

FIGURE 1. Location of Low-Med Rainfall and Med-High Rainfall canola NVT across Western Australian Agzones

CANOLA

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Introduction

The past two seasons have been highly productive canola years across WA starting with the early breaks brought about by cyclone Seroja in 2021 and cyclone Charlotte in 2022. These excellent seasons, combined with high canola prices, have resulted in a large expansion of canola area. For the 2023 season, it will be important to stick to robust rotations to deal with any build-up of blackleg and sclerotinia and choose varieties with good blackleg resistance, where necessary.

In this edition of the canola sowing guide, GRDC/NVT are now referring to the NVT trial locations as either 'Low-Med Rainfall' or 'Med-High Rainfall'. Previously, these trials were known as the 'Early' and 'Mid' trial series. The locations of the canola variety trials are shown in Figure 1.

NEW FOR 2023

AGT has entered the canola market, releasing three OP varieties for 2023: Bandit TT and Renegade TT and a conventional OP variety, Outlaw. Other new TT OP varieties include DG Torrens TT and ATR Bluefin. These join the 2021 TT OP releases of DG Bidgee TT and DG Murray TT to bring the total of recently released TT OP varieties to six.

Most of these new OP varieties are higher yielding than ATR Bonito (Bandit TT 12% higher in Low-Med Rainfall NVT and DG Torrens TT and DG Bidgee TT 7% higher in Med-High Rainfall NVT). Some OP varieties also have higher blackleg resistance than ATR Bonito (e.g., DG Bidgee TT has a resistant (R) blackleg rating). However even the highest yielding OP varieties are still significantly lower yielding than

the top five hybrids (by about 12%) in both Low-Med Rainfall and Med-High Rainfall NVT. Good OP agronomy may reduce this yield difference, but the yield gap will still often be significant. With 18% of the 2022 canola area sown to ATR Bonito, the new OP varieties will offer more competitive alternatives in WA. The cheaper OP systems are best suited to high risk or low yield situations and comparison strips with a hybrid variety are recommended.

Ensure good OP agronomy when using retained OP seed. Sieve to get the largest seed size possible (ideally over a 2mm sieve) to provide some insurance for establishment in tough conditions. It is also important to keep seed rates high to achieve the highest yields. For example, OP seed rates should be over 4.5kg/ha when seed has been graded over a 2mm sieve to meet the optimum target density of 45 plants/m² in the medium rainfall zone (with expected 50% field establishment for reasonable seeding conditions). For more details refer to 'Canola seeding rate information' at <https://www.agric.wa.gov.au/canola/canola-seeding-rate-information>.

Hybrid varieties are driving ever increasing canola yields, and the new GT varieties Nuseed Eagle TF and Nuseed Hunter TF continue this trend. Some varieties with dual herbicide tolerance are achieving yields similar to some single tolerance hybrids. For example, Pioneer PY520 TC (TT+CL) yields as well as some TT hybrids, and Hyola Regiment XC (GT+CL) yields as well or better than some TruFlex and Roundup Ready hybrids.

TT OP varieties

- **DG Torrens TT** is an early-mid maturity variety from Nutrien Ag Solutions. It was the highest yielding OP variety in Med-High Rainfall NVT, 7.5% higher than ATR Bonito with a higher blackleg resistance rating (RMR) and a similar high oil content.
- **Bandit TT** is an early maturity variety released by AGT. It was the highest yielding OP in Low-Med Rainfall NVT, more than 10% higher yielding than ATR Bonito. Bandit TT is suited to low pressure blackleg situations.
- **Renegade TT** is an early-mid maturity variety released by AGT. It out-yielded ATR Bonito by 7% in Low-Med Rainfall NVT and by 4% in Med-High Rainfall NVT. It has a higher blackleg rating (MRMS bare seed) than ATR Bonito.
- **ATR Bluefin** is an early maturity variety released by Nuseed in late 2021. Its yield is behind ATR Bonito, but it has a blackleg resistance rating of RMR, and an oil content 1% above the TT average (44.6%).

TT hybrids

- **HyTTec Velocity** is an early maturity release from Nuseed. It was the third highest yielding variety in the Low-Med Rainfall NVT.
- **InVigor T 4511** has similar early-mid maturity and comparable yields to InVigor T4510. However, InVigor T4511 has a higher blackleg resistance rating (R vs MR), and a higher oil content than InVigor T 4510.
- **RGT Baseline TT** is a mid-late maturity variety from SeedForce.

TT+CL

- **Pioneer PY520 TC** is a mid-maturity variety and was the highest yielding TT+CL variety of the Low-Med Rainfall NVT, with similar yields to many TT hybrids.

