

HYOLA 540XC



CANOLA

World's first TruFlex® + Clearfield® dual tolerant canola hybrid from Pacific Seeds

HYBRID ATTRIBUTES

Excellent crop protection for group B imi soil residue management

Dual herbicide tolerance perfect for IWM cropping rotations

Risk mitigation tool after low rainfall summers - dry profiles

Reliable 5 series hybrid with competitive yield potential

Specifically adapted to the 1.5t/ha to 3.5t/ha growing regions

High blackleg rating of R (P) provisional company rating

Good lodging resistance, even flowering and manageable height for direct harvesting

No vernalisation hold, with a moderate thermal time requirement: i.e. Early sowing leads to earlier flowering maturity

Yield adaptability	1.5 - 3.5t/ha
Blackleg rating	R (P)
Blackleg groups	BF (P)
Oil potential	Moderate - high
Herbicide tolerance	XX + CL
Maturity	Mid-Early
Plant vigour	8
Plant height	Medium - High
#Lodging resistance	9
*Shatter tolerance	8
^Hectolitre weight	8
Growing regions	NSW, Vic, WA, SA+
Irrigation/dryland	Both

+ means only if approved for commercial release in 2020 by SA government regulations.

(P) Indicates provisional rating and blackleg groups from Pacific Seeds blackleg nurseries and R gene screening

Indicates observed visual rating from Pacific Seeds R&D internal replicated research trial evaluations

*Indicates observed visual rating from Pacific Seeds R&D internal replicated research trial evaluations

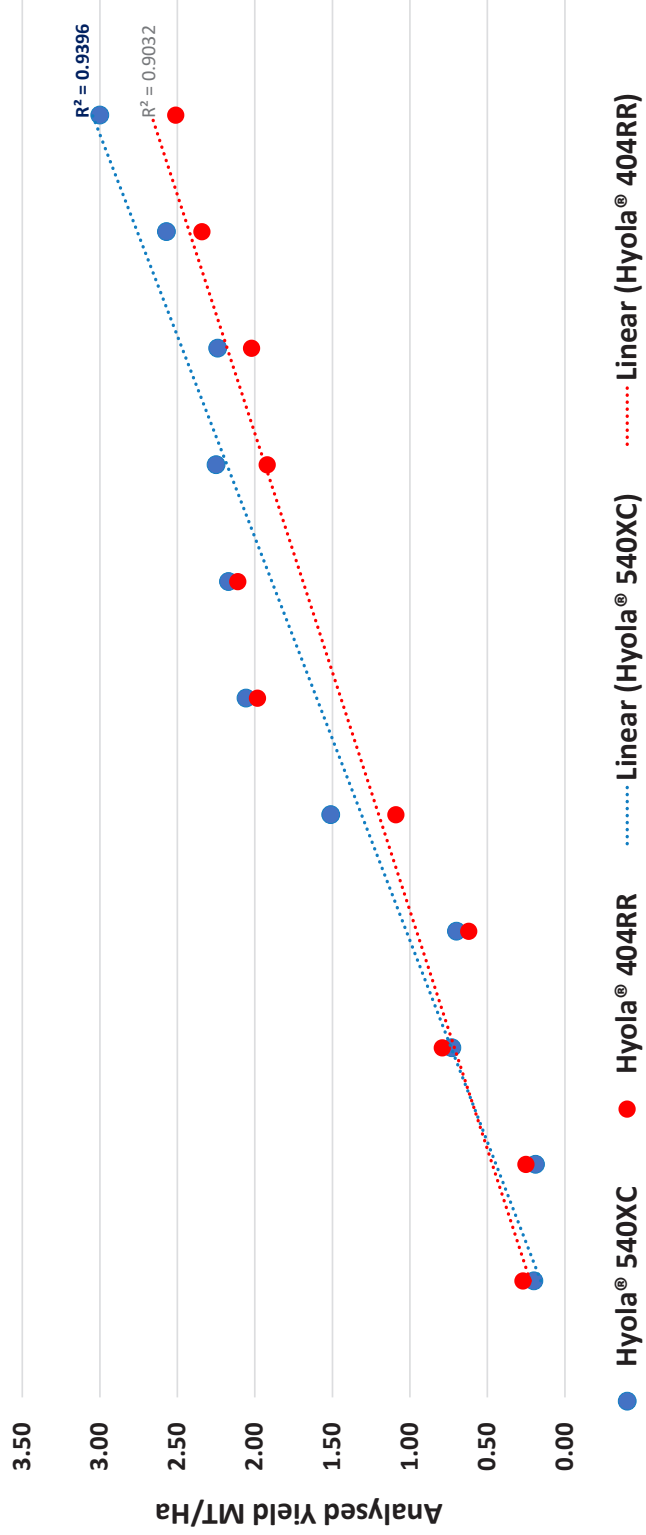
^ Indicates calculated weight rating from Pacific Seeds R&D internal replicated research trial evaluations

