

82%

OF UK WHEAT AREA IS AT RISK FROM BYDV IF LEFT UNTREATED

THE PROBLEM

Barley yellow dwarf virus (BYDV) is a serious disease in wheat, with plant infection occurring after about 30 mins of aphid feeding. The earlier the infection the worse the yield impact with yield losses on untreated crops as high as 60%. It is estimated each year, 82% of the crop area could be affected by BYDV if left untreated, which would cost the industry an average of £136 million a year.



Grow to expect the best

RGT WOLVERINE

BYDV RESISTANCE - WINTER WHEAT

THE LOSS OF REDIGO DETER

Previously Redigo Deter seed treatment was the mainstay of BYDV management, providing protection for 6-8 weeks. However since the chemical has been banned, growers have no way of fully protecting their crops from BYDV.

RGT Wolverine is the ONLY UK wheat variety with resistance to Barley Yellow Dwarf Virus (BYDV), thanks to a trait called Bdv2. This gives protection to the crop 24/7, all season long.




FINANCIAL LOSS FROM BYDV INFECTION.

Defra 5-year avg UK yield (t/ha)	8.02
AHDB avg UK BYDV yield loss	8%
Grain price (£/t)	£160.00
Yield loss (t/ha)	0.6416
Financial loss (£/ha)	£102.66
Cost of BDV2 trait (£/ha)	£15
BDV2 Return on Investment (£/ha)	£87.66

PYRETHROIDS

Without Redigo Deter the only other chemical control is via pyrethroid insecticides. However, due to overuse of these chemicals, aphids with resistance to these compounds can be found across the UK, meaning farmers can no longer rely on pyrethroid insecticides to fully control BYDV. RGT Wolverine is the only variety with BYDV resistance available, counteracting all the negative aspects of using pyrethroids.

BYDV Control	Pyrethroid	 RGT Wolverine
Longevity of control	1-7 days	24/7, season long.
Sprayer workload	High	None
Aphid resistance	Yes	No
Increasing aphid resistance	Yes	No
Crop monitoring	Yes	No
Application cost	Yes	No
Chemical cost	Yes	No
Weather dependency	High	None
Beneficial insects	Affected	Not affected



COST COMPARISON.

The most cost effective way to control BYDV.

	DETER	DETER + PYRETHROID X1	PYRETHROID X1	PYRETHROID X2	BDV2
	RGT SAKI	RGT SAKI	RGT SAKI	RGT SAKI	RGT WOLVERINE
Seed cost/t	£430.00	£430.00	£430.00	£430.00	£330.00
Application cost/ha		£13.00	£13.00	£26.00	
Pyrethroid spray (cost/ha)		£4.13	£4.13	£8.27	
Deter (cost/t)	£135.00	£135.00			
BIPO rate/ha					£33
Seed rate (kg/ha)	175	175	175	175	175
Hectares/t	5.71	5.71	5.71	5.71	5.71
Cost of protection /ha	£98.88	£116.01	£92.38	£109.52	£90.75
Difference vs RGT Wolverine	£8.13	£25.26	£1.63	£18.77	£0.00

RGT WOLVERINE

BYDV RESISTANCE - WINTER WHEAT



RGT Wolverine.
Recommended
List 2021/22.

RGT Wolverine

- Very early sowing potential - prostrate vegetative growth.
- Very high yielding, even when BYDV is absent.

END-USE GROUP	AVERAGE LSD (5%)	RGT WOLVERINE	GLEAM
Scope of recommendation		Sp	UK
		NEW	C
Fungicide-treated grain yield (% treated control)			
United Kingdom (10.8 t/ha)	2.2	102	103
East region (10.7 t/ha)	2.5	101	103
West region (10.9 t/ha)	2.9	102	103
North region (11.0 t/ha)	3.4	[103]	102
Grain quality			
Hagberg Falling Number	27.2	274	217
Specific weight (kg/hl)	0.7	75.9	76.3
Agronomic features			
Resistance to lodging without PGR (1–9)	0.8	[7]	7
Resistance to lodging with PGR (1–9)	0.6	8	7
Height without PGR (cm)	1.9	86	87
Ripening (days +/- Skyfall, -ve = earlier)	0.7	+2	-0
Resistance to sprouting (1–9)	1.0	[6]	[5]
Disease resistance			
Mildew (1–9)	1.3	5	6
Yellow rust (1–9)	0.9	5	5
Brown rust (1–9)	1.0	8	6
Septoria tritici (1–9)	1.1	5.3	6.1
Eyespot (1–9)	1.7	[5]	4
Fusarium ear blight (1–9)	0.5	6	6

RGT WOLVERINE

Europe's first BYDV-resistant wheat is a major breakthrough in European plant breeding, offering farmers an alternative to chemical control.

- The only winter wheat variety with resistance to BYDV offering season long protection, 24/7.
- Very early sowing potential • Stiff strawed
- Very high yielding, even when BYDV is absent • Good bushel weight.