GT

- **Nuseed Eagle TF** is a mid-maturity TruFlex variety. It was the highest yielding variety in the Med-High Rainfall NVT. It has an excellent blackleg resistance rating (R) and an oil yield 1.8% above the average for GT varieties (45.4%).
- **Nuseed Hunter TF** is an early-mid maturity TruFlex variety and achieved the highest yields of the Low-Med Rainfall NVT.
- **DG Hotham TF** is a mid-maturity TruFlex variety from Nutrien Ag Solutions with excellent blackleg resistance rating (R).

GT+CL

- **Hyola Regiment XC** is a mid-maturity TruFlex + Clearfield Dual Tolerant variety. It was the highest yielding dual GT+CL variety in both Low-Med and Med-High Rainfall NVT.

CL

- **Hyola Solstice CL** is a mid-maturity variety. It was 7% higher yielding than Hyola Equinox CL in the Med-High Rainfall NVT.
- **RGT Clavier CL** is a new grain and graze variety from Seed Force, with longer maturity than RGT Nizza CL.

Conventional

- **Outlaw** is an early maturity conventional OP variety released by AGT.

WITHDRAWN VARIETIES

- **TT:** SF Ignite, InVigor T3510
- **TT+GT:** BASF 3000TR
- **GT:** InVigor R 3520, InVigor R 5520P, Nuseed GT-53, Nuseed Condor TF

Current canola varieties available for 2023

Canola varieties are available with TT, GT and CL single herbicide tolerance, and dual or 'stacked' combinations of TT+LL, TT+CL, GT+CL (Table 1). With the withdrawal of BASF 3000TR, the dual herbicide tolerance of TT+GT is no longer available.

Very little (0.05%) conventional canola is grown in WA due to a lack of chemical options for radish control. Ryegrass control is difficult due to its widespread resistance to Group A grass herbicides in the WA wheatbelt. Despite this, AGT has released a new OP conventional variety, Outlaw. Conventional varieties are no longer tested in WA NVT trials, but NVT results are available for New South Wales, South Australia and Victoria online at nvtonline.com.au.

The GT herbicide tolerance group includes TruFlex and Roundup Ready types (Table 1). The TruFlex®

trait has an extended spray window until the start of flowering and allows greater flexibility of herbicide applications compared with Roundup Ready® types. Always check herbicide suitability by referring to the herbicide label. All GT canola varieties were developed using single gene genetic modification (GM), licensed from Bayer. Some GT varieties have the PodGuard® trait (Table 1). PodGuard® reduces seed shatter at maturity, which can reduce seed loss from shattering during direct heading and reduces seed loss risk from later harvesting.

Some longer maturity 'winter types' with Clearfield herbicide tolerance are available for dual purpose use (Graze and Grain) (Table 1). 'Graze n Grain' varieties are not included in the NVT trials, so are not reported in this guide. Information on the management and yields of winter canola types are available from private company websites.



Photo: Megan Hele

TABLE 1. Herbicide tolerance, harvest maturity, oil content, blackleg ratings and commercial information of current canola varieties

Herbicide tolerance	Variety	Harvest maturity	Oil content (diff. to mean)	Blackleg resistance rating (bare seed)	Blackleg group	PodGuard®	EPR \$/t delivered	Release year	Seed access
TT (OP)	AFP Cutubury	4	-0.9	MRMS	AB	-	4	2020	Agronomy for Profit
TT (OP)	ATR Bluefin	3	1.0	RMR	AB	-	5	2021	Nuseed
TT (OP)	ATR Bonito	4	0.7	MS	A	-	5	2013	Nuseed
TT (OP)	ATR Mako	4	-1.8	MRMS	A	-	5	2015	Nuseed
TT (OP)	ATR Stingray	3	0.3	MRMS	C	-	-	2011	Nuseed
TT (OP)	ATR Wahoo	6	0.3	MRMS	A	-	5	2013	Nuseed
TT (OP)	Bandit TT	3	-1.0	MS	A	-	10	2022	AGT
TT (OP)	DG Bidgee TT	4.5	0.1	R	H	-	5	2021	Nutrien Ag solutions
TT (OP)	DG Murray TT	6	0.8	R	H	-	5	2021	Nutrien Ag solutions
TT (OP)	DG Torrens TT	4.5	0.8	RMR	H	-	5	2022	Nutrien Ag solutions
TT	Hyola® Blazer TT	4.5	0.0	R	ADF	-	-	2020	Pacific Seeds
TT	HyTTec® Trident	3	0.2	R	AD	-	5	2019	Nuseed
TT	HyTTec® Trifecta	5	0.2	R	ABD	-	5	2020	Nuseed
TT	HyTTec® Trophy	4	-0.2	R	AD	-	5	2017	Nuseed
TT	HyTTec® Velocity	3	-0.9	MRMS	AB	-	5	2022	Nuseed
TT	InVigor® T 4510	4	-0.8	MR	BF	-	-	2016	BASF
TT	InVigor® T 4511	4	0.5	R	?	-	-	2022	BASF
TT	InVigor® T 6010	6	-0.1	MRMS	BC	-	-	2020	BASF
TT (OP)	Renegade TT	4	-0.9	MRMS	A	-	10	2022	AGT
TT	RGT Baseline TT	6	1.1	MRMS	B	-	10	2022	Seed Force
TT	RGT Capacity TT	4	-0.5	MRMS	B	-	10	2021	Seed Force
TT	SF Dynatron TT	5	0.7	MRMS	BC	-	10	2020	Seed Force
TT	SF Spark TT	3	0.7	MR	ABDS	-	10	2018	Seed Force
TT (OP)	Yetna	4	-	-	-	-	4	2015	Agronomy for Profit
TT+CL	Hyola® Enforcer CT	5	-0.2	R	ADF	-	-	2020	Pacific Seeds
TT+CL	Pioneer PY520 TC	5	-	MR	BC	-	-	2022	Pioneer
TT+LL	InVigor® LT 4530P	4.5	-0.9	RMR	BF	P	-	2021	BASF

