

17ES20 Canola seed dressing

Authors

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Location of trial

Salmon Gums east, Ted's Road

Summary (Key messages)

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Background

In 2016 2,000ha of canola not emerge when sown in early to mid April and farmers reported that this has occurred previously. It appeared to be worse on lighter soils – sandy loam duplex's east of Salmon Gums. We believe the poor emergence may be a result of damping off. In which case fungicide seed dressings may help.

Aim

To determine if early sown canola benefits from seed dressings in low rainfall environments

Trial Details

- Property: Sam Guest, Salmon Gums east, Ted's Road 32.832059° S 121.873488° E
- Growing Season rainfall (GSR, April to October) = 218 mm
- Soil type: Circle valley sand (0.8% organic carbon) clay at 10cm
- Paddock rotation 2017 canola, 2016 barley, 2015 wheat
- Sowing date April 18

Treatments and Assumptions used in Gross Margins

14 Treatments: SeedTreat(7)*Insecticide(2)

Blocking: Rep.Insecticide/SeedTreat , 4 replicates

Seed treatments

1. ATR Bonito
2. ATR Bonito Maxim XL 4L/t
3. ATR Bonito Maxim XL 4L/t + Cruiser Opti 1L/100kg
4. ATR Bonito graded (>1.8mm)
5. ATR Bonito graded Maxim XL 4L/t
6. ATR Bonito graded Maxim XL 4L/t + Cruiser Opti 1L/100kg
7. ATR Bonito Commercial seed Maxim XL 4L/t + Cruiser Opti 1L/100kg

Insecticide at seeding treatments

1. Nil
2. Talstar 100 mL/ha + Chlorpyrifos 1 L/ha immediately after seeding

All seed adjusted for laboratory germination and seed size to target 40 plants/m².

Oil bonus +/- 1.5% per unit of oil (%) either side of 42%, with no oil ceiling. Grain worth \$550/t. Newly purchased OP seed valued at \$17/kg. Retained OP seed valued at \$2/kg. Extra grading cost of \$1/ha. Insecticide treatment cost \$6.19/ha. Non treatment costs of \$251/ha.

Results

The experiment was sown on 18th April into marginal conditions. Due to very dry conditions following seeding crop emergence was very slow and staggered. Seed sown slightly deeper or onto shallow soils which had access to moisture held by slightly heavier soil type emerged more quickly and evenly than the majority of the experiment which was a loamy sand. Graded and treated seed and/or treated commercial seed appeared to have better emergence early on than ungraded seed with or without Maxim XL. Once rains arrived in late May we had a second germination and plant numbers improved in other treatments but ungraded + untreated and ungraded plus Maxim XL treated seed still had lower plant numbers than Commercial seed or graded seed treated with Maxim XL + Cruiser Opti. However lowest plant counts were 27 plants/m², which would be considered adequate for OP TT canola in this environment.

We observed no insect damage to any canola at this site. Therefore none of our 'insecticide' treatments appeared to have any effect on crop performance.

NDVI taken June 13 and July 11 showed no treatment differences. Similarly we found no significant treatment effects on seed yield, oil, oil yield or gross margins in this experiment. The surrounding crop was also of adequate density and in contrast to some years in this region the farmer did not have any low density areas on his farm. Thus we did not really have conditions similar to those reported by the farmers in previous years and the experiment did not add to our knowledge base.

Table 1 Canola plant counts (plants/m²) as of May 15 and August 2 at Salmon Gums east in a seed dressing experiments, 17ES20. Values with same letter are not significantly different at $P=0.05$.

	Seed treatment	May 15		August 2	
1	ATR Bonito	20	a	27	a
2	ATR Bonito Maxim XL 4L/t	22	a	28	a
3	ATR Bonito Maxim XL 4L/t + Cruiser Opti 1L/100kg	26	a	35	ab
4	ATR Bonito graded	24	a	31	ab
5	ATR Bonito graded Maxim XL 4L/t	21	a	31	ab
6	ATR Bonito graded Maxim XL 4L/t + Cruiser Opti 1L/100kg	40	b	36	b
7	ATR Bonito Commercial seed Maxim XL 4L/t + Cruiser Opti 1L/100kg	30	ab	39	b
P	Insecticide	ns		ns	
	Seed treatment	0.025		0.044	
	Insecticide.Seed treatment	ns		ns	
LSD	Insecticide				
	Seed treatment	12		8	
	Insecticide.Seed treatment				

Table 2 Canola yield and oil at Salmon Gums east in a seed dressing experiments, 17ES20.

	Seed treatment	GY	Oil
1	ATR Bonito	0.97	49.0
2	ATR Bonito Maxim XL 4L/t	0.97	48.6
3	ATR Bonito Maxim XL 4L/t + Cruiser Opti 1L/100kg	1.01	48.7
4	ATR Bonito graded	1.00	49.0
5	ATR Bonito graded Maxim XL 4L/t	0.95	48.7
6	ATR Bonito graded Maxim XL 4L/t + Cruiser Opti 1L/100kg	0.98	48.8
7	ATR Bonito Commercial seed Maxim XL 4L/t + Cruiser Opti 1L/100kg	0.96	48.9
P	Insecticide	ns	ns
	Seed treatment	ns	ns
	Insecticide.Seed treatment	ns	ns

Conclusion

We found no significant treatment effects on seed yield, oil, oil yield or gross margins in this experiment. The surrounding crop was also of adequate density and in contrast to some years in this region the farmer did not have any low density areas on his farm. Thus we did not really have conditions similar to those reported by the farmers in previous years and the experiment did not add to our knowledge base

Acknowledgements

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Links

For other reports related to this trial see <https://www.agric.wa.gov.au/canola> or visit GRDC's on-farm trial web site at <https://www.farmtrials.com.au>

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