

Canola National Variety Trial Results 2013

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Key messages

The 2013 growing season was very kind to the mid-long maturity groups. Clearfield (IT) and Roundup Ready (RR) continue to demonstrate a yield advantage over the Triazine tolerant (TT) group.

Roundup Ready Triazine tolerant (RT) varieties were introduced to the NVT program for the first time in 2013, which gives growers another approach to weed control. Their performance was still second to benchmark hybrids from the TT group which indicates that this chemistry group should only be used for its herbicide agronomic traits. This is only the first year of RT evaluation, hence performance is expected to improve over the next two years.

The financial reward from the oil bonus has shown benefit with some varieties but still remains the second selection criteria as yield is still the biggest influencing factor on profit.

Disclaimer: It is advisable not to make widespread recommendations or management decisions on variety replacement or retention based only on the 2013 NVT data.

Aims

The aim of the program is to evaluate a range of current and soon to be released canola varieties established at a single sowing time and under regional, grower accepted, and standard practice. Growers are able to select varieties with new and improved quality, maturity and disease traits which in turn provide breeders with feedback on the direction they need to be taking their respective breeding operations in WA.

Method

The trials are distributed as evenly as possible across Australia in the main soil types and rainfall zones, and where possible, the trials are located with active grower groups to provide a focal point for the main grower group research sites.

The trials are sown and harvested as close to or before district grower practice to ensure variety performance is similar to that seen by growers on their farms. The varieties in the trials are either currently available to growers or will soon have commercial release to market and are benchmarked against district standards and quality check varieties.

Field assessments of emergence, vigor, and days to flowering are conducted across all of the trials along with other opportune assessments that occur in different growing seasons e.g. disease, shattering.

All varieties have a CBH delivery standard analysis conducted on oil, seed & meal protein and moisture.

Data Analysis Method

Agzone ranking is calculated by;

1. Ranking varieties based on yield at each location
2. Averaging these ranks within an Agzone
3. Ranking each variety average rank for an Agzone

2013 ranking excludes unreleased varieties and trials not released (Mingenew).

Results

Table 1 AgZone and State Average Yield Rankings for Roundup Ready (RR) Canola

Variety	AgZone Average Yield Rank					State Average	
	AGZ 2	AGZ 3	AGZ 4	AGZ 5	AGZ 6	Yield (t/ha)	Oil
CB Frontier RR	10	1		6	6	2.27	42.5
CB Status RR	16		8			1.74	44.4
GT Cobra	14	14	9	11	13	1.81	45.3
GT Viper	18		10	12		1.47	45.0
Hyola 400RR	6	3	6	8	3	2.03	47.4
Hyola 404RR	7	7	2	2	8	2.10	47.1
Hyola 500RR	1	4		3	1	2.44	46.7
Hyola 505RR	13	10		4	8	2.17	47.1
IH30 RR	5		3	1		2.00	45.4
IH50 RR	8	11		10	11	2.15	44.4
Monola 513GT	14	12	7	13	14	1.82	48.0
Nuseed GT-41	12	13	4	9	12	1.90	45.2
Nuseed GT-50	4	5			3	2.26	44.9
Pioneer 43Y23 (RR)	2	9	1	5	3	2.20	44.4
Pioneer 44Y24 (RR)	3	6	5	7	6	2.18	44.7
Pioneer 45Y22 (RR)	9	1			2	2.30	44.6
Victory V5002RR	11	8			10	2.15	46.5
VT 525 G	16	14	11			1.57	46.0
Average						2.05	45.5

Table 2: AgZone and State Average Yield Rankings for Triazine Tolerant (TT) Canola

