



PIONEER®

MADE TO GROW™

2023

HYBRID RANGE

Winter OSR



CORTEVA™
agriscience

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For further information about Pioneer Oilseed Rape hybrids, please visit: www.corteva.co.uk/pioneer

Pioneer hybrids in this booklet contain OG-INRA Technology from INRA, France.

AHDB data referenced can be found in full at www.ahdb.org.uk



Winter Oilseed rape comparative agronomic descriptions 2023

	Traits & Characteristics	Trial Information	Oil content (%)	Lodging resistance	Stem stiffness	Autumn vigour	Height (cm)	Light leaf spot resistance	Stem canker resistance	Verticillium stem stripe	Earliness of flowering	Earliness of maturity	Launch year	Data source
PT303	Protector® Sclerotinia, Verticillium Stem Stripe, TuYV, Rlm7	AHDB UK Recommended, 2023	45.7	8	8	6.0	159	7	6	PR	5	5	2021	1/4
PT279CL	Clearfield®	AHDB East/West Recommended, 2022	44.8	8	8	6.5	152	5	5	nd	6	6	2018	1
PX141	Maximus® Semi-Dwarf	NEW, UK National Listed, 2022	43.5	9	9	6.1	114	6	7	nd	2	6	2023	2
PX131	Maximus® Semi-Dwarf, TuYV	AHDB UK Described, 2023	46.1	8	9	6.1	111	7	6	nd	6	4	2019	1
PX125CL	Maximus® Semi-Dwarf Clearfield®	UK National Listed, 2020	44.2	8	8	nd	124	6	5	nd	4	6	2021	2/3
PT284	Protector® Clubroot	UK National Listed, 2018	45.1	9	8	6.4	150	6	7	nd	5	5	2019	2
PT315	Pod Shatter Resistance, TuYV, High Oil, Rlm7	NEW, UK National Listed, 2023	46.8	9	8	6.9	169	6	6	nd	6	7	2023	2/3
PT312	Protector® Sclerotinia, TuYV, High Oil	NEW, UK National Listed, 2023	47.6	9	8	6.0	165	5	7	nd	4	7	2023	2/3

1 = AHDB Database; 2 = UK National List Trial Results; 3 = Pioneer Research Data; 4 = ADAS

TuYV = Turnip Yellow Virus resistance; PR = Partially Resistant; nd = no data; Rlm = Phoma resistance type

PT303 is the first winter oilseed rape hybrid to offer growers in the UK and Ireland top level yields with built-in tolerance to Sclerotinia

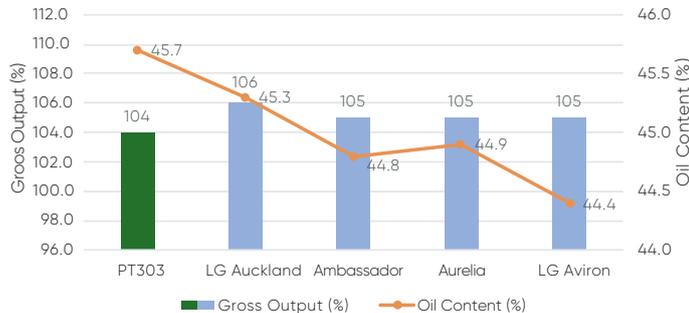
- Gross Output of 104% on AHDB UK Recommended List
- Sclerotinia tolerance
- Verticillium stem stripe tolerance
- Turnip yellows virus (TuYV) resistance
- Strong autumn vigour and spring regrowth
- Light Leaf Spot 7, Stem Canker 6
- Phoma resistance from Rlm7 and horizontal quantitative genetic resistance
- Unique growth habit and genetics spreads risk from damaging late season stalk-based disease
- Later flowering - earlier maturing combination
- Large stature with good lodging resistance and stem stiffness



A top gross output

PT303 has an impressive UK gross output yield on the AHDB Recommended List of 104%. This high gross output is derived from a very high seed yield and the highest oil content of any AHDB UK listed variety.