Varieties listed in alphabetical order within herbicide tolerance groups; ■ new varieties are highlighted in yellow.

OP = Open pollinated

Herbicide tolerance: TT = Triazine Tolerant, CL = Clearfield® (Imidazolinone tolerant), LL = LibertyLink (glufosinate tolerant), GT = Glyphosate Tolerant (RR = Roundup Ready type, TF = TruFlex® type), CC = Conventional canola

Harvest maturity key: 3 = early, 4 = early-mid and mid-early, 5 = mid, 6 = mid-late (provided by seed companies).

Oil content averages (%): TT = 44.6, GT = 45.4 and CL = 44.7 (data from 2017–2021 NVT).

Blackleg information from GRDC Blackleg Management Guide 2022 Spring Fact Sheet, see further information at grdc.com.au/GRDC-FS-BlacklegManagementGuide

Blackleg resistance rating key: R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

[Table 2. continued following page...]

TABLE 1. Herbicide tolerance, harvest maturity, oil content, blackleg ratings and commercial information of current canola varieties (cont'd)

Herbicide tolerance	Variety	Harvest maturity	Oil content (diff. to mean)	Blackleg resistance rating (bare seed)	Blackleg group	PodGuard®	EPR \$/t delivered	Release year	Seed access
GT (TF)	DG Bindo TF	4.5	-0.1	MRMS	AB	-	-	2021	Nutrien Ag solutions
GT (TF)	DG Lofty TF	3	0.1	R	ABH	-	-	2021	Nutrien Ag solutions
GT (TF)	DG Hotham TF	5	0.0	R	ABH	-	-	2022	Nutrien Ag solutions
GT (TF)	Hyola® 410XX	4.5	0.8	MR	ABD	-	-	2018	Pacific Seeds
GT (TF)	InVigor® R 4022P	4	-0.2	MR	ABC	P	-	2019	BASF
GT (TF)	InVigor® R 4520P	4.5	-1.1	MRMS	B	P	-	2020	BASF
GT (TF)	Nuseed Eagle TF	5	1.8	R	ABD	-	-	2022	Nuseed
GT (TF)	Nuseed Emu TF	3	0.0	MR	AB	-	-	2021	Nuseed
GT (TF)	Nuseed Hunter TF	4	0.0	RMR	AB	-	-	2022	Nuseed
GT (TF)	Nuseed Raptor TF	4	0.0	R	AD	-	-	2019	Nuseed
GT (RR)	Pioneer® 44Y27 RR	4	-0.4	RMR	B	-	-	2017	Pioneer
GT (RR)	Pioneer® 44Y30 RR	4	0.0	MR	AB	-	-	2021	Pioneer
GT (RR)	Pioneer® 45Y28 RR	5	1.0	RMR	BC	-	-	2018	Pioneer
GT (RR)	Pioneer 45Y28 RR	5	1.0	MR	BC	-	-	2018	Pioneer
GT(TF)+CL	Hyola® Battalion XC	3.5	-1.3	R	ADF	-	-	2021	Pacific Seeds
GT(TF)+CL	Hyola® Garrison XC	4	-0.2	R	ADF	-	-	2020	Pacific Seeds
GT(TF)+CL	Hyola® Regiment XC	5	0.3	R	ADFH	-	-	2022	Pacific Seeds
CL	Hyola® Equinox CL	5	0.4	R	ADF	-	-	2021	Pacific Seeds
CL	Hyola® Solstice CL	5	0.5	RMR	AFDH	-	-	2022	Pacific Seeds
CL	Pioneer® 43Y92 CL	3	-0.6	RMR	B	-	-	2017	Pioneer
CL	Pioneer® 44Y94 CL	4	0.4	RMR	BC	-	-	2020	Pioneer
CL	Pioneer® 45Y93 CL	5	0.5	R	BC	-	-	2018	Pioneer
CL	Pioneer® 45Y95 CL	5	0.3	RMR	C	-	-	2021	Pioneer
CL Graze n Grain	Hyola® 970CL	9	-	R	H	-	-	2018	Pacific Seeds
CL Graze n Grain	Hyola® Feast CL	8	-	R	H	-	-	2020	Pacific Seeds
CL Graze n Grain	Phoenix CL	8.5	-	R	B	-	-	2018	AGF Seeds
CL Graze n Grain	RGT Clavier CL	9	-	R	?	-	12	2022	Seed Force
CL Graze n Grain	RGT Nizza CL	8	-	R	B	-	12	2021	Seed Force
CC(OP)	Outlaw	3	-	-	-	-	10	2022	AGT

