



Department of
Primary Industries and
Regional Development

Digital Library

Biosecurity published reports

Biosecurity, pests, weeds and diseases
research

2024

Winter Spring Insecticide Guide 2024: Registered chemicals for broadacre crops in Western Australia

Rebecca Severtson

Department of Primary Industries and Regional Development, Western Australia

Follow this and additional works at: https://library.dpird.wa.gov.au/bs_publishedrpts



Part of the [Agronomy and Crop Sciences Commons](#), and the [Biosecurity Commons](#)

This report is brought to you for free and open access by the Biosecurity, pests, weeds and diseases research at Digital Library. It has been accepted for inclusion in Biosecurity published reports by an authorized administrator of Digital Library. For more information, please contact library@dpird.wa.gov.au.

Winter/Spring Insecticide Guide 2024

Registered chemicals for broadacre crops in Western Australia

The insecticides listed in the tables within this guide can be used on any crop appearing on the chemical label, if the rate used does not exceed the highest rate that is registered for use on that crop.

There are many products with different trade names that contain the same active ingredient. This list is not exhaustive and does not imply any specific recommendations of brand names.

Unless otherwise specified, all insecticides listed are emulsifiable concentrate formulations (EC). Other insecticide formulations are suspension concentrate (SC), wettable powder (WP), capsule suspension (CS), wettable granules (WG), emulsion (EW), dry flowable (DF) and water dispersible granules (WDG). Ultra-low volume (ULV) insecticides are not listed.

Read the chemical label before use and check label withholding periods for grazing or hay/silage/fodder production before application.

Please turn on punctuation if using a screen reader.

The information tabled is a guide only. Whilst every care has been taken in preparation of the information, some errors or omissions may have occurred.

Compiled by Research Scientist Svetlana Micic from the Department of Primary Industries and Regional Development (DPIRD) and the PestFacts WA service team.

Contact

For further information or corrections, contact the following staff from DPIRD:

- Research Scientist, Svetlana Micic in Albany on +61 (08) 9892 8591 or svetlana.micic@dpiird.wa.gov.au
- Technical Officer, Alan Lord in South Perth on +61 (08) 9368 3758 or alan.lord@dpiird.wa.gov.au

Contents

Winter / Spring Insecticide Guide 2024.....1

Registered chemicals for broadacre crops in Western Australia.....1

Control of cereal pests3

Control of lupin pests5

Control of canola pests7

Control of field pea pests9

Control of pasture pests.....10

Insecticide active ingredient and equivalent trade names.....11

Control of cereal pests

Table 1 Registered insecticides for winter and spring cereal pests

Insecticide active ingredient names are listed. Rates are millilitres per hectare (mL/ha) unless specified otherwise; g/L refers to grams per litre; g/ha refers to grams per hectare; N/A refers to not applicable.

Insecticide active ingredient	Aphids	Russian wheat aphid	Armyworm
Afidopyropen 100 g/L	50 ^{^#}	50 ^{^#}	N/A
Alpha-cypermethrin 100 g/L	125 (BYDV only)	N/A	160-240
Alpha-cypermethrin 250 g/L	50 (BYDV only)	N/A	96
Alpha-cypermethrin 300 g/L	40 (BYDV only)	N/A	80
Alpha-cypermethrin 400 g/L	32 (BYDV only)	N/A	60
Alpha-cypermethrin 500 g/L	25 (BYDV only)	N/A	48
Beta-cypermethrin 100 g/L	N/A	N/A	290
Bt [SC] (pest specific)	N/A	N/A	1000-4000 g/ha
Bt [WG] (pest specific)	N/A	N/A	500-2000 g/ha
Chlorpyrifos 500 g/L	N/A	N/A	700-900
Chlorpyrifos 700 g/L	N/A	N/A	500-645
Cypermethrin 200 g/L	N/A	N/A	170 %
Cypermethrin 250 g/L	N/A	N/A	135 %
Cypermethrin 260 g/L	N/A	N/A	130 %
Deltamethrin 27.5 g/L	N/A	N/A	500
Dimethoate 400 g/L	500	N/A	N/A
Esfenvalerate 50 g/L	100-300 (BYDV only)	N/A	N/A
Gamma-cyhalothrin 150 g/L	10-15 (BYDV only)	N/A	N/A
Lambda-cyhalothrin 240 g/L	13 or 19 (BYVD only)	20-40 [^]	N/A
Lambda-cyhalothrin 250 g/L	12-18 (BYVD only)	40 [^]	N/A
Methomyl 225 g/L	N/A	N/A	1000-1500
Permethrin 500 g/L	N/A	N/A	100-200
Sulfoxaflor 240 g/L	50-100 *	100	N/A
Sulfoxaflor 500 g/kg	25-50 g/ha *	50 g/ha	N/A
Trichlorfon 500 g/L	N/A	N/A	1200
Trichlorfon 900 g/L	N/A	N/A	670 g/ha
Pirimicarb 500 g/kg (pest specific)	150-300 g/ha	225-300 g/ha	N/A

