Canola Early Triazine Tolerant National Variety Trial - Yealering

Living Farm
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KEY MESSAGES

The top yielding varieties in this trial were HyTTec Trident, SF Dynatron TT, InVigor T 4510, HyTTec Trophy & Hyola Blazer (2.01 t/ha average for the top 5 varieties) with 0.23 t/ha difference between the first & the fifth variety.
Season 2020 in the region started with rainfall events in February and March which provided some subsoil moisture, below average winter rains were followed by a dryer than average spring & early finish.
Grower decision on variety choice for 2021 should not purely be based on this data but include data from across the region and over a number of years.

AIM

The aim of the National Variety Trials (NVT) is to generate independent information for growers and industry about newly released varieties of field crops to the current commercial varieties grown in the area.

BACKGROUND

The NVT program has been designed to identify the highest yielding varieties, free from the constraints of nutrition and disease. As a result, the nutrition and crop protection packages applied to NVT trials are typically higher than may be applied by the average grower.
Management is the same for all plots with no differences in timing for crop protection or nutrition
All trials have 3 replicates of each variety and all plots are sown (and subsequently harvested) on the same day. Timing of sowing is dependent upon the season, but is typically done within an average district “best practice” window and located on a typical soil type for the area.

TRIAL DETAILS

Plot size & replication	10 m x 1.85 m x 3 replicates
Soil type	Sandy Loam
Paddock rotation:	2019 Wheat
Sowing date	28/4/20 dry sown
Sowing rate	50 seed/m^2
Fertiliser	28/4/20 Macro Pro Extra 130 kg/ha, Urea 100 kg/ha 26/6/20 Sulphate of Ammonia 300 kg/ha 9/8/20 Flexi N 100 L/ha
Herbicides, insecticides & fungicides	Knockdown & pre-ems pre-seeding Broadleaf spray Grass spray 2 x Fungicide sprays 2 x Insecticide sprays Dessication spray pre-harvest Details of chemicals used and rates available at nvtonline.com.au
Growing season rainfall	166.8 mm (May-Oct)

Table 1: Rainfall (mm) Source BOM Data

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
0.8	50.4	11.4	10.6	36.6	41.8	21.4	36.8	30.2	0.0	19.8	0.0

TREATMENTS

1	ADV-Impressive		8	Hyola Blazer TT	15	NMH19T648
2	AN18Q4x1893RR2_O		9	Hyola Enforcer CT	16	NT0289
3	AN20LT001		10	HyTTec Trident	17	PHT-3860
4	ATR Bonito		11	HyTTec Trophy	18	SF Dynatron TT
5	ATR Stingray		12	InVigor T 4510	19	SF Spark TT
6	DG1927TT		13	Monola H421TT	20	SFR65-028TT
7	Hyola 350TT		14	NL1131	21	SFR65-041TT

SOIL COMPOSITION

Table *2*: Soil composition of the Yealering NVT canola trial site at 0-10 cm and 10-30 cm.

Depth	**Texture 1 sand,2 sandy loam, 3 loam, 4 loamy clay, 5 clay**	**Total Nitrogen mg/kg**	**Phosphorus mg/kg**	**P Test Type**	**Organic Carbon %**	**pH (water)**	**pH ($CaCL_2$)**	**Conductivity (EC) dS/m**	**ESP %**
0-10	2	69	43	Colwell	1.9	6.1	5.4	0.2	2.66
10-30	2	53				6.5	5.7	0.1	1.95

FIELD PLAN N

	Range 1	Range 2	Range 3	Range 4	Range 5	Range 6
Row 1	NMH19T648	NL1131	DG1927TT	HyTTec Trophy	AN20LT001	Filler 4
Row 2	SFR65-041TT	SF Spark TT	ATR Bonito	Hyola Enforcer CT	Filler 5	InVigor T 4510
Row 3	Hyola Blazer TT	Monola H421TT	Hyola 350TT	PHT-3860	HyTTec Trident	SFR65-028TT
Row 4	ATR Stingray	SF Dynatron TT	AN18Q4x1893RR2_O	NT0289	ADV-Impressive	Filler 1
Row 5	AN20LT001	ATR Bonito	Filler 1	Monola H421TT	SFR65-041TT	NT0289
Row 6	AN18Q4x1893RR2_O	SFR65-028TT	Filler 5	NMH19T648	HyTTec Trophy	SF Dynatron TT
Row 7	ADV-Impressive	Filler 4	SF Spark TT	ATR Stingray	PHT-3860	DG1927TT
Row 8	Hyola Enforcer CT	Hyola 350TT	HyTTec Trident	InVigor T 4510	NL1131	Hyola Blazer TT
Row 9	DG1927TT	Filler 5	Filler 4	Hyola Blazer TT	AN18Q4x1893RR2_O	SF Spark TT
Row 10	HyTTec Trident	NT0289	NL1131	ADV-Impressive	ATR Bonito	NMH19T648
Row 11	Filler 1	HyTTec Trophy	SFR65-041TT	SFR65-028TT	ATR Stingray	Hyola 350TT
Row 12	PHT-3860	InVigor T 4510	SF Dynatron TT	AN20LT001	Monola H421TT	Hyola Enforcer CT