Varieties listed in alphabetical order within herbicide tolerance groups; ■ new varieties are highlighted in yellow.

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[Table 2. continued following page...]

National Variety Trials (NVT) results 2017–2021

This guide presents predicted yields from the long-term Multi-Environment Trial (MET) analysis of all WA National Variety Trials (NVT) from 2017–2021. There were 211 canola trials in WA during this period: 97 TT trials, 80 GT trials and 34 CL trials.

Locations of canola variety trials are shown in Figure 1. The two trial series previously identified as ‘Early’ and ‘Mid’ are now known as ‘Low-Med Rainfall’ and ‘Med-High Rainfall’ NVT respectively.

All NVT MET results are available online, at nvtonline.com.au or via the NVT long-term yield app.

LOW-MED RAINFALL NVT

HyTTec Trident was the highest yielding TT variety in the Low-Med Rainfall NVT (Table 2). The next highest yielding varieties were Hyola Blazer TT and HyTTec Velocity. HyTTec Trident and Hyola Blazer have a resistant (R) blackleg rating.

InVigor T4511 achieved similar yields to InVigor T4510 but has a better blackleg resistance rating (R) and higher oil content.

New OP variety Bandit TT outyielded ATR Bonito by 12%, while Renegade TT was 7% higher than ATR Bonito. Bandit TT should be grown in areas of low blackleg pressure, as its blackleg resistance rating is the same as ATR Bonito (MS, bare seed). This might limit its distribution in 2023, after large canola areas in the favourable 2021 and 2022 seasons. Renegade TT has a higher blackleg resistance rating (MRMS), so should be the favoured OP variety in areas of higher blackleg pressure.

Nuseed Hunter TF was the highest yielding variety in the GT NVT MET analysis. It was 4% higher yielding than Nuseed Emu TF and has a higher blackleg rating (RMR).

MED-HIGH RAINFALL NVT

HyTTec Trifecta was the highest yielding TT variety in each year of the Med-High Rainfall NVT MET analysis. HyTTec Trifecta is mid maturity. Varieties with competitive yields were the earlier maturing varieties, Hyola Blazer TT, HyTTec Trident and HyTTec Trophy. All these varieties have a resistant (R) blackleg resistance rating. SF Dynatron TT yielded slightly more than InVigor T4511. While InVigor T4511 had a comparable yield to InVigor T4510, it has a better blackleg resistance rating (R) and a higher oil content.

DG Torrens TT and DG Bidgee TT were the highest yielding OP TT varieties in the Med-High Rainfall NVT, at 7.5% higher than ATR Bonito. Both varieties have better blackleg resistance rating than ATR Bonito, with R for DG Bidgee TT and RMR for DG Torrens. Other OP varieties, Renegade TT and DG Murray TT were also higher yielding than ATR Bonito. DG Murray TT has a mid-late maturity with a blackleg rating of R, making it a suitable choice for long season environments with some blackleg pressure.

The new mid maturity variety, Nuseed Eagle TF, achieved the highest yield in the GT Med-High NVT, and was 2% ahead of Nuseed Condor TF (withdrawn). Nuseed Eagle TF has a R rating for blackleg resistance and an oil content 1.8% higher than the GT average. InVigor R 4520P and Nuseed Hunter TF were the second and third highest yielding varieties followed by Hyola Regiment XC (GT+CL variety), Pioneer 44Y30RR and Pioneer 45Y28RR. Of this group, Hyola Regiment XC has the highest blackleg resistance rating of R, followed by Nuseed Hunter TF and Pioneer 45Y28 RR with RMR.