Gross output and oil content of PT303 versus selected varieties AHDB UK recommended list 2023

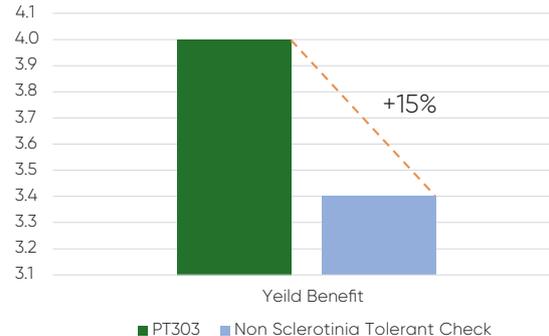


Sclerotinia tolerance

PT303 is the first hybrid to be marketed in the UK with a claim for tolerance to Sclerotinia. This yield sapping disease can reduce yields in commercial situations by up to 30%.

Significant yield loss can occur where flowering fungicide applications are missed or delayed – or just in years when sclerotinia pressure is very high. PT303 Protector[®] Sclerotinia can provide extra support for your crop when this unpredictable and highly damaging disease strikes.

Seed yield (t/ha)



PT303 Protector Sclerotinia yielded over 15% more than the non sclerotinia tolerant check over 6 untreated trials*. At £600/t ex farm a 0.6t increase = £360 potential advantage per Ha.

*Pioneer research trials

Sclerotinia infection is largely eliminated from both treated and untreated AHDB trials through comprehensive fungicide applications at flowering. In commercial situations however, flowering treatment programmes may be more limited, and applications may be inadvertently mistimed.

Consider that results from trials that are comprehensively treated for disease at flowering time may entirely mask

susceptibility to stalk diseases such as sclerotinia and verticillium stem stripe.

PT303 has given very high gross output yields in AHDB UK RL trials even though sclerotinia infection was probably well controlled at all locations. The Sclerotinia tolerance of PT303 is therefore likely to be an additional benefit to its proven performance.

Non-tolerant comparator



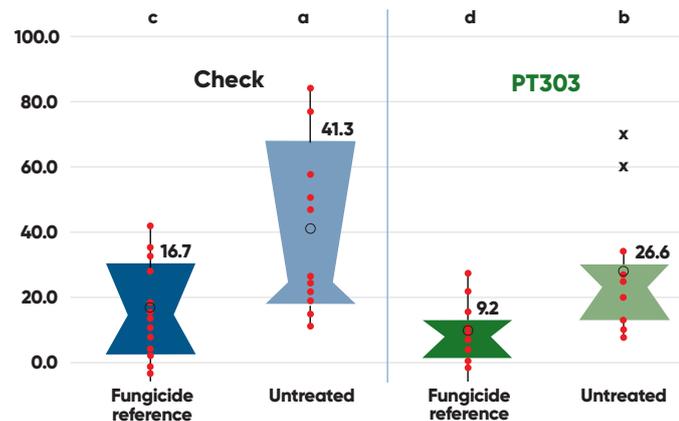
Protector Sclerotinia



Essex 2021

Impact of incidence of sclerotinia infection, 2019–2021

% incidence in 13 trials



Incidence = frequency of stems infected by *Sclerotinia sclerotiorum*.

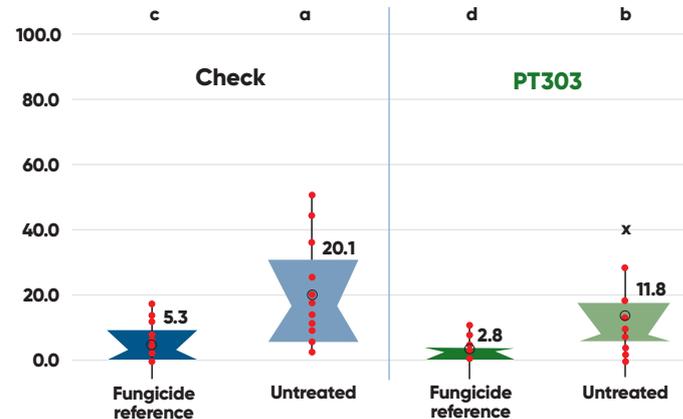
Sclerotinia Protector significantly reduced the number of infected stems.

Average reduction of 36%.

The variability of infestation of PT303 was significantly less than the check.

Severity of sclerotinia impact, 2019–2021

% severity in 13 trials



Severity = intensity (extent) of *Sclerotinia* lesions.