RESULTS

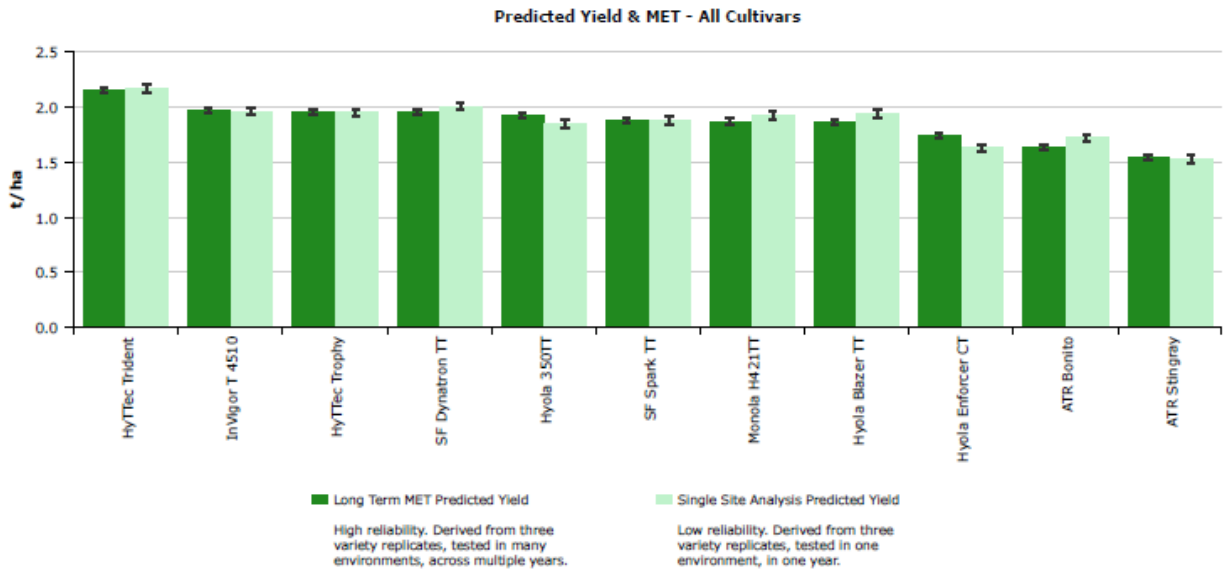

Figure 1: Yield comparison of Canola Triazine Tolerant cultivars sown in Yealering, 2020

Variety	Long term MET predicted yield (t/ha)	Single site analysis Yield (t/ha)	Oil – Seed (6% moisture)	Protein Seed (10% moisture)
HyTTec Trident	2.16	2.17	41.8	24.1
InVigor T 4510	1.98	1.96	41.7	24.6
HyTTec Trophy	1.95	1.95	40.8	25.2
SF Dynatron TT	1.95	2.01	43.8	20.8
Hyola 350TT	1.93	1.85	42.4	25.0
SF Spark TT	1.88	1.88	43.9	29.4
Monola H421TT	1.86	1.93	44.7	23.5
Hyola Blazer TT	1.86	1.94	42.0	26.0
Hyola Enforcer CT	1.75	1.63	41.3	25.0
ATR Bonito	1.64	1.72	43.3	26.5
ATR Stingray	1.55	1.52	42.9	26.5

Table 3: 2020 yield analysis and grain quality of canola TT cultivars at Yealering in descending order of yield (t/ha)

VARIETY DESCRIPTIONS

For variety descriptions and information on the best choice of variety to grow this season see the 2021 WA Crop Sowing Guide at **https://grdc.com.au/2021-western-australian-crop-sowing-guide**

COMMENTS

The NVT Yealering Triazine Tolerant Canola trial was sown dry on the 28th April. Germination was a little patchy on 6th May rainfall but filled out well during the season finishing with an overall site yield of 1.83 t/ha on below average seasonal rainfall and an early finish.

For results of all NVT trials for 2020 please visit the National Variety Trials online www.nvtonline.com.au

ACKNOWLEDGEMENTS

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