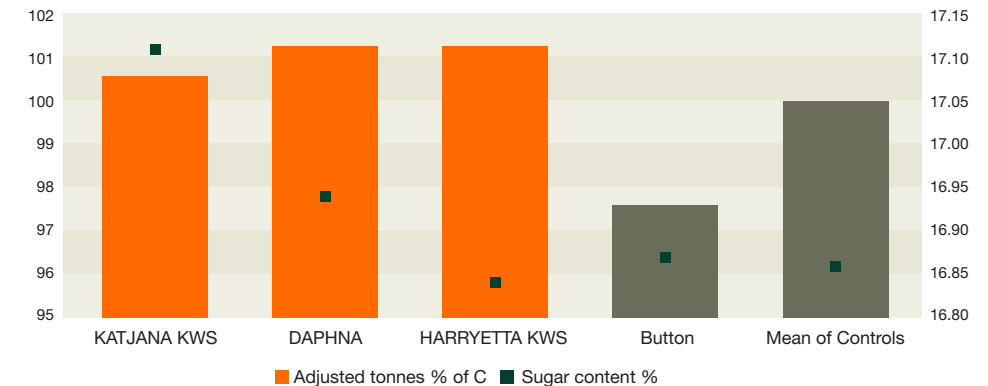
**KATJANA  
KWS**



BCN tolerance with high yield and low bolters

- Top 3 yield performer
- BCN tolerant
- Low bolting

#### Early sown bolters per hectare



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)

After 4 years KATJANA has gained a loyal following by growers. It offers a good combination of high yields paired with BCN tolerance.

It is a well rounded variety, offering growers the ability to be sown before mid-March and the highest sugars, in the BCN segment.

**ANNATINA  
KWS**



# The solid choice for sugar beet farmers

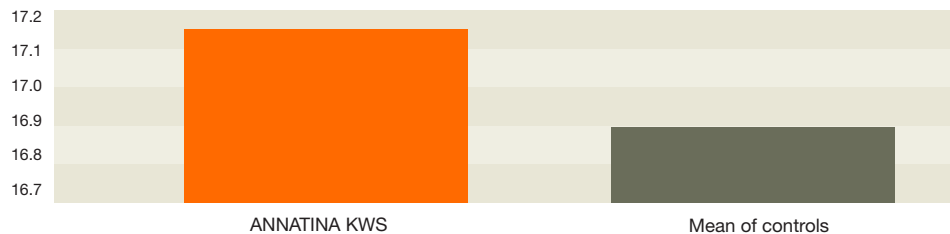


## CLASSICAL VARIETIES – RHIZOMANIA

- High sugars
- Low bolting
- Standard rhizomania tolerance

A high sugar content will favour growers needing to haul their beet further to the factory which coupled with very low bolters in the normal sowing window make ANNATINA KWS a good choice for growers looking to manage their workload through the year.

### Sugar content (%)



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)

### DID YOU KNOW?

KWS has an extensive network of trials in the UK. In 2024 we have over 12,000 plots across 5 locations.

**JOSEPHINA  
KWS**

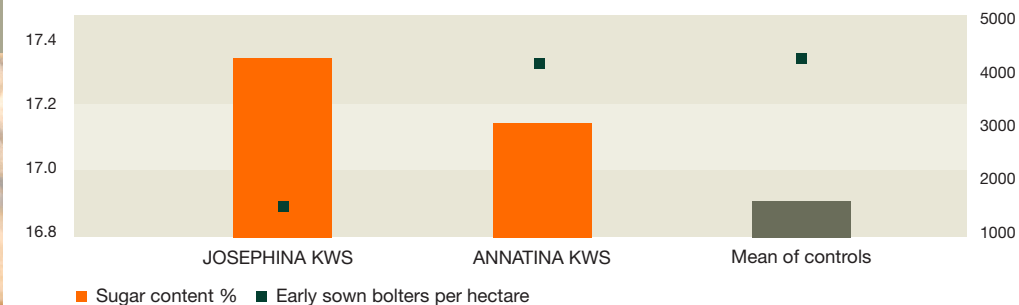


**NEW**

The sweetest choice for early sowing

- The lowest early sown bolters available
- Highest sugar content available
- Good rust and cercospora

### Sugar content (%) and early sown bolters



Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)

With the lowest early sown bolting number, JOESPHERINA KWS gives growers more choice for an early start to the season. With the highest sugar percentage on the Recommended List, this will help offset longer journeys to the factories.

A good rust and cercospora scores, allow for later harvesting to maximise returns.



# CR+

## A revolution in Cercospora control

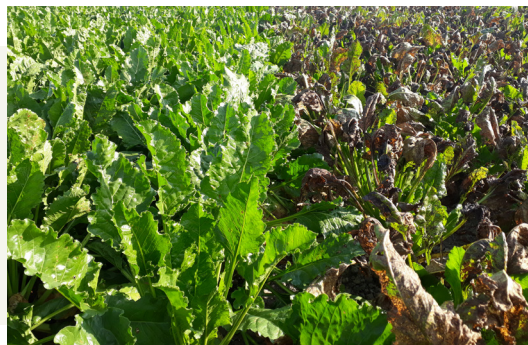
**Cercospora is a challenging disease. CR+ offers a tool to get back in control.**

Cercospora Leaf Spot is by far the most destructive disease of sugar beet – by reducing yield by up to 50%. Furthermore cercospora leads to reduced processing quality of roots, reducing productivity.