TABLE 2. Yield of canola yields in the LOW-MED RAINFALL NVT, expressed as a percentage of site mean yield for each trial yield (2017–2021), and the weighted average over the five-year period

Low-Med Rainfall — TT, TT+CL, TT+LL									
Herbicide tolerance	Variety	Year		2017	2018	2019	2020	2021	2017–2021
		Site mean yield (t/ha)		1.57	1.51	1.02	1.80	2.31	
		Maturity	No. trials	(8)	(7)	(8)	(9)	(12)	(44)
TT	HyTTec Trident	3	(37)	127	121	117	116	119	120
TT	Hyola Blazer TT	4.5	(13)	136	125	115	100	115	117
TT	HyTTec Velocity	3	(5)	112	118	118	116	117	116
TT	InVigor T 4511	4	(12)	112	117	114	107	112	112
TT	HyTTec Trophy	4	(26)	113	110	111	111	111	111
TT	InVigor T 4510	4	(44)	109	112	113	111	111	111
TT	SF Dynatron TT	5	(20)	112	111	112	107	110	110
TT	RGT Capacity TT	4	(15)	95	99	106	111	105	104
TT(OP)	Bandit TT	3	(12)	113	108	102	95	103	104
TT	SF Spark TT	3	(30)	98	100	102	105	102	102
TT(OP)	Renegade TT	4	(10)	100	96	97	102	99	99
TT(OP)	ATR Bonito	4	(39)	95	94	91	89	91	92
TT(OP)	AFP Cutubury	4	(12)	97	92	91	88	91	92
TT(OP)	ATR Stingray	3	(17)	88	86	86	91	88	88
TT(OP)	DG Murray TT	6	(5)	85	85	87	89	87	87
TT(OP)	ATR Bluefin	3	(11)	81	85	87	92	87	87
TT+CL	Hyola Enforcer CT	5	(16)	119	109	102	97	104	106
TT+LL	InVigor LT 4530P	4.5	(20)	110	113	109	99	107	107

Low-Med Rainfall — GT, GT+CL									
Herbicide tolerance	Variety	Year		2017	2018	2019	2020	2021	2017–2021
		Site mean yield (t/ha)		1.85	1.85	1.09	1.83	2.64	
		Maturity	No. trials	(6)	(5)	(7)	(8)	(11)	(37)
GT(TF)	Nuseed Hunter TF	4	(7)	120	117	112	111	113	114
GT(TF)	Nuseed Emu TF	3	(17)	111	112	107	114	108	110
GT(TF)	Nuseed Raptor TF	4	(17)	134	119	98	91	106	108
GT(RR)	Pioneer 44Y27 RR	4	(36)	112	110	104	103	107	107
GT(RR)	Pioneer 44Y30 RR	4	(11)	105	106	107	107	107	107
GT(RR)	Pioneer 45Y28 RR	5	(6)	111	107	102	-	106	106
GT(TF)	InVigor R 4520P	4.5	(26)	116	110	98	90	106	103
GT(TF)	InVigor R 4022P	4	(26)	107	105	100	96	104	102
GT(TF)	DG Lofty TF	3	(11)	99	100	97	99	99	99
GT(TF)	DG Bindo TF	4.5	(5)	100	98	94	93	96	96
GT(TF)	Hyola 410XX	4.5	(26)	88	90	98	99	93	94
GT+CL(TF)	Hyola Regiment XC	5	(11)	104	104	107	107	105	106
GT+CL(TF)	Hyola Battalion XC	3.5	(19)	106	103	98	99	99	100
GT+CL(TF)	Hyola Garrison XC	4	(15)	103	99	97	93	97	97

Varieties listed in decreasing yield, within herbicide tolerance types; new varieties are highlighted in yellow.

 Shaded cells indicate that the variety was not present in trials; all shaded values are predicted yields from MET analysis.