Sclerotinia Protector significantly lowered the severity on plant stems.

Average reduction of 42%.

The reduction of the variability of lesions was very marked, even in untreated plots.

The efficacy of the fungicide treatments applied was also improved.

Verticillium stem stripe resistance

ADAS tests at a UK location with a recent history of verticillium have indicated PT303 has partial resistance or tolerance to Verticillium Stem Stripe. When combined with its tolerance to Sclerotinia, this gives PT303 a unique potential to reduce the severity of the yield robbing stem-based disease at harvest.

ADAS results at this location further independently confirmed the ability of PT303 to quickly establish high levels of ground cover and grow rapidly in both the autumn and spring.

Verticillium stem stripe results

	Ground cover (% of area)	Vigour 20/10/21 (0-10 index*)	Vigour 20/10/21 (0-10 index)	Verticillium stem stripe trial rating
	Scored 20/10/2020	Scored 20/10/2020	Scored 29/03/2021	
PT303	83.80	7.5	7.5	Partially resistant
Quartz	60.00	5.6	5.1	Susceptible
Campus	65.00	6.1	6.3	Moderately susceptible
Flamingo	71.20	6.4	7.6	Partially resistant

Source: ADAS 2021 *0 = lowest; 10 = highest

Verticillium stem stripe pre-harvest assessment

	Verticillium incidence % of plants affected	Verticillium index (0-100 index)	Premature ripening %
PT303	52.0	32.6	40.1
Quartz	81.0	71.2	72.8
Campus	69.0	42.0	48.5
Flamingo	54.0	30.2	35.3

Source: ADAS 2021

Stem health

PT303 stem health at maturity reduces premature senescence and its damaging effect on yield.

PT303



Leading competitor



Light leaf spot and stem canker

PT303 has broad agronomic strengths. It provides a resistance score of 7 for both light leaf spot and stem canker and its base disease resistance package makes it suited to any location.

Phoma resistance is derived from both Rlm 7 and horizontal quantitative sources ensuring it is appropriate for high pressure situations.

Turnip yellows virus (TuYV) resistance

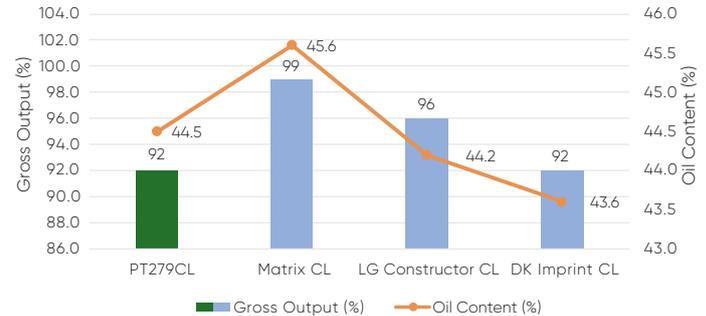
PT303 has TuYV resistance confirmed by GEVES in France.

The first Clearfield hybrid to be added to the AHDB Recommended List. PT279CL has maintained its position on the East/West Recommended List and is a commercially proven Clearfield type.

With a high oil content and stiff straw, PT279CL has provided growers with high harvestable yields since first being listed on the AHDB Recommended List.



Gross output and oil content of PT279CL versus other Clearfield hybrids



Comparative agronomic scores PT279CL and other Clearfield® hybrids 2023 AHDB RL

	PT279CL	Matrix CL	LG Constructor CL	DK Imprint CL
Oil Content (%)	44.5	45.6	44.2	43.6
Light Leaf Spot Resistance	5	6	6	6
Stem Canker Resistance	5	8	6	7
Turnip Yellows Virus Resistance	-	R	R	-
Resistance to Lodging	8	8	8	8
Stem Stiffness	8	8	8	7
Plant Height (cm)	147	152	143	153
Earliness of Flowering	6	7	6	6
Earliness of Maturity	6	6	6	6

Source: AHDB 2022 UK RL

On the 1-9 scales, high figures indicate that a hybrid shows the character to a higher degree; R = Resistance

PT315 is a new Pioneer hybrid for 2023. PT315 has given a high gross output yield with a very high oil content. It combines pod shatter resistance with turnip yellows virus resistance.

