

Ergot infection in winter rye hybrids shows differential contribution of male and female genotypes and environment

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Supplemental materials

Table S1: Name of cultivars and single crosses (SC) with a varying percentage of a non-adapted restorer gene, type of cultivar and breeding company of Exp. 1

Entry	Type of cultivar ^a	Breeder
SU Satellit ^b	H	HYBRO GmbH & Co KG
SU Allawi ^b	H	HYBRO GmbH & Co KG
SU Stakkato ^b	H	HYBRO GmbH & Co KG
Dańkowskie Diament	P	"DANKO" Hodowla Roslin Sp. z o.o.
Brasetto	H	KWS LOCHOW GmbH
Palazzo	H	KWS LOCHOW GmbH
Visello	H	KWS LOCHOW GmbH
Conduct	P	KWS LOCHOW GmbH
SC ₁₀₀	H	KWS LOCHOW GmbH
SC ₂₅	H	KWS LOCHOW GmbH
SC ₀	H	KWS LOCHOW GmbH
SC ₅₀	H	KWS LOCHOW GmbH

^aP: population cultivar, H: hybrid cultivar

^b10% population rye included

Table S2: Country, location, and respective traits tested in Exp. 1 (x = trait observed)

Country	Location	Ergot severity (%)	Anther rating (1-9)	Ear emergence (1-9)	Plant height (cm)
	<i>Number of environments</i>	8	7	7	7
Germany	Oberer Lindenhof (48°28'25.5"N 9°18'17.9"E)	X	X	X	X
Germany	Braunschweig (52°16'33.4"N 10°34'09.3"E)	X	—	—	—
Germany	Petkus (51°58'50.3"N 13°21'01.7"E)	X	X	X	X
Germany	Wohlde (52°48'48.7"N 9°59'53.1"E)	—	X	X	X
Austria	Freistadt (48°29'23.6"N 14°29'47.6"E)	X	X	X	X
Austria	Zwettl (48°36'22.4"N 15°13'23.8"E)	X	X	X	X
Poland	Zybisów (51°03'51.9"N 16°54'45.4"E)	X	X	X	X
Poland	Kościelna Wieś (51°46'28.7"N 18°00'58.0"E)	X	X	X	X
Denmark	Skejby (56°12'00.6"N 10°09'06.3"E)	X	—	—	—

Table S3: Country, year, location and respective traits tested in Exp. 2 (x = trait observed)

Country	Year	Location (GPS data)	Ergot severity (%)	Anther rating (1-9)	Ear emergence (1-9)	Plant height (cm)
			set A/set B			
		<i>Number of environments^{a)}</i>	16/8	8/2	9/6	12/6
Germany	2014	Oberer Lindenhof (48°28'25.5"N 9°18'17.9"E)	x/x	x/x	x/x	x/x
Germany	2014	Braunschweig (52°16'33.4"N 10°34'09.3"E)	x/x	–/–	–/–	–/–
Germany	2014	Wohlde (52°48'48.7"N 9°59'53.1"E)	x/–	x/–	–/–	x/–
Germany	2014	Petkus (51°58'50.3"N 13°21'01.7"E)	x/–	x/–	x/–	x/–
Germany	2014	Wulfode (53°03'45.7"N 10°14'02.5"E)	x/x	–/–	x/x	x/x
Germany	2014	Kleptow (53°21'54.9"N 14°00'04.4"E)	x/x	–/–	x/x	x/x
Poland	2014	Kościelna Wieś (51°46'28.7"N 18°00'58.0"E)	x/x (1 rep)	–/–	–/–	–/–
Denmark	2014	Skejby (56°12'01.3"N 10°09'32.0"E)	x/–	x/–	–/–	x/–
Germany	2015	Oberer Lindenhof (48°28'25.5"N 9°18'17.9"E)	x/x	x/x	x/x	x/x
Germany	2015	Braunschweig (52°16'33.4"N 10°34'09.3"E)	–/–	–/–	–/–	–/–
Germany	2015	Wohlde (52°48'48.7"N 9°59'53.1"E)	x/–	x/–	x/–	x/–
Germany	2015	Petkus (51°58'50.3"N 13°21'01.7"E)	x/–	x/–	x/–	x/–
Germany	2015	Wulfode (53°03'45.7"N 10°14'02.5"E)	x/x	–/–	x/x	x/x
Germany	2015	Kleptow (53°21'54.9"N 14°00'04.4"E)	x/x	–/–	x/x	x/x
Poland	2015	Kościelna Wieś (51°46'28.7"N 18°00'58.0"E)	x/–	–/–	–/–	–/–
Poland	2015	Zybiszów (51°03'51.9"N 16°54'45.4"E)	x/–	–/–	–/–	–/–
Denmark	2015	Skejby (56°12'00.6"N 10°09'06.3"E)	x/–	x/–	–/–	x/–

^{a)} Environment = location x year combinations