OP = Open pollinated

Herbicide tolerance: TT = Triazine Tolerant, CL = Clearfield® (Imidazolinone tolerant), LL = LibertyLink (glufosinate tolerant), GT = Glyphosate Tolerant (RR = Roundup Ready type, TF = TruFlex® type)

Harvest maturity key: 3 = early, 4 = early-mid, 5 = mid, 6 = mid-late (information provided by seed companies)

Yield data source: NVT Online, nvtonline.com.au

TABLE 3. Yield of canola yields in the WA MED-HIGH RAINFALL NVT, expressed as a percentage of site mean yield for each trial yield (2017–2021), and the weighted average over the five-year period

Med-High Rainfall — TT, TT+CL, TT+LL									
Herbicide tolerance	Variety	Year		2017	2018	2019	2020	2021	2017–2021
		Site mean yield (t/ha)		1.99	2.19	1.98	2.76	2.93	
		Maturity	No. trials	(12)	(10)	(12)	(8)	(11)	
TT	HyTTec Trifecta	5	(31)	114	116	113	114	119	115
TT	Hyola Blazer TT	4.5	(20)	113	112	112	113	118	114
TT	HyTTec Trident	3	(25)	109	118	108	111	116	112
TT	HyTTec Trophy	4	(47)	110	112	109	111	114	111
TT	SF Dynatron TT	5	(23)	109	104	110	111	113	109
TT	InVigor T 4511	4	(11)	105	111	105	107	109	107
TT	InVigor T 4510	4	(53)	106	107	107	108	108	107
TT	RGT Capacity TT	4	(22)	106	104	106	106	107	106
TT	InVigor T 6010	6	(23)	107	102	106	104	106	105
TT	RGT Baseline TT	6	(7)	104	102	103	103	108	104
TT(OP)	DG Torrens TT	4.5	(15)	101	98	100	98	100	100
TT(OP)	DG Bidgee TT	4.5	(11)	100	99	98	97	102	99
TT	SF Spark TT	3	(14)	99	100	99	99	99	99
TT(OP)	Renegade TT	4	(11)	97	96	98	98	94	97
TT(OP)	DG Murray TT	4.5	(16)	97	97	94	92	96	95
TT(OP)	Bandit TT	3	(11)	92	93	93	94	90	92
TT(OP)	ATR Bonito	4	(40)	93	89	94	94	90	92
TT(OP)	ATR Wahoo	6	(10)	94	87	94	91	91	92
TT(OP)	ATR Mako	4	(17)	90	89	92	92	89	90
TT(OP)	ATR Stingray	3	(10)	89	85	90	88	83	87
TT(OP)	AFP Cutubury	4	(8)	87	85	89	87	82	86
TT(OP)	ATR Bluefin	3	(7)	85	83	87	86	79	84
TT+CL	Pioneer PT520 TC	5	(5)	106	107	106	108	113	108
TT+CL	Hyola Enforcer CT	5	(28)	103	108	102	102	103	104
TT+LL	InVigor LT 4530P	4.5	(19)	103	102	104	104	100	103

Varieties listed in decreasing yield, within herbicide tolerance types; ■ new varieties are highlighted in yellow.

■ Shaded cells indicate that the variety was not present in trials; all shaded values are predicted yields from MET analysis.

OP = Open pollinated

Herbicide tolerance: TT = Triazine Tolerant, CL = Clearfield® (imidazolinone tolerant), LL = LibertyLink (glufosinate tolerant), GT = Glyphosate Tolerant (RR = Roundup Ready type, TF = TruFlex® type)

Harvest maturity key: 3 = early, 4 = early-mid, 5 = mid, 6 = mid-late (information provided by seed companies)

Yield data source: NVT Online, nvtonline.com.au

[Table 3. continued following page...]

TABLE 3. Yield of canola yields in the WA MED-HIGH RAINFALL NVT, expressed as a percentage of site mean yield for each trial yield (2017–2021), and the weighted average over the five-year period (cont'd)