Scale: 1 = poor - 9 = best

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HYOLA 540XC SHOWS HIGHER YIELDS VS HYOLA 404RR



Source: 2017 & 2018 Pacific Seeds Research Trial Regression Data - Hyola® 540XC vs Hyola® 404RR

HYOLA XC - AGRONOMIC BENEFITS TO GROWERS

Hyola XC technology is the latest in flexibility of spray timing with both quick knock down and extended residual protection available using key chemical groups that growers need, Hyola® XC technology is set to become a vital part in IWM soil residual carryover canola toolboxes and provide growers with inbuilt crop and investment protection.

Mixing and rotating herbicide actives in crop is now the most valuable tool in resistance management when compared to rotating over successive seasons with individual chemistries.

Visit: www.crop.bayer.com.au/tools-and-services/mix-it-up/ for more details.



Photo: Hyola 410XX (L) vs Hyola 540XC (R), both with 93ml/ha simulated IMI chemistry soil carryover in 2019 agronomy extension trials.

SOIL RESIDUAL FACTORS

Hyola XC technology can be used to overcome plantback constraints often associated with the use of Imidazolinone herbicides, particularly in low rainfall environments and/or on soils of lower pH.

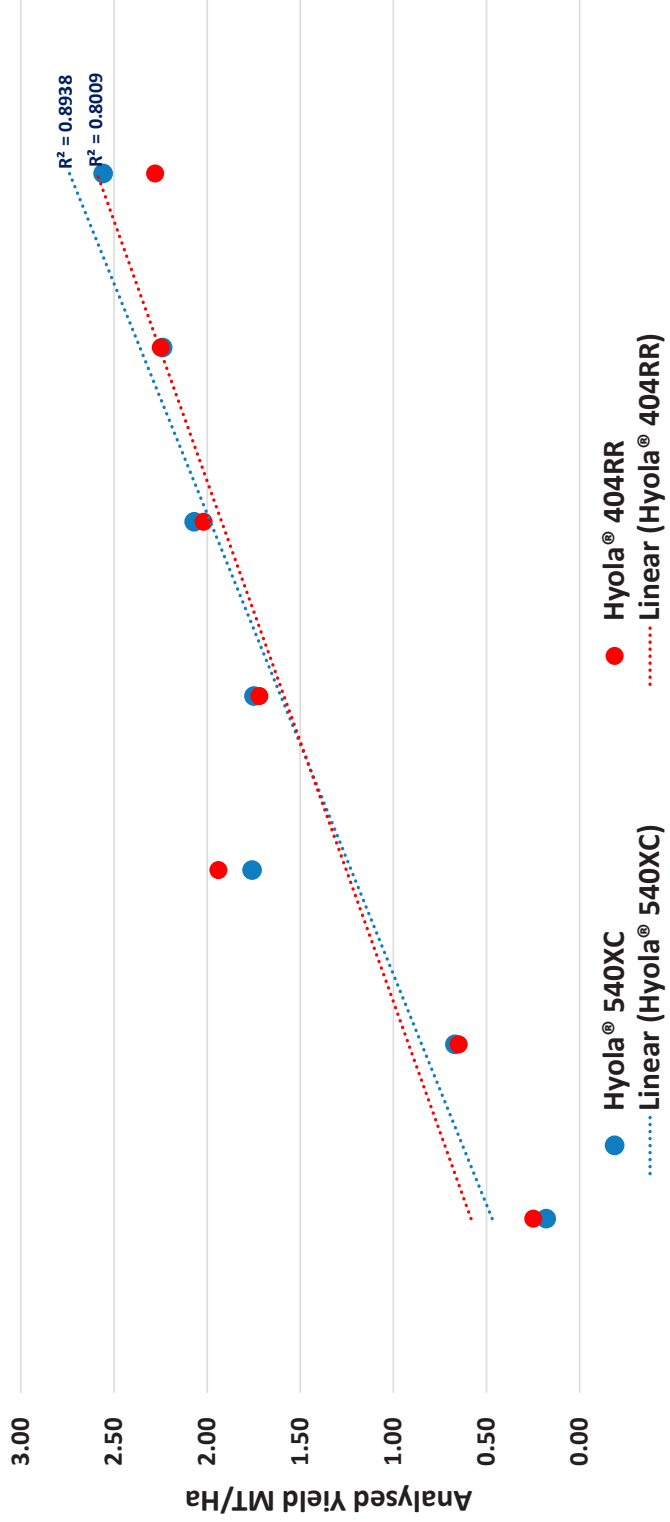
Sulfonylurea (SU), imidazolinone (IMI) or triazine herbicides are likely to cause the most concern, and residues, from the previous season may affect crop emergence or even kill sensitive crops or crop cultivars in the next season.