- High Gross Output of 106%
- Very High oil content of 46.8%
- Pod shatter resistance
- Turnip yellows virus (TuYV) resistance
- High rating of 6.9 for early autumn vigour
- Light Leaf Spot 6, Stem Canker 6
- Phoma resistance based on RlmE and horizontal quantitative genetic resistance
- Large stature hybrid that has scored 9 for lodging and 8 for stem stiffness



Top Level Gross Output and Agronomic

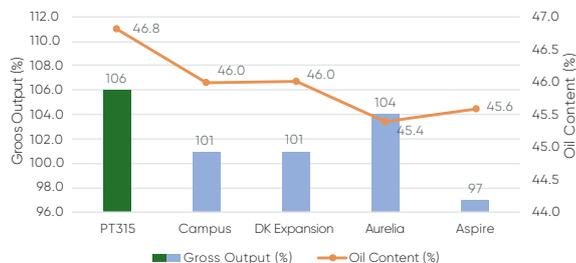
PT315 has given a very high gross output yield of 106% of the Control yield with a very high oil content of 46.8%.

This top-level yield performance comes with a unique agronomic package including pod shatter resistance, turnip yellows virus resistance and the highest autumn vigour score of any hybrid in the Pioneer range.

PT315 scores 6 for both light leaf spot and phoma resistance. The phoma resistance is based on the RlmE resistance gene combined with broad horizontal quantitative resistance.

RlmE resistance gene combined with broad horizontal quantitative resistance.

Gross output and oil content of PT315 versus control varieties, UK National List Trials



High Oil

PT315 has given one of the highest oil contents of any variety in both 2021 and 2022 UK National List Trials. This level of oil content is likely to generate significant oil bonus payments. An illustration of the type of oil bonus payments that may be achieved can be seen in the table below.

Variety	Seed Yield* %	Seed Yield t/ha	Oil Content %	Oil Bonus Payment £ per tonne	Oil Bonus Payment £ per ha
PT315	105	5.49	46.8	£51.00	£280.07
Campus	100	5.23	46.0	£45.00	£235.35
DK Expansion	101	5.28	46.0	£45.00	£237.70
Aurelia	104	5.44	45.4	£40.50	£220.29
Aspire	97	5.07	45.6	£42.00	£213.07

* 100% Control Seed Yield, t/ha

Figures based on a crop value of £500/tonne and an oil bonus payment of 1.5% for every % above 40%

