

4.2 Assessing Effects Of Different Plant Health Products In Wheat - Mininera, Vic

Location:

Mininera

Author:

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Funding:

Southern Farming Systems.

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Researchers:

Lou Ferrier and Rohan Wardle, SFS

Rainfall (mm) April – November :

430mm - total 607 mm

Background:

It has been demonstrated that foliar fungicides are very effective at controlling leaf rust and stripe rust in wheat. A healthy plant may also have a better ability to resist disease and offers an alternative method of disease control. Some products available for plant health in gardening situations may be useful in broadacre cropping situations.

The aim of this trial is to test a number of plant health products as to their effect in controlling leaf disease in wheat.

Trial Design:

A replicated randomized block design consisting of 4 repetitions. Plot length of 12m and width of 1.45m.

▼ Table 4.7: Trial inputs

Previous Crop:	Canola
Sowing Date:	17 May 2007
Harvest Date:	5 January 2008
Variety:	Kellalac wheat
Target Population:	200 plants/m ²

	Product	Rate	Date
Herbicides	Roundup	1.5l/ha	17.5.07
	Triflur X	1.2l/ha	17.5.07
Fertiliser	MAP + Cu	100kg/ha	17.5.07
	Zn		
	Urea	40kgN/ha	21.8.07

Treatments

1.	Untreated
2.	10g/ha Gibberelic Acid @ growth stage 30 (8.8.07)
3.	Tilt 250mls/ha @ growth stage 31-2 (24.8.07)
4.	Tilt 250mls/ha @ growth stage 31-2 (24.8.07) + Folicur 145ml/ha @ growth stage 65 (13.11.07)
5.	Dynamic Lifter incorporated at sowing (17.5.07) + GS 32 (26.8.07)
6.	Folicur @145ml/ha @ GS 39 + GS 65 (13.11.07)
7.	Potassium Sulphate @ GS 31-2 (24.8.07)
8.	Potassium Sulphate @ GS 31-2 (24.8.07)
9.	Worm Juice @ 80L/ha @ GS 31-2 (23.8.07) (Camperdown Compost Company)
10.	Seasol incorporated at sowing (17.5.07) + GS 32 (26.8.07)
11.	Activist Zinc, Big Red (Cu), Supa Moly @ GS 31-2 (24.8.07) (Agrichem)
12.	1. Compost @ GS 31-2 (23.8.07) (Camperdown Compost Company)

Trial Observations:

Disease assessment was not undertaken in this trial however the trial does reveal that treatment no. 6 with a conventional fungicide application yielded the highest, had the highest test weight, the lowest screenings and the highest thousand grain weight. Some plant health products yielded highly as well, in particular the worm juice and trace elements products (trt. 9 and 11.)

It's important to note that there are significant differences between treatments for test weight, screenings and thousand grain weight but there was no significant difference for yield and protein.

Results:

Treatment (ranked according to yield)	Yield (t/ha)	Protein (%)	Test Weight (kg/ha)	Screenings (%)	Thousand Grain Weight (g)
6. Folicur @ GS 39+65	5.60	13.12	75.04 a	1.12 d	35.20 a
8. Pot.Sulph + Folicur @ GS39	5.50	12.90	73.88 ab	1.53 cd	34.07 ab
9. Worm Juice	5.20	12.22	73.03 bc	1.62 bcd	33.60 ab
3. Tilt @ GS31	5.11	12.70	72.15 cd	2.19 ab	32.54 bc
11. Zinc, Big Red, Moly	5.10	12.73	73.30 bc	1.96 abc	32.67 bc
1.Untreated	5.05	12.46	70.54 d	2.36 a	31.23 c
4. Tilt@GS31 + @GS65	5.03	12.93	72.67 bc	1.70 bcd	33.84 ab
12.Compost	5.03	12.87	72.52 bc	2.00 abc	32.46 bc
5. Dynamic Lifter	4.90	13.07	73.24 bc	1.80 abc	32.68 bc
2.Gibberelic Acid	4.88	12.87	71.81 cd	2.02 abc	35.27 a
10. Seasol	4.86	12.36	72.48 bc	1.59 bcd	33.77 ab
LSD (P=0.05)	0.47 Trending but NSD(P=0.054)	NSD	1.61	0.61	2.12
CV	6.33	4.29	1.53	23.35	4.39

Means followed by the same letter do not significantly differ.

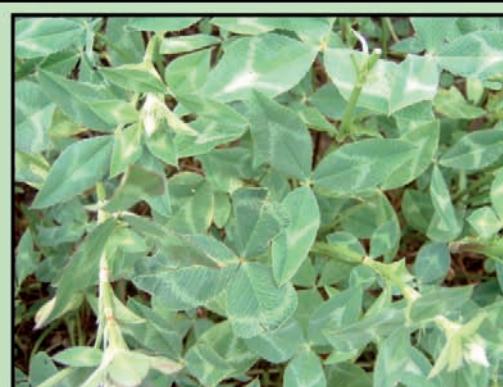
LSD = Least significant difference. P = Probability. CV = Coefficient of variation. NSD = Not significantly different.



Arrotas Arrowleaf clover on SPS Mininera
Site created a lot of interest



Note: Arrotas holding its quality compared
to Balansa in full flower on RHS.
Photo: Nov 2nd, 2007



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