Insecticide active ingredient	Aphids	Russian wheat aphid	Armyworm
Pirimicarb 800 g/kg (pest specific)	95-190 g/ha	190 g/ha	N/A
Zeta-Cypermethrin 100 g/L	N/A	N/A	170

Symbols for Table 1

- ^ Chemical can only be applied on wheat and barley.
- % Chemical can only be applied to barley.
- # Chemical cannot be applied after growth stage 71 (watery ripe).
- * Chemical cannot be applied after flag leaf stage.

BYDV only- Indicates that the chemical can only be applied for the control of cereal aphids in autumn for barley yellow dwarf virus disease (BYDV) control.

Control of lupin pests

Table 2 Registered insecticides for winter and spring lupin pests

Insecticide active ingredient names are listed. Rates are millilitres per hectare (mL/ha) unless specified otherwise; g/L refers to grams per litre; g/ha refers to grams per hectare; N/A refers to not applicable.

Insecticide active ingredient	Aphids*	Native budworm
Alpha-cypermethrin 100 g/L	N/A	120-200
Alpha-cypermethrin 250 g/L	N/A	48-120
Alpha-cypermethrin 300 g/L	N/A	40-70
Alpha-cypermethrin 400 g/L	N/A	30-53
Alpha-cypermethrin 500 g/L	N/A	24-40
Beta-cypermethrin 100 g/L	N/A	200-250
Bt [SC] (pest specific)	N/A	1000-4000 g/ha
Chlorantraniliprole 350 g/kg	N/A	70 g/ha
Chlorantraniliprole 400 g/L	N/A	60
Chlorantraniliprole 600 g/L	N/A	40
Cypermethrin 200 g/L	N/A	120-300
Cypermethrin 250 g/L	N/A	120-240
Cypermethrin 260 g/L	N/A	115-230
Deltamethrin 27.5 g/L	N/A	200-500
Dimethoate 400 g/L	500 or 800 ⁺	N/A
Emamectin 17g/L	N/A	150-300
Esfenvalerate 50 g/L	N/A	130-330
Gamma-cyhalothrin 150 g/L	N/A	20
Helicoverpa NPV (pest specific)	N/A	100-375
Lambda-cyhalothrin 250 g/L	N/A	24
Methomyl 225 g/L	N/A	1500-2000
Methomyl 900 g/Kg	N/A	375-500 g/ha
Pirimicarb 500 g/kg (pest specific)	250-300 g/ha ⁺	N/A
Pirimicarb 800 g/kg (pest specific)	160-190 g/ha ⁺	N/A
Spinetoram 120 g/L (pest specific)	N/A	200-300
Zeta-Cypermethrin 100 g/L	N/A	150-300

Symbols for Table 2

- * Green peach aphids are widely resistant to synthetic pyrethroid (Group 3A) and organophosphate (Group 1B) insecticides. For more information on managing resistance see GRDC's [Resistance Management Strategy for the Green Peach Aphid in Australia Grains](#).
- + Check aphid species for rates of chemical (usually higher rates required for green peach aphid control).

Control of canola pests

Table 3 Registered insecticides for winter and spring canola pests

Insecticide active ingredient names are listed. Rates are millilitres per hectare (mL/ha) unless specified otherwise; g/L refers to grams per litre; g/ha refers to grams per hectare; N/A refers to not applicable.

Insecticide active ingredient	Aphids*	Native budworm	Diamondback moth*
Afidopyropen 100 g/L	50 %	N/A	N/A
Alpha-cypermethrin 100 g/L	N/A	200 or 300	400
Alpha-cypermethrin 250 g/L	N/A	80 or 120	N/A
Alpha-cypermethrin 300 g/L	N/A	70-100	130-135
Alpha-cypermethrin 400 g/L	N/A	53-75	100
Alpha-cypermethrin 500 g/L	N/A	40-60	N/A
Beta-cypermethrin 100 g/L	N/A	200-250	N/A
Bt [SC] (pest specific)	N/A	1000-4000 g/ha	1000-4000 g/ha
Bt [WG] (pest specific)	N/A	500-2000 g/ha	500-2000 g/ha
Cyantraniliprole 100 g/L	150	150	150 \$
Cypermethrin 200 g/L	N/A	200-250	N/A
Deltamethrin 27.5 g/L	N/A	500	N/A
Emamectin 17 g/L	N/A	150-300	150-300 ^
Esfenvalerate 50 g/L	N/A	130-330	250
Flonicamid 500 g/kg	100 g/ha %^	N/A	N/A
Gamma-cyhalothrin 150 g/L	N/A	20-30	20
Helicoverpa NPV (pest specific)	N/A	100-375 \$	N/A
Lambda-cyhalothrin 250 g/L	N/A	24-36	24
Methomyl 225 g/L	N/A	1000-2000	500-1000
Methomyl 900 g/kg	N/A	375 or 500 g/ha	250 g/ha
Pirimicarb 500 g/kg (pest specific)	500 or 1000 g/ha	N/A	N/A
Pirimicarb 800 g/kg (pest specific)	315 or 625 g/ha	N/A	N/A
Spinetoram 120 g/L (pest specific)	N/A	150 ^	150 ^
Sulfoxaflor 240 g/L	100-200 %	N/A	N/A
Sulfoxaflor 500 g/kg	50 g/ha %	N/A	N/A

Symbols for Table 3

- % Insecticide cannot be applied after the end of flowering.
- \$ Target 1st to 3rd instar larvae when they reach spray threshold.
- ^ Do not spray insecticide more than twice in a single season.
- * Green peach aphid and diamondback moth are widely resistant to synthetic pyrethroid (Group 3A) and organophosphate (Group 1B) insecticides. For more information on managing resistance see GRDC's:

Resistance Management Strategy for the Green Peach Aphid in Australia Grains

Resistance Management Strategy for Diamondback Moth in Australian Canola

Control of field pea pests

Table 4 Registered insecticides for winter and spring field pea pests

Insecticide active ingredient names are listed. Rates are millilitres per hectare (mL/ha) unless specified otherwise; g/L refers to grams per litre; g/ha refers to grams per hectare; N/A refers to not applicable.

Insecticide active ingredient	Native budworm	Pea weevil
Alpha-cypermethrin 100 g/L	160-300	160-200
Alpha-cypermethrin 250 g/L	64-120	64-80
Alpha-cypermethrin 300 g/L	53-55-100	53-55-70
Alpha-cypermethrin 400 g/L	40-75	40 or 53
Alpha-cypermethrin 500 g/L	32 or 40-60	32 or 40
Beta-cypermethrin 100 g/L	200-250	190-240
Bt [SC] (pest specific)	1000-4000 g/ha	N/A
Chlorantraniliprole 350 g/kg	70 g/ha	N/A
Chlorantraniliprole 400 g/L	60	N/A
Chlorantraniliprole 600 g/L	40	N/A
Cypermethrin 200 g/L	200-250	200
Cypermethrin 250 g/L	160-200	160
Cypermethrin 260 g/L	155-208	155-208
Deltamethrin 27.5 g/L	250-500	400-500
Emamectin 17 g/L	150-300	N/A
Esfenvalerate 50 g/L	130-330	330
Gamma-cyhalothrin 150 g/L	20-30	30
Helicoverpa NPV (pest specific)	100-375	N/A
Lambda-cyhalothrin 250 g/L	24 or 36	36
Methomyl 225 g/L	1500-2000	N/A
Permethrin 500 g/L	150-250	N/A
Spinetoram 120 g/L (pest specific)	200-300	N/A
Zeta-cypermethrin 100 g/L	200 or 250	200

Control of pasture pests

Table 5 Registered insecticides for winter and spring pasture pests

Insecticide active ingredient names are listed. Rates are millilitres per hectare (mL/ha) unless specified otherwise; g/L refers to grams per litre; g/ha refers to grams per hectare; N/A refers to not applicable.

Insecticide active ingredient	Aphids	Redlegged earth mite
Alpha-cypermethrin 100g/L	N/A	50
Alpha-cypermethrin 250 g/L	N/A	20
Alpha-cypermethrin 300g/L	N/A	17-20
Alpha-cypermethrin 400g/L	N/A	13
Alpha-cypermethrin 500g/L	N/A	10
Beta-cypermethrin 100g/L	N/A	60-90
Bifenthrin 20g/L and chlorpyrifos 400g/L	250-500 *	N/A
Bifenthrin 30g/L and chlorpyrifos 600g/L	165-335 *	N/A
Chlorpyrifos 500g/L	200-300	140-300
Dimethoate 400g/L	150-375	55-250
Esfenvalerate 50g/L	100 *	50-70
Gamma-cyhalothrin 150g/L	20 *	8
Lambda-cyhalothrin 250g/L	24 *	9
Malathion 440g/L	1250	N/A
Malathion 1000g/L	550	N/A
Omethoate 290g/L	100	100
Phosmet 150g/L	N/A	250-350
Pirimicarb 500g/kg (pest specific)	100-150 g/ha	N/A
Pirimicarb 800g/kg (pest specific)	65-95 g/ha ⁺	N/A

Symbols for Table 5

- * Apply only after cultivation or sowing.
- + Check aphid species for rates of chemical.

Insecticide active ingredient and equivalent trade names

Table 6 Insecticide trade names listed by active ingredient group

Trade names listed may not be comprehensive, check with your retailer. Read chemical label before use.

Insecticide group	Chemical names	Trade names
1A Carbamates	Pirimicarb 500 g/kg	4Farmers, Aphidex, Apparent, Conquest Pirimidex, Farmalinx Piricarb, Genfarm, Imtrade, Kenso Agcare, Ozcrop, Piri-Ken, Pirimor, Rainbow, Titan Atlas
1A Carbamates	Pirimicarb 800 g/kg	Aphidex
1A Carbamates	Methomyl 225 g/L	AC Mayhem, ACP, Apparent, Choice, Conquest Landrin, CropSure Lannomyl, Easyfarm, Electra, EzyCrop, Farmalinx Pirate, Genfarm, Huilong, Imtrade Activist Veriphy, Imtrade Methomyl, KDPC Metho, Kenso Agcare, Lymo, Macphersons Seneca, Novaguard, Nudrin, Nufarm, Ozcrop, Rainbow, Relyon, Sinmas, Thanos, Titan
1A Carbamates	Methomyl 900 g/Kg	Imtrade Activist 900 Veriphy
1B Organophosphates	Chlorpyrifos 400 g/L	Pyrinex Super (also contains group 3A bifenthrin 20g/L)
1B Organophosphates	Chlorpyrifos 500 g/L	4Farmers, AC Chop, Accensei, ACP, Agmerch, Agroc, Agro-Essence, Apparent Dingo, APS, Arysta LifeScience, AW Cuft, Chlorphos, Conquest, Chlorban, Clip Insecticide, Cropsure Sureban, David Grays, Echem, Ezycrop, Farmalinx Chlorpos, Generifos, Genfarm, Huilong, Imtrade, Kelpie Chlor-P, Kenso AgCare, Ozcrop, Pidgeon's Pest Controller, Rainbow, Relyon, Sabakem, