

NEW PRODUCTS AND PRODUCT UPDATES

This page is intended to be a guide to New Products released since last season, or are intended to be released during this year. They may or may not have been priced or included in detail in the remainder of the pesticide guide, but it will give a general feel for the new products entering the market.

NEW PRODUCTS or FORMULATIONS

ADAMA

Bronco®	Herbicide: 400g/L BROMOXYNIL. Double strength bromoxynil formulation.
Countdown	Herbicide: 800g/L PROSULFOCARB. A formulation of the Group J active from Boxer Gold. (Also see Arcade below).
Palmero TX	Herbicide: 75g/kg ISOXAFLUTOLE + 750g/kg TERBUTHYLAZINE. For use in chickpea crops and fallow. Controls a wide range of broadleaf weeds and suppresses ryegrass and wild oats.
Zulu XT	Herbicide 720g/L 2,4-D. Formulated as IPA and DMA salts with very good compatibility with glyphosate.

BASF

Butisan®	Herbicide: 500g/L METAZACHLOR. Registration still pending at time of writing. A new Group K for use in all canola production systems. Used IBS. It control ryegrass, wild oats and wireweed for 9 weeks. Active in low moisture and moves back into furrows.
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BAYER

Aviator Xpro	Fungicide: 75g/L BIXAFEN + 150g/L PROTHIOCONAZOLE. Bixafen is a new mode of action, an SDHI, co-formulated with Prothioconazole. It is an EC formulation with stickers and spreaders. It is registered in canola for blackleg and sclerotinia this year.
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CONQUEST

HOWITZER	Herbicide: 25g/L DIFLUFENICAN + 250g/L MCPA LVE + 250g/L BROMOXYNIL. New Group C,F,I coformulation with 1L/ha rate delivering full lethal dose of each active. The increased Bromoxynil loading is the difference.
IQ	Adjuvant: 582g/L PARAFFINIC OIL + 240g/L NON IONIC SURFACTANT. High grade paraffin oil loaded the same as Uptake.

CROPCARE

CLAW	Herbicide: 350g/L IMAZAMOX. A generic of Raptor with a registrations in field peas, legume pastures and lucerne.
PONTIAC	Seed Treatment: 6.25g/L FLUTRIAFOL + 15g/L METALAXYL + 180g/L IMIDACLOPRID. A formulation with two fungicides and an insecticide. Has activity on pythium and suppresses rhizoctonia. It is effective against smuts and bunts and has insecticide to reduce BYDV infection and protect seed during storage.

DOW

Legend™	Fungicide: 250g/L Quinoxifen (Group 13). Mildew specific fungicide for use in barley only.
Pixxaro™	Herbicide: 250g/L FLUROXYPYR + 16.26g/L ARYLEX. Broadleaf weed control in fallow and for post emergent use in cereals. Targeting marshmallow, thistles and legumes.
Gallery™	Herbicide: 750g/kg ISOXABEN (Gp O). Florasulam has been omitted from this formulation. For use against germinating wild radish in cereal crops. Timing of use is IBS, PSPE and early PO.
Crusader GoDri	Herbicide: 215g/kg PYROXSULAM (Gp B). Post emergent in wheat and triticale for brome and barley grass. Dry formulation which will mix better in cold wetter than the previous formulation.

4 FARMERS

Triadimefon 500 Dry	Fungicide: 500g/kg TRIADIMEFON. Dry formulation specifically designed for mixing with granular fertiliser.
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SACOA

So-Wett	Adjuvant: 1000g/L NON IONIC SURFACTANT
Fallow	Adjuvant: Another MSO product which is methylated canola seed oil with an emulsifier package.
COHORT	Adjuvant: 1000g/L SOYAL PHOSPHOLIPID. An acidifying and penetrating surfactant that reduces alkaline hydrolysis. Assists with the uptake of foliar fertilisers and spray droplet size management.

SYNGENTA

Arcade®	Herbicide: 800g/L PROSULFOCARB (Gp J). This active does most of the work on the ryegrass in Boxer Gold. It is not strong on its own and will give best results when with a mixing partner. The use rate of 3L/ha reflects this. Registered in wheat and barley.
Tallinor™	Herbicide: 37.5g/L BICYCLOPYRONE + 175g/L BROMOXYNIL (Gp H + C). For the control of hard to kill broadleaf (inc wild radish) weeds out of cereals. Rate range is 500 to 1200mL/ha.

