

Disclaimer:

This document is based on the results from an individual trial and may contain experimental use patterns that are currently off-label. **This document does not provide any interpretation and should not be taken as an endorsement of any unregistered use pattern.**

Professional advice should be sought for specific recommendations to ensure access to the most up to date information and knowledge.

Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.

Impact of Crown Rot in Cereals

Trial ID: CFT0902

Location:

Cryon

Trial Year:

2009

Investigator:

Clare Felton-Taylor

Objective:	To evaluate the impact of crown rot inoculum on cereal variety yield in the presence of <i>Pratylenchus thornei</i>
Planting:	13/05/2009
Harvest:	31/10/2009
Starting Pathogen Levels (PreDicta B):	2,300 <i>P thornei</i> /kg soil, nil detection of crown rot pathogen
Keywords:	Crown rot, <i>Pratylenchus thornei</i> , root-lesion nematode, wheat, barley, durum

Crown rot inoculum supplied by Dr Steven Simpfendorfer NSW DPI and added with seed at 2 g/ m row at planting

Trt No.	Crop	Variety	<i>P thornei</i> Tolerance Rating	Crown Rot Treatment	Emergence 29/05/2009 16 DAP Plants/m ²	Yield 31/10/2009 171 DAP kg/ha
1	Wheat	EGA Wylie	T	-	90.4	3314bcd
2	Wheat	EGA Wylie	T	Plus inoculum	76.0	3320bcd
3	Wheat	EGA Gregory	MT	-	78.9	3197cd
4	Wheat	EGA Gregory	MT	Plus inoculum	78.7	3021def
5	Wheat	Ventura	MT-MI	-	71.5	3528abc
6	Wheat	Ventura	MT-MI	Plus inoculum	75.2	3528abc
7	Wheat	Livingston	MI	-	77.7	3678a
8	Wheat	Livingston	MI	Plus inoculum	70.1	3470abc
9	Wheat	Strzelecki	MI-I	-	69.5	2842efgh
10	Wheat	Strzelecki	MI-I	Plus inoculum	71.3	2572hij
11	Wheat	Sunco	I	-	69.7	3112def
12	Wheat	Sunco	I	Plus inoculum	74.0	3203cd
13	Barley	Skiff	n/a	-	81.6	3545abc
14	Barley	Skiff	n/a	Plus inoculum	79.1	2989defg
15	Barley	Grout	n/a	-	80.7	2668ghi
16	Barley	Grout	n/a	Plus inoculum	92.0	2763fghi
17	Durum	Bellaroi	MI	-	83.8	3314bcd
18	Durum	Bellaroi	MI	Plus inoculum	66.0	2285j
19	Durum	Jandaroi	MI	-	69.1	2852efgh
20	Durum	Jandaroi	MI	Plus inoculum	66.2	2428ij
P =					0.15	0.00
LSD =					nsd	312-361

Yield cv = 7.1%

nsd = No significant difference

DAP = Days after Planting

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Table 2: Grain Quality

Trt No.	Crop	Variety	<i>P thornei</i> Tolerance Rating	Crown Rot Treatment	Grain Weight g/1000 Grains	Test Weight kg/hL	Screenings %	Protein %	Retention %
1	Wheat	EGA Wylie	T	-	37def	75ab	1.0f	11.4efgh	
2	Wheat	EGA Wylie	T	Plus inoculum	36efg	74abcd	1.9def	11.8defg	
3	Wheat	EGA Gregory	MT	-	41bc	74abc	1.5def	11.2fgh	
4	Wheat	EGA Gregory	MT	Plus inoculum	38de	73abcd	2.2bcd	10.8gh	
5	Wheat	Ventura	MT-MI	-	39cd	72abcd	1.9cdef	10.5h	
6	Wheat	Ventura	MT-MI	Plus inoculum	38de	72abcd	3.5bc	11.0fgh	
7	Wheat	Livingston	MI	-	37def	73abcd	2.0bcde	11.0fgh	
8	Wheat	Livingston	MI	Plus inoculum	36efg	72bcd	2.6bcd	10.6h	
9	Wheat	Strzelecki	MI-I	-	37def	72abcd	2.5bcd	10.7h	
10	Wheat	Strzelecki	MI-I	Plus inoculum	34g	71cd	3.6b	11.0fgh	
11	Wheat	Sunco	I	-	37def	76a	1.0ef	12.8bcd	
12	Wheat	Sunco	I	Plus inoculum	36defg	74abcd	1.5def	11.9def	
13	Barley	Skiff	n/a	-	43b	64e	1.7def	12.6cd	76.8
14	Barley	Skiff	n/a	Plus inoculum	43b	60f	2.4bcd	12.2cde	81.2
15	Barley	Grout	n/a	-	44b	59f	2.3bcd	10.8h	78.7
16	Barley	Grout	n/a	Plus inoculum	44ab	58f	2.2bcd	11.1fgh	81.3
17	Durum	Bellaroi	MI	-	42bc	71cd	1.7def	13.0bcd	
18	Durum	Bellaroi	MI	Plus inoculum	34fg	64e	10.1a	14.1a	
19	Durum	Jandaroi	MI	-	47a	74abcd	1.0ef	13.2abc	
20	Durum	Jandaroi	MI	Plus inoculum	42bc	70d	3.5b	13.7ab	
P =					0.00	0.00	0.00	0.00	0.70
LSD =					3.0	4.0	Log detransf	1.0	nsd