Med-High Rainfall — GT, GT+CL									
Herbicide tolerance	Variety	Year		2017	2018	2019	2020	2021	2017–2021
		Site mean yield (t/ha)		2.02	2.20	2.13	2.62	2.88	
		Maturity	No. trials	(8)	(6)	(10)	(8)	(11)	
GT(TF)	Nuseed Eagle TF	5	(5)	120	114	118	117	122	119
GT(TF)	InVigor R 4520P	4.5	(29)	120	112	117	116	118	117
GT(TF)	Nuseed Hunter TF	4	(4)	112	119	111	114	118	115
GT(RR)	Pioneer 44Y30 RR	4	(17)	116	110	115	114	116	115
GT(RR)	Pioneer 45Y28 RR	5	(25)	113	113	112	113	119	114
GT(TF)	Nuseed Raptor TF	4	(30)	111	116	109	112	117	113
GT(RR)	Pioneer 44Y27 RR	4	(60)	109	113	109	112	114	111
GT(TF)	InVigor R 4022P	4	(29)	113	107	111	111	110	111
GT(TF)	DG Bindo TF	4.5	(11)	105	104	105	105	108	106
GT(TF)	DG Hotham TF	5	(10)	101	102	102	102	108	103
GT(TF)	Hyola 410XX	4.5	(23)	102	105	101	102	102	102
GT(TF)	DG Lofty TF	3	(4)	97	101	99	101	102	100
GT+CL(TF)	Hyola Regiment XC	5	(11)	114	117	112	112	118	115
GT+CL(TF)	Hyola Garrison XC	4	(29)	105	109	103	104	106	105
GT+CL(TF)	Hyola Battalion XC	3.5	(11)	104	107	102	102	101	103
Med-High Rainfall — CL									
Herbicide tolerance	Variety	Year		2017	2018	2019	2020	2021	2017–2021
		Site mean yield (t/ha)		2.04	2.34	2.44	3.27	3.51	
		Maturity	No. trials	(7)	(6)	(5)	(3)	(3)	
CL	Pioneer 45Y95 CL	5	(8)	117	113	116	115	120	116
CL	Pioneer 44Y94 CL	4	(10)	113	113	112	114	118	114
CL	Pioneer 45Y93 CL	5	(18)	112	107	112	109	117	111
CL	Hyola Solstice CL	5	(3)	112	115	103	108	110	110
CL	Hyola Equinox CL	5	(6)	104	110	96	103	99	103
CL	Pioneer 43Y92 CL	3	(6)	103	105	100	105	99	103

Varieties listed in decreasing yield, within herbicide tolerance types; ■ new varieties are highlighted in yellow.

■ Shaded cells indicate that the variety was not present in trials; all shaded values are predicted yields from MET analysis.

OP = Open pollinated

Herbicide tolerance: TT = Triazine Tolerant, CL = Clearfield® (Imidazolinone tolerant), LL = LibertyLink (glufosinate tolerant), GT = Glyphosate Tolerant (RR = Roundup Ready type, TF = TruFlex® type)

Harvest maturity key: 3 = early, 4 = early-mid, 5 = mid, 6 = mid-late (information provided by seed companies)

Yield data source: NVT Online, nvtonline.com.au

WA canola varieties grown in 2017–2022

The proportion of GT canola increased to 45% of the total canola area in the 2022 growing season (Table 4) while the proportion of TT canola decreased to 47%. The proportion of Clearfield canola remained steady at 3%. Varieties with dual tolerance increased to 6% of the total crop; 3.5% for GT+CL varieties, 1.3% for TT+CL varieties and 0.5% each for TT+GT and TT+LL.

The proportion sown to hybrid TT canola has increased markedly since 2018. In the 2022 season, 50% of the TT area was sown with hybrid varieties, and 50% to OP varieties (Figure 2).

ATR Bonito (OP) maintained its place as the most common variety in 2022, being sown to more than 18% of the WA canola crop (although a large reduction from the 53% of area sown four years ago) (Table 5). The TT hybrid varieties sown over the largest area were HyTTec Trident, HyTTec Trophy and HyTTec Trifecta (Table 5). The GT varieties sown over the largest area were Pioneer 44Y27, InVigor R4022P and Pioneer 44Y30RR. Of the 29 most popular canola varieties in 2022, only seven were grown five years ago (2017) while eleven were grown in 2018. This illustrates the very rapid turnover in canola varieties across WA.

TABLE 4. Proportion (% area) of canola herbicide systems in WA 2017–2022

Herbicide tolerance	2017	2018	2019	2020	2021	2022
TT	80	72	63	62	56	47
GT	18	26	34	32	37	45
CL	1	1	2	3	3	3
Dual tolerance	1	1	1	3	4	6