SIPCAM

Sledge	Herbicide Broadleaf: 25g/L PYRAFLUFEN (Gp G). An EC formulation of the knockdown spike Ecopar.
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LABEL UPDATES

ADAMA

Veritas®	Fungicide: 120g/L AZOXYSTROBIN + 200g/L TEBUCONAZOLE. Permit in place for ascochyta and grey mould in chickpeas.
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BASF

Sharpen®	Herbicide: 700g/kg SAFLUFENICIL. Has some phloem mobility so translocates downwards making it the only Group G registered for standalone use. The label covers a wider range of weeds including broadleaf and references superior grass control with knockdowns. Registration for crop-topping in pulse crops. Use with Hasten or MSO.
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CONQUEST

DARGO	Herbicide: 500g/L or kg PROPYZAMIDE formulated as an SC or WDG. As well as being registered in canola will be registered in lupin, field peas, chickpeas and lentils.
RACER	Herbicide: 250g/kg BUTROXYDIM WDG.

SACOA

SE™	Moisture retainer: POLYETHYLENE GLYCOL + ETHOXYLATED ALCOHOL. Herbicide interactions and compatibilities.
BIOPEST	Adjuvant and Insecticide: 815g/L PARAFFINIC OIL. Label change for canola for herbicide, insecticide and fungicide mixtures.
N-FLOW	Compatibilizer: Post emergent uses have been added to this compatibility enhancer.

SIPCAM

ECHO900	Fungicide: 900g/kg Chlorothalonil Premium WDG and 720g/L Chlorothalonil Premium SC (Gp M5). For use in pulse crops with 14 day withholding period.
ECOPAR	Herbicide: 20g/L PYRAFLUFEN-ETHYL. Increased maximum use rates for use with MCPA amine. Now registered for 800mL/ha in cereals and 500mL/ha in pastures.
TERBYNE	Herbicide: 875g/kg TERBUTHYLAZINE. Now registered for use IBS in vetch.

SYNGENTA

Uniform™	Fungicide: 322g/L AZOXYSTROBIN + 124g/L METALAXYL. Registered in barley for BLR, STNB, NTNB and PM.
Moddus Evo	Growth Regulator: Moddus Evo now has a registration for reducing head loss in barley.

WHEAT POST - EMERGENT BROADLEAF WEED CONTROL

HERBICIDES	Herbicide groups present in mix <small>(See group modes of action in Miscellaneous section)</small>	APPLICATION RATE				Registered Max Rate	Application Timing Crop Growth Stage	WEEDS																		Spray Oil (% v/v)	Wetter (% v/v)	UAN (Flexi N) Compatible	Rainfast Period (Hrs)	Harvest Withholding (Days)	Grazing Withholding (Days)	Legend Good Control *** Fair Control ** Some Effect * Blank=Nil/Unknown NR = Not Required						
		Rate selection is dependant on crop growth stage, weed growth stage, any stress the crop or weed has experienced and conditions at spraying																																				
		Low Rate		High Rate																																		
		Rate/ha	Cost/ha	Rate/ha	Cost/ha																																	
2,4-D																																						
2,4-D Amine (625g/L)	I(1)	640 ml	\$3.39	1,400 ml	\$7.42	1400	GS15/17-GS37	*	*	*	*																		***	NR	NR	X	6	14	7	Minimum rate for Wild Radish is 800ml/ha. Apply from 5 leaf to late jointing stage, except varieties Spear, Aroona, Cranbrook and Jacup, which should be from 6 leaf to jointing. Lower rate only applies to Cape Tulip cornfels. Weeds should be no bigger than 10cm - 15cm, and Dock no larger than 5 leaf, with a minimum rate of 1.1L/ha. DO NOT SPRAY if Lucerne is present.		
2,4-D Ester (680g/L)	I(1)	450 ml	\$2.93	800 ml	\$5.20	800	GS15/17 - GS37	*	**	**	*	*																		***	*	NR	NR		6	7	7	Minimum use rate for Wild Radish 650ml/ha, Wild Turnip 450ml/ha. High end use rate for Cape Tulip. Wiser in most years to avoid use after Z33 (third node). Check varietal tolerance for application timing.
2,4-D Ester (680g/L)	I(1)	800 ml	\$5.20	1,700 ml	\$11.05	800	GS85-GS95	*	*	**	*	*																		***	*	NR	NR		6	7	7	Harvest Aid / Salvage only.
Affinity Force Mixtures																																						
Affinity Force (240g/L) +	G(2)	60 ml		100 ml		100	GS13-GS25	**																						***				6	NRD	14	Do not use MCPA LVE. Useful alternative Group G. Increase rate of MCPA Amine as required (see phenoxy page). Could add Diuron, Lontrel, Logran, Eclipse (100g/L) or Dicamba for a particular weed spectrum (also increases modes of action used). Better activity if weeds are at least two true leaves. Max of 4 leaves for capeweed and wireweed. Has useful activity on Paterson's Curse.	
MCPA Amine (750g/L)	I(1)	330 ml	\$12.74	500 ml	\$20.75	1350																								***		0.05	X	6	NRD	7		
Aptitude & Mixtures																																						
Aptitude	G(2) + C	200 gm	\$20.00	200 gm	\$20.00	200	GS13-GS25																										X	0	NRD	14	Rapid brown out of Marshmallow and Wild Radish.	
Aptitude +	G(2) + C	200 gm		200 gm		200	GS13-GS25	**																										0	NRD	14	Do not mix with MCPA LVE. Can be mixed with MCPA Amine 750.	
MCPA Amine (750g/L)	I(1)	330 ml	\$23.22	330 ml	\$23.22	1350			**	**	**	**																					X	6	NRD	7		
Aptitude +	G(2) + C	200 gm		200 gm		200	GS13-GS25	***	**	**	***																							0	NRD	14		
Lontrel (750g/kg)	I(4)	40 gm	\$22.00	120 gm	\$26.00	120									*	**	*	***	***			**	***	*	NR	NR		X	3	70	28							
Aptitude +	G(2) + C	200 gm		200 gm		200	GS13-GS25	**	**	***	***																						0	NRD	14			
Cadence WG	I(3)	115 gm	\$24.72	200 gm	\$28.20	285																										X	4	NRD	7			

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INSECT IDENTIFICATION



Figure 1: Red-legged earth mite (left) are black bodied, with red legs. Bryobia mites have a grey/blue shield-shaped body with silver spots.

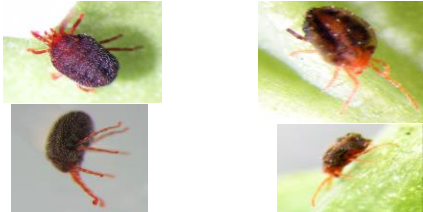


Figure 2: Balaustium mite (left) and Bryobia mite (right) are very similar. Balaustium generally grow larger than Bryobia and RLEM, with a more red-brown body. Bryobia use their front legs like feelers.



Figure 3: Adult green peach aphid are 3mm long, green, orange or pink, and may have wings. These attack lupins and canola at any growth stage.



Figure 4: Cabbage aphids are bluish-grey with a waxy coating, forming dense colonies on canola plants. Adults are 3mm long and may have wings.



Figure 5: Wheat aphids attack all cereals and grasses. The olive green to black adults are 2mm, with a red patch at the rear of the pear-shaped body.



Figure 6: Cutworm moths (top) are a dull brown colour with black markings. The larvae (bottom) are up to 50mm long, hairless and dark coloured, often with longitudinal markings or spots. These pests attack all crops, cutting through the stems of young seedlings.



Figure 7: Budworm larvae are found high up on plants, such as faba bean, field pea, chickpea, lupins, canola and many pasture legumes. They may be brown, orange or green, with dark stripes on the body, which is up to 40mm long. They have sparse bumps and bristles along their bodies, and have four pairs of false legs just behind the centre. The moths are a dull brown colour with



Figure 8: Lucerne flea larvae and adults are yellow-green, wingless and globe-shaped. Adults are about 3mm long. When disturbed, they spring off like typical fleas. The pest attacks all crops, chewing through the leaves.



Figures 9 & 10: Armyworm larvae (right) are up to 40mm long, hairless and striped. The body colour varies, but is usually pinkish, green or brown. Moths (above) are a patterned brown. They attack barley, oats, wheat and triticale.



Figure 11: Diamondback Moth larvae (above) are pale green, slightly tapered at each end and grow through four stages to a length of 12mm. They wriggle violently when disturbed.



Figures 12 & 13: The Pea Weevil eggs hatch on the pods of the field peas and the larvae (left) burrow into the pod and feed on the seed and eventually grow to about 5mm in length. The adult (right) is a chunky beetle, also about 5mm long. It is generally brown with white, black and grey patches. The abdomen extends beyond the wing covers and is white with two black oval spots.