The soil pH will have an impact on which herbicides are more likely to persist. All other things being equal, imidazolinones will be more persistent on acid soils and sulphonyl ureas on alkaline soils.

Source: <https://www.agric.wa.gov.au/grains-research-development/>

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2018 HYOLA 540XC INDEPENDENT GRAIN YIELD RESULTS



Source: 2018 Bayer-Pacific Seeds TruFlex® Trial Regression Data - Hyola® 540XC vs Hyola® 404RR

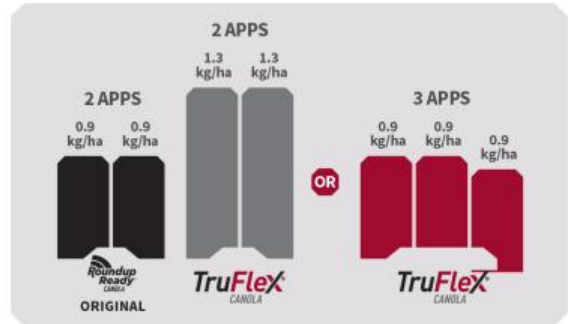
HYOLA XC - BENEFITS OF TRUFLEX TECHNOLOGY

**EXTENDED SPRAY WINDOW
– EMERGENCE TO FIRST FLOWER**



The window of application for Roundup Ready Herbicide with PLANTSHIELD by Monsanto will extend past the six-leaf stage all the way to first flower.

**THE RATE FARMERS NEED FOR
THEIR WEED CHALLENGES***



* Of Roundup Ready Herbicide with PLANTSHIELD by Monsanto.
* Either apply three applications at 0.9 kg/ha or apply two applications of 1.3 kg/ha of Roundup Ready Herbicide with PLANTSHIELD by Monsanto.

One of the smartest routes to high yield potential is through effective weed control. Here's how TruFlex® canola with Roundup Ready® Technology can help make it happen:

**WEED CONTROL
GROWERS CAN RELY
ON**

TruFlex® canola with Roundup Ready® Technology and Roundup Ready® Herbicide with PLANTSHIELD® by Monsanto were designed to work with each other. This combination provides you with the tools you need to effectively control weeds in your canola fields.