Source: CBH Group

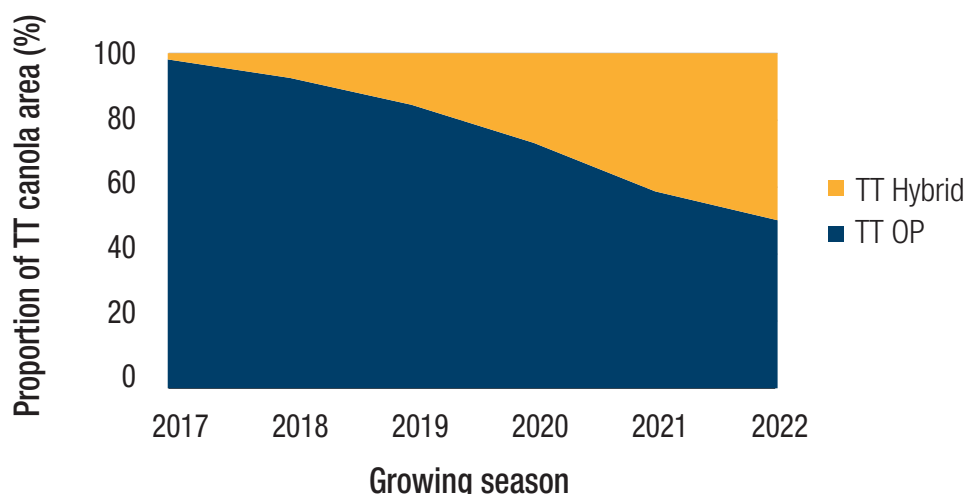


FIGURE 2. Proportion (% area) of OP and Hybrid TT canola in WA 2017–2022

Source: CBH Group

TABLE 5. Proportion (% area) of canola varieties sown in WA 2017–2022

Variety	Tolerance	2017	2018	2019	2020	2021	2022*
ATR Bonito	TT(OP)	54.5	53.0	39.1	34.6	26.4	18.4
Pioneer 44Y27 RR	GT	-	1.7	6.8	5.5	7.1	10.2
HyTTec Trident	TT	-	-	-	5.2	11.3	8.0
InVigor R 4022P	GT	-	-	-	0.8	2.7	7.3
Pioneer 44Y30 RR	GT	-	-	-	-	-	6.9
HyTTec Trophy	TT	-	0.0	2.3	5.9	5.6	6.9
HyTTec Trifecta	TT	-	-	-	0.3	1.2	4.0
Nuseed Emu TF	GT	-	-	-	-	-	3.8
Hyola 410XX	GT	-	-	1.0	2.5	2.6	3.5
Pioneer 45Y28 RR	GT	-	-	-	1.2	2.5	2.8
Nuseed Raptor TF	GT	-	-	-	1.0	3.1	2.5
Hyola Garrison XC	GT+CL	-	-	-	-	0.0	2.4
ATR Stingray	TT(OP)	12.7	6.7	6.1	5.5	3.5	1.9
Pioneer 44Y94 CL	CL	-	-	-	-	0.9	1.7
InVigor T 4510	TT	0.1	1.9	3.5	3.1	2.5	1.5
InVigor R 3520	GT	-	0.0	0.5	0.5	1.8	1.4
Hyola Enforcer CT	TT+CL	-	-	-	-	0.7	1.1
AFP Cutubury	TT(OP)	-	0.0	0.2	0.5	0.7	1.1
InVigor R 5520P	GT	0.1	0.6	1.0	0.9	0.8	1.0
Hyola Battalion XC	GT+CL	-	-	-	-	-	0.9
Pioneer 43Y23 RR	GT	5.4	7.9	7.4	4.8	3.2	0.8
Nuseed GT-53	GT	1.4	3.7	3.6	3.5	4.4	0.8
Hyola Blazer TT	TT	-	-	-	-	0.0	0.8
InVigor R 4520P	GT	-	-	-	-	-	0.8
Pioneer 43Y29 RR	GT	-	-	3.1	3.4	3.6	0.7
DG Bidgee TT	TT(OP)	-	-	-	-	-	0.6
Hyola 404RR	GT	4.8	8.4	5.4	3.6	2.8	0.5
InVigor T 6010	TT	-	-	-	-	0.3	0.5
Nuseed Condor TF	GT	-	-	-	-	-	0.5

Source: CBH Group

*Varieties sown over more than 0.5% of the total area are shown for the 2022 growing season.

Records of 0.0 indicate percentages below 0.05 (which are rounded to 0.0)

Canola seed commercialisation companies

Agronomy for Profit

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AGT

agtbreeding.com.au

Alana Hartley +61 (0)417 919 299 (North)
Floyd Sullivan +61 (0)499 580 260 (South)

BASF

myseed.com.au/canola

Michael Allingame +61 (0)437 454 283

Nuseed

nuseed.com.au

Andrew Suverijn +61 (0)409 484 702
Andrew Royce +61 (0)427 466 916
Michael Hickey +61 (0)438 913 106

Nutrien Ag solutions/Dynagro Seed (formerly commercialised by Seednet)

seednet.com.au/products/dyna-gro-canola

David Clegg +61 (0)408 630 641

Pacific Seeds

pacificseeds.com.au

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Andrew Heinrich +61 (0)473 520 818
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ABBREVIATIONS

CC	Conventional Canola
CL	Clearfield® (Imidazolinone tolerant)
GT	Glyphosate Tolerance
EPR	End Point Royalties
LL	LibertyLink
MET	Multi-Environment Trials
NVT	National Variety Trials
OP	Open Pollinated
RR	Roundup Ready®
TF	TruFlex®
TT	Triazine Tolerant



Photo: Megan Hele

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