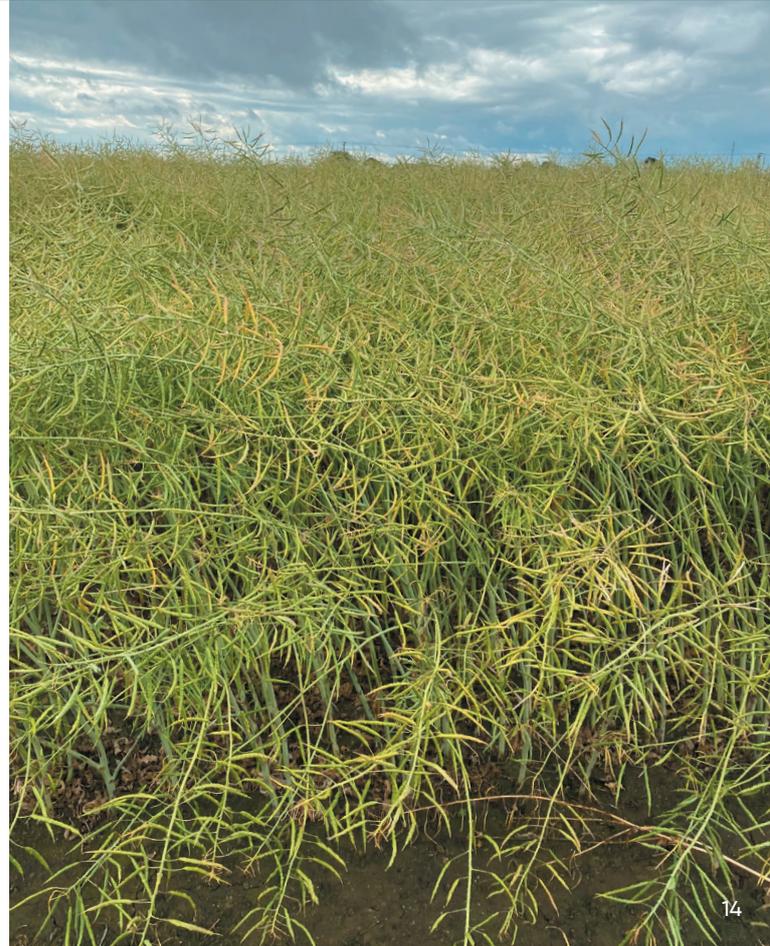
PT312

AHDB
RECOMMENDED



PT312 is a new Pioneer hybrid for 2023. It provides a high gross output yield with a very high oil content. PT312 combines Protector Sclerotinia tolerance with turnip yellows virus resistance and pod shatter tolerance.

- Gross Output of 103%
- Top oil content of 47.6%
- Turnip yellows virus (TuYV) resistance
- Light Leaf Spot 5, Stem Canker 7
- Large stature hybrid that has scored 9 for lodging and 8 for stem stiffness



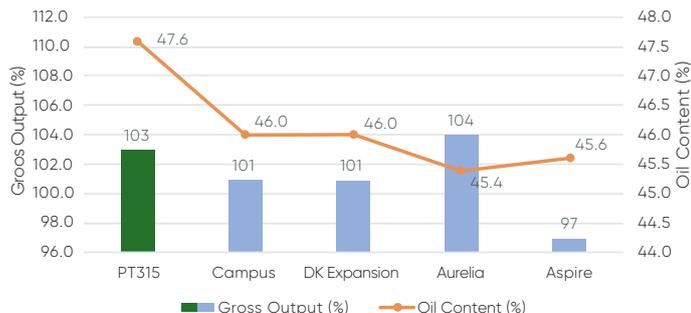
Top Level Gross Output and Agronomic

PT312 has given a very high gross output yield of 103% of the Control yield with a top oil content of 47.6%.

This top-level yield performance comes with an outstanding trait combination of Protector Sclerotinia tolerance, turnip yellows virus resistance and pod shatter tolerance.

PT312 scores 5 for both light leaf spot and 7 for phoma resistance.

Gross output and oil content of PT312 versus control varieties, UK National List Trials



High Oil

PT312 has given the highest oil content of any variety in 2021& 2022 UK National List Trials. This level of oil content is likely to generate significant oil bonus payments. An illustration of the type of oil bonus payments that may be achieved can be seen in the table below.

Variety	Seed Yield* %	Seed Yield t/ha	Oil Content %	Oil Bonus Payment £ per tonne	Oil Bonus Payment £ per ha
PT312	101	5.28	47.6	£57.00	£301.09
Campus	100	5.23	46.0	£45.00	£235.35
DK Expansion	101	5.28	46.0	£45.00	£237.70
Aurelia	104	5.44	45.4	£40.50	£220.29
Aspire	97	5.07	45.6	£42.00	£213.07

* 100% Control Seed Yield, t/ha

Figures based on a crop value of £500/tonne and an oil bonus payment of 1.5% for every % above 40%

PT284



PT284 combines the Pioneer Clubroot Protector resistance trait with market leading disease resistance scores for the best infield protection. Choose PT284 for better early vigour.

Agronomic Profile

Oil Content	45.1%
Light Leaf Spot Resistance	6
Stem Canker Resistance	7
Lodging Resistance	9
Plant Height (cm)	150
Earliness of Maturity	5

Source: UK Official Data.



PX125CL



PX125CL is the only Maximus Clearfield hybrid available in the UK. The combination of the Maximus semi-dwarf plant type and the tolerance to Clearfield herbicides provides growers with unique benefits.

Agronomic Profile

Oil Content	44.2%
Light Leaf Spot Resistance	6
Stem Canker Resistance	5
Lodging Resistance	9
Plant Height (cm)	124
Earliness of Maturity	4

Source: Pioneer Research Data.



PX131 is the only semi-dwarf hybrid on the 2023 AHDB Descriptive List.

This unique product type provides growers with the highest level of standing power and the greatest ease of combining.