Cercospora is of growing concern in the UK. In the 2020/21 campaign we saw devastating effects in the Wissington factory area, paired with bad Virus Yellows. In the 23/24 campaign albeit there was no bad outbreak of cercospora, patches of the disease were easy to find in fields, across a large acreage of the beet growing area. This shows the disease has spread and this will unfortunately be providing an inoculum bank for future years.

With the growing risks, and concerns about cercospora in the UK we have introduced into the UK our CR+ trait.

This has been commercially available on the continent for several years already and has proven to be a huge success in their high risks areas.



Cercospora Protection



Yield Performance

### DID YOU KNOW?

CR+ and represents the culmination of a 20-year effort by KWS. But the project does not stop there! The release of CR+ represents the latest development in a long line of innovative sugar beet solutions from KWS.



## CR+

### More than just one source!

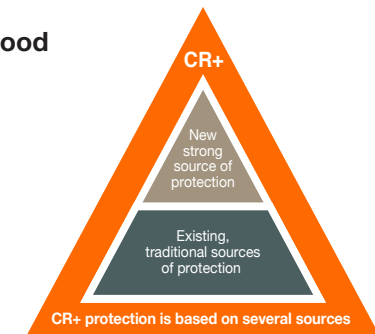
The advantages of different sources: CR+ varieties combine new and existing sources of protection which leads to the new level of Cercospora protection.

**Fungicide strategies are an integral part of a good disease management.**

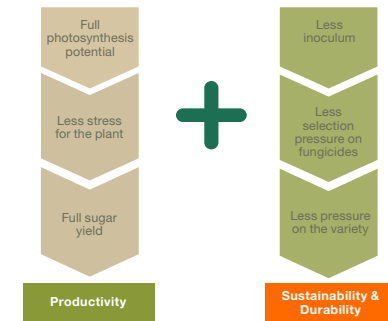
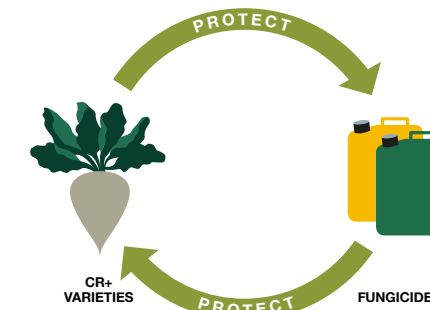
**GREEN LEAVES UNTIL HARVEST!**



To ensure the longevity of CR+ in the UK at least one efficacious application of a fungicide with a label claim of cercospora control must be used!



Cercospora is a challenging disease. CR+ offers a tool to get back control.





CHYMA  
KWS

NEW

## The cleanest variety available

### CLASSICAL VARIETIES – RHIZOMANIA

- Outstanding tolerance to cercospora
- High yields and sugar content
- Highest untreated yield

CHYMA KWS is an exciting introduction for 2025. This is the first variety into the UK to have our CR+ trait. This offers unrivalled protection to the devastating disease, cercospora.

As a variety CHYMA KWS is very attractive, offering high yields and a high sugar content. It has the highest untreated yield on the recommended list. The sum of its ratings for rust, powdery mildew and cercospora are the highest in Recommended List trials, 20.1 out of 27.

With no obvious weakness with its leaf disease scores CHYMA KWS will suit later lifting.

	CHYMA KWS	Mean of controls	Mean of KWS varieties	Mean of RL	Mean of non KWS varieties
Rust	6.5	5.3	5.6	5.3	5.1
Powdery Mildew	6.5	5.5	4.7	4.6	4.4
Cercospora	7.2	6.5	6.5	6.3	6.1
Total sum (max 27)	20.1	17.3	16.8	16.2	15.6

Source: BBRO Recommended List of Sugar Beet Varieties 2025 (based on trials from 2021 – 2023)

### DID YOU KNOW?

In 2023 KWS' AgroService and Trial Teams pioneered the first inoculated cercospora trials, specifically looking at the disease in the UK conditions.

### Cercospora trials within the UK

During 2023 KWS UK undertook trial work looking at the yield uplift of CHYMA KWS compared to a standard KWS variety, without CR+. To ensure a good disease pressure the trial was inoculated with infected leaves harvested from around the beet from 2022. The trial was also irrigated in August and September to ensure the disease could thrive in the plot. A two spray fungicide programme was used.

The highlights of the trial include:

- CHYMA KWS remained very clean, no visual Cercospora Leaf Spots were seen
- A significantly greener leaf area +17.8% (difference generated by image analysis software analysing green pixels, avoids human bias)
- Visual leaf ratings for cercospora gave CHYMA KWS a score of 9 compared to the control only 4.9 (1-9 scale, 9 being clean from cercospora)

The results of CHYMA KWS and the control from the cercospora trial are shown below. The yield uplift of CHYMA KWS where it has been exposed to cercospora inoculum has shown how valuable the trait is.

	Trial Treatments (Adjusted t/ha)	
	Inoculated and two fungicides	Uninoculated and two fungicides
CHYMA KWS	122.2	118.6
Control Variety	110.61	114.72
% increase over control	10.5%	3.4%
Margin increase/ha at £33/t	£383	£129

Source: Yield results from the KWS UK cercospora trial 2023.



Plots treated with fungicides twice, CHYMA KWS on the right. A significantly greener and more vigorous canopy.

Source: KWS UK cercospora trial, Cambridgeshire, 2023.



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