INTEGRATED SLUG AND SNAIL CONTROL

A comparison of the key attributes for the commonly used snail and slug bait products registered for use in Australian agriculture

Products should always be applied as per label recommendations where these are available. This table is provided as a guide only.

Product	Active Ingredient	A.I. g / kg	APVMA Product No.	Label Rate kg / ha	Pellets / kg	At label rates Pellets/m ²	Pellet	Relative hardness 0= soft 10 = very hard	Efficacy 2 weeks after rain (35mm)	Ability to be broadcast	Distance spread (based on twin spinner machine)
Delicia® Sluggoff® Lentils	Metaldehyde	30	60931/0409	3	100,000	30	flour	3.8†	Reduced	Fair	18m
Metarex® Snail and Slug Bait	Metaldehyde	50	58910/49354	5-8	60,000	30-50	flour	6.7	Similar	Good	22-24m
Metarex® Micro Slug Bait	Metaldehyde	50	68958/59492	5 drilled	100,000	-	flour	6.1†	Reduced	-	-
Imtrade Metakill® Snail & Slug Bait	Metaldehyde	50	64990/105219	4-8	100,000	40-81	flour	2.2	Reduced	Fair	18-20m
Slimax® Broadacre Slug and Snail Bait	Metaldehyde	30	68963/59506	3-5	50,000	15-25	bran	2.6	Similar	not tested	not tested
SlugOut® All Weather Slug and Snail Bait	Metaldehyde	18	49324/58633	10	85-93,000	85-93	granule	8.7†	Reduced	Good	24m
Meta® Slug and Snail Pellets	Metaldehyde	15	49568/100778	5-7.5	24-27,000	18-21	bran	0.9	Reduced	Poor-fair*	20-24m
Slugg® Slug and Snail Pellets (2.5 mm)	Metaldehyde	15	46023/103982	5-7.5	21-26,000	11-20	bran	1.5	Reduced	Poor-fair*	20-24m
Slugg® Slug and Snail Pellets (4 mm) φ a	Metaldehyde	15	46023/56819	5-7.5	10-11,000	5-8	bran	0.6	Reduced	Poor*	not tested
Pestmaster® Snail & Slug Pellets (2.5 mm) φ a	Metaldehyde	15	51102/56581	5-7.5	26-32,000	13-24	bran	0.8	Reduced	Fair*	20-24m
Pestmaster® Snail & Slug Pellets (4 mm) φ a	Metaldehyde	15	51102/56581	5-7.5	9 -10,000	5-7	bran	0.7	Reduced	Poor*	not tested
Multicrop Multiguard® Snail and Slug Killer	Iron chelate	60	60104/0905	5-16	18-24,000	9-38	bran	0.9	Reduced	Poor-fair*	20-22m
Eradicate® Snail and Slug Killer	Iron chelate	60	68634/58804	5-16	25-26,000	13-39	bran	0.9	Reduced	Fair*	20-24m
Mesurol® bait φ b	Methiocarb	20	33274/1209	5.5	28-30,000	15-18	bran	0.5	Similar	Poor*	not tested

Explanatory Notes

φExtra technical comment by Protech Consulting Pty Ltd Jul 2016

The full pesticide label must be consulted for full and up to date application instructions. Observe all restraints and withholding periods.

Pellets / m² applied varies depending on the rate (kg/ha) applied by the number of pellets/kg and the pellets ability to remain intact as determined by hardness.

φ a Registered label rate is 5g/m². Label recommendations for bran based baits can be misleading hence the rate used in broad acre is often 5kg/ha - 7.5 kg/ha.

φ b Registered label rate is 5.5kg/ha or 11kg/ha - 22kg/ha. For most infestations apply low rate.

a/ Hardness was assessed by SARDI using pellets of a standard size (2-3mm) except where pellets were smaller (1-2mm) as indicated by †. Results will vary depending on size and batch.

b/ Efficacy 2 weeks after rain was assessed by SARDI using a bioassay with non-significant changes in snail mortality reported here as similar (Nash *et al.* Feb 2016) GRDC Update papers.

* Field and lab results indicate these products break up, hence spread ability varies depending on the hardness and length of pellet from each batch. c/ Data obtained from Ashley Wakefield spreader trials is presented as provided. Always calibrate and check bait distribution for individual situations.