- Maximus® semi-dwarf hybrids such as PX131 are suited to sowing in high fertility situations where the risk of lodging is high.
- Harvesting is fast and efficient due to the lower level of biomass.
- Their spreading growth habit in the autumn significantly reduces the chance of winter kill.

Gross Output & Oil Content of PX141 versus PX131 - UK Official Trials 2019-2021



PX141 is a new Maximus semi-dwarf hybrid for 2023 sowing.

PX141, like other Maximus semi-dwarf hybrids, provides growers with the highest level of standing power and the greatest ease of combining.



- Higher seed yield than PX131
- Taller than PX131
- Higher stem canker resistance than PX131
- Better stem stiffness than PX131

Comparative agronomic scores PX141 vs PX131

	PX141	PX131
Oil Content (%)	43.5	45.2
Light Leaf Spot Resistance	6	7
Stem Canker Resistance	7	6
Turnip Yellows Virus Resistance	-	R
Resistance to Lodging	9	9
Stem Stiffness	9	8
Plant Height (cm)	114	101
Earliness of Flowering	2	4
Earliness of Maturity	6	5

Source: UK Official Trial Results 2019-2021

On the 1 – 9 scale a higher figure indicates the character is shown to a higher degree, R = Resistance



Pioneer WOSR seed is available with either LumiGEN™ Standard treatment or LumiGEN™ Insecticide treatment. LumiGEN™ Standard includes the fungicide Integral Pro and the Pioneer growth promoter treatment Lumibio Kelta. LumiGEN™ Insecticide additionally includes the insecticide Lumiposa®.

LumiGEN™
Lumiposa®
SEED APPLIED INSECTICIDE

The best crop protection for your OSR selection.

Belkar[®]

Arylex™ active

HERBICIDE

Post-emergence autumn applied herbicide for superior control of broad-leaved weeds especially cleavers, cranesbill, fumitory, poppies and shepherd's purse.

Astrokerb[®]

HERBICIDE

Powerful dual-action control that is exceptional against blackgrass and key broad-leaved weeds such as poppies and mayweed.

Kerb[®] FLO 500

HERBICIDE

Long-standing consistent control of blackgrass and other grass and broad-leaved weeds in oilseed rape and pre-emergence in winter beans.

Korvetto[®]

Arylex™ active

HERBICIDE

Wide-spectrum, spring applied herbicide for use in winter oilseed rape. Highly effective on a range of problem broad-leaved weeds, with outstanding control of key weeds such as cleavers, mayweeds and thistles.

Whatever Pioneer hybrid variety you choose for the season ahead, our range of herbicides will control problem weeds and maximise the potential of your OSR crop.

Discover more at:
www.corteva.co.uk/osr





OSR £200 CASHBACK OFFER

There are plenty of reasons to choose Pioneer and Corteva oilseed rape products this season. Order both **PT303 Protector® Sclerotinia** OSR and **Belkar®** herbicide and get **£200 cashback***.

Find out more at: www.corteva.co.uk/osroffer

*T&C's apply. See website for details.

Your key Pioneer contacts

For all enquiries about Pioneer Winter Oilseed Rape contact your local Corteva Representative. Their experience and local advice is available to help you maximise your success.

Jonathan Bellamy

Northern Wales,
Central England &
Northern Ireland

Office: **01270 619825**

Mobile: **07801 183233**

Email: jonathan.bellamy@corteva.com



Chris Pashby

North West Promoter

Mobile: **07737 612318**



Tom Carey

West Midlands Promoter

Mobile: **07432 154981**



Beckie Cartwright

Northern England & Scotland

Mobile: **07917 520707**

Email: rebecca.cartwright@corteva.com



Andy Stainthorpe

UK & Ireland

Office: **01823 334279**

Mobile: **07801 183234**

Email: andy.stainthorpe@corteva.com



Pieter Botha

South East Promoter

Mobile: **07915 127965**





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Technical Hotline: 0800 689 8899 E-mail: ukhotline@corteva.com

USE PLANT PROTECTION PRODUCTS SAFELY. Always read the label and product information before use.

For further information including warning phrases and symbols refer to label.

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Kerb® Flo 500 contains propyzamide. Korvetto® contains halauxifen-methyl (Arylex™ active) and clopyralid.