Impact of Crown Rot in Cereals

Trial ID: **AM0902** **Location:** **Bullarah** **Trial Year:** **2009**
Investigator: **Anthony Mitchell**

Objective:	**To evaluate the impact of crown rot in winter cereals in the presence of *P thornei***
Planting Date:	**13/05/2009**
Inoculum:	**2g/m row applied with seed**
Sowing depth:	**3cm**
Harvest Date:	**2/11/2009**
Keywords:	**Crown rot, *Pratylenchus thornei*, root-lesion nematode, wheat, barley, durum**

NB*:* This was a benchmarking trial conducted in the absence of *Pratylenchus thornei*

Trt No	Crop	Variety	*P thornei* Tolerance Rating	Crown Rot Treatment	Emergence 20 DAP Plants/m²	Yield 173 DAP kg/ha	Yield Impact due to added Crown Rot kg/ha	% Loss
1	Wheat	EGA Wylie	T	-	37ab	2210cde		
2	Wheat	EGA Wylie	T	Plus inoculum	34abc	2065defg	-145	-7
3	Wheat	EGA Gregory	MT	-	30bcde	1863efg		
4	Wheat	EGA Gregory	MT	Plus inoculum	34abc	1278j	-585	-31
5	Wheat	Ventura	MT-MI	-	30bcde	2090def		
6	Wheat	Ventura	MT-MI	Plus inoculum	25cde	1745fgh	-345	-17
7	Wheat	Livingston	MI	-	34abc	1748fgh		
8	Wheat	Livingston	MI	Plus inoculum	28bcde	1365ij	-383	-22
9	Wheat	Strzelecki	MI-I	-	33abc	1713ghi		
10	Wheat	Strzelecki	MI-I	Plus inoculum	27cde	1148j	-565	-33
11	Wheat	Sunco	I	-	27cde	1758fgh		
12	Wheat	Sunco	I	Plus inoculum	21e	1408hij	-350	-20
13	Barley	Skiff	n/a	-	29bcde	2938a		
14	Barley	Skiff	n/a	Plus inoculum	30bcde	2690ab	-248	-8
15	Barley	Grout	n/a	-	23e	2468bc		
16	Barley	Grout	n/a	Plus inoculum	25cde	2375bcd	-93	-4
17	Durum	Bellaroi	MI	-	40a	2235cde		
18	Durum	Bellaroi	MI	Plus inoculum	25cde	1408hij	-828	-37
19	Durum	Jandaroi	MI	-	32abcd	1960efg		
20	Durum	Jandaroi	MI	Plus inoculum	24de	1745fgh	-215	-11
				P =	0.0064	0.0000		
				LSD =	9.2	375		

Yield cv = 13.9%

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Trt No	Crop	Variety	*P thornei* Tolerance Rating	Crown Rot Treatment	Grain Weight g/1000 Grains	Test Weight kg/hL	Screenings %	Protein %
1	Wheat	EGA Wylie	T	-	37de	77ab	0.9j	12.9 d
2	Wheat	EGA Wylie	T	Plus inoculum	36def	77ab	1.2hij	12.9 d
3	Wheat	EGA Gregory	MT	-	33fgh	75cd	3.6bcd	11.4 i
4	Wheat	EGA Gregory	MT	Plus inoculum	34fgh	71fg	4.3abc	11.6 hi
5	Wheat	Ventura	MT-MI	-	35def	75cd	3.6bcd	12.2 efg
6	Wheat	Ventura	MT-MI	Plus inoculum	38d	75bc	3.4bcde	11.9 gh
7	Wheat	Livingston	MI	-	35def	73de	2.1defgh	13.7 c
8	Wheat	Livingston	MI	Plus inoculum	33fgh	70fgh	3.2bcdef	14.2 b
9	Wheat	Strzelecki	MI-I	-	32gh	72ef	2.2defgh	11.9 gh
10	Wheat	Strzelecki	MI-I	Plus inoculum	32h	69hi	4.8abc	12.2 fg
11	Wheat	Sunco	I	-	35efg	77a	1.0ij	12.4 ef
12	Wheat	Sunco	I	Plus inoculum	35efg	77ab	1.6ghij	12.6 de
13	Barley	Skiff	n/a	-	47a	60k	2.3defgh	16.0 a
14	Barley	Skiff	n/a	Plus inoculum	46a	59k	2.9cdefg	15.6 a
15	Barley	Grout	n/a	-	47a	59k	2.0efghij	13.5 c
16	Barley	Grout	n/a	Plus inoculum	45ab	58k	2.8cdefg	13.4 c
17	Durum	Bellaroi	MI	-	37de	68i	5.1ab	13.7 c
18	Durum	Bellaroi	MI	Plus inoculum	35def	64j	6.2a	14.2 b
19	Durum	Jandaroi	MI	-	42bc	72ef	1.8fghij	13.7 c
20	Durum	Jandaroi	MI	Plus inoculum	41c	70ghi	3.0bcdef	14.4 b
				P =	0.0000	0.0000	0.0000	0.0000
				LSD =	2.7	2.0	Log detransf	Log detransf