Variety	AgZone Average Yield Rank					State Average	
	AGZ 2	AGZ 3	AGZ 4	AGZ 5	AGZ 6	Yield (t/ha)	Oil
ATR Bonito	12	11	3	5	10	1.76	46.4
ATR Gem	16	13	7	10	11	1.69	45.9
ATR Stingray	10	7	6	2	8	1.88	45.4
ATR Wahoo	15	13		11	12	1.71	45.5
CB Atomic HT	1	6		9	14	1.97	43.7
CB Henty HT	7	8		13	8	1.86	44.9
CB Jardee HT	13	16		14	15	1.63	44.4
CB Nitro HT	6	9		7		1.83	44.0
CB Telfer	18		8	12		1.31	44.9
Crusher TT	5	11	5	6	13	1.82	43.7
Hyola 450TT	9	3	4	4	4	1.90	46.4
Hyola 525RT	14	10		3	6	1.81	46.3
Hyola 555TT	4	3			2	2.29	43.9
Hyola 559TT	2	2	1	1	5	2.00	46.3
Hyola 650TT	8	1			1	2.39	45.7
Hyola 656TT	3	3			3	2.35	45.2
Monola 413TT	19	17		15	15	1.43	42.5
Pioneer Sturt TT	11		2	8		1.63	43.9
Thumper TT	17	15			7	2.00	46.0
Average						1.83	45.1

Table 3: AgZone and State Average Yield Rankings for Clearfield (IT) Canola

Variety	AgZone Average Yield Rank				State Average	
	AGZ 2	AGZ 3	AGZ 5	AGZ 6	Yield (t/ha)	Oil
Archer	1	1	5	3	2.30	45.6
Carbine	9	6	4	7	2.11	45.3
Hyola 474CL	6	6	1	3	2.15	44.5
Hyola 575CL	7	8		3	2.25	44.0
Hyola 577CL	3	3		1	2.41	45.8
Pioneer 43Y85 (CL)	10		2		1.91	45.8
Pioneer 44Y84 (CL)	7	5	6	8	1.90	45.3
Pioneer 44Y87 (CL)	4		3		2.07	44.8
Pioneer 45Y86 (CL)	4	2		6	2.27	45.7
Pioneer 45Y88 (CL)	2	3		2	2.37	44.2
Average					2.20	45.1

Conclusion

In the IT chemistry group, Archer, Hyola 577CL and Pioneer 45Y88 were top performers across most sites. There are limited results for low rainfall areas to form a conclusive result, but Hyola 474, Pioneer 43Y85 and Pioneer 44Y87 appear to have performed well.

Growers are now spoilt for choice in the Roundup Ready (RR) chemistry group as there are several good varieties to choose from in the early to mid maturity groups. New varieties IH 30 and Pioneer 44Y24 joined the likes of Hyola 404 and Pioneer 43Y23 as top performers for the low to medium rainfall environments. For the medium to high rainfall environments, Hyola 500 and Pioneer 44Y24 performed as well as proven performers like GT50, CB Frontier and Pioneer 45Y22.

In the Triazine Tolerant (TT) group there has been an increase in the number of hybrid varieties released compared to the open pollinated (OP) lines. The cost benefit of hybrids over OP has been marginal since the introduction of TT hybrid genetics. However in 2012 Hyola 559 and CB Atomic showed a significant benefit which has been supported by another solid performance in 2013. Due to this improved performance, financial gain could be realised in areas with a 1.5t/ha average or more.

ATR Bonito looks to have a good oil and blackleg package but couldn't manage to outperform ATR Stringray and Crusher in the medium to high rainfall environments. Pioneer Sturt was released and has performed well in the low to medium rainfall areas with no blackleg pressure. End point royalties (EPR) have now been reintroduced with some companies for their open-pollinated lines.

The canola breeding companies have remained relatively stable over this period with the only change being Canola Breeders (CB) now NPZ Australia.

The NVT website (www.nvtonline.com.au) is the primary source of NVT results. Search tools on the site allow comparison of variety performance within and between regions, locally and nationally. Extension of the results at the agribusiness and regional crop updates is vitally important to maximise the benefit of the program to the WA and Australian agricultural industry.

Key words: ACAS, GRDC, NVT, Yield, Quality.

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