**FLEXIBILITY IN SPRAY
RATES AND TIMING**

TruFlex canola gives you increased weed control flexibility. The window of application for Roundup Ready Herbicide with PLANTSHIELD by Monsanto will extend past the six-leaf stage to first flower. From emergence to first flower either apply three applications at the current rate of 0.9 kg/ha or apply two higher rates of 1.3 kg/ha.

**SUPERIOR YIELD
POTENTIAL**

New advances in trait technology will help enable better weed control and crop safety compared to Roundup Ready® canola. It's a combination that could give you the opportunity to see a lot more yield potential at harvest time.



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HYOLA 540XC INDIVIDUAL TRIAL LOCATION RESULTS

HYBRID VARIETY	Cunderdin WA	Badgingara WA	Kendenup WA	Esperance WA	Temora NSW	Yarrawonga VIC	Lake Bolac VIC
	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha
Hyola® 410XX	2.07	1.90	2.52	1.95	0.71	0.23	2.30
Hyola® 540XC	2.07	1.75	2.56	1.76	0.67	0.18	2.24
Hyola® 404RR	2.02	1.72	2.28	1.94	0.65	0.25	2.25
MEAN YIELD	2.12	1.80	2.57	1.95	0.70	0.25	2.33

SOURCE: 2018 PACIFIC SEEDS - BAYER TRUFLEX® TRIAL RESULTS BY LOCATION

YEAR	2018	2018	2018	2018	2018	2018	2018
LOCATION	Yarrawonga	Temora	Esperance	Badgingara	Cunderdin	Lake Bolac	Kendenup
STATE	WA	NSW	WA	WA	WA	VIC	WA
Hyola® 540XC	0.18	0.67	1.76	1.75	2.07	2.24	2.56
Hyola® 404RR	0.25	0.65	1.94	1.72	2.02	2.25	2.28

SOURCE: 2018 PACIFIC SEEDS - TRUFLEX® TRIAL ANALYSED YIELD COMPARISONS VS HYOLA 404RR

HYOLA XC - CLEARFIELD CHEMISTRY MANAGEMENT

When utilising the XC technology, a sound IWM strategy utilizing alternative modes of action across pre-emergent, post emergent and fallow application in different crops should be adopted.

Also, the ongoing strategy should consider non-herbicide control measures such as harvest weed seed control (chaff carts, seed destructors, narrow windrow burn, chaff lining, Chaff baling etc.).

Clearfield canola

Apply to canola crop at the 2 to 6 leaf stage. Apply to actively growing weeds in the 3-leaf to 2-tiller stage and broadleaf weeds in the 2 to 6 leaf stage. DO NOT apply **Clearfield** canola after 6 leaf stage.



To preserve the effectiveness of any herbicide a good resistance management approach is recommended. Intervix herbicide is a Group B herbicide. Other group B (ALS inhibitors) include sulfonylureas, and triazolopyrimidines (sulphonamides). To assist with resistance management, rotate Clearfield winter crops with spring crops to break the cycle of winter annual weeds and allow the use of alternate site of action herbicides.

If winter cropping is rotated with a fallow season, control weeds before they set seed and use alternate mode of action herbicides. ALS-inhibiting herbicides should not be used more than 2 out of 4 years.

This aligns well with the industry WEEDSMART's "The Big 6" basis for an IWM program (<https://weedsmart.org.au/the-big-6/>), which can be summarized as followed:

1. ROTATE CROPS AND PASTURES
2. DOUBLE KNOCK – TO PRESERVE GLYPHOSATE
3. MIX AND ROTATE HERBICIDES
4. STOP WEED SEED SET
5. CROP COMPETITION
6. HARVEST WEED SEED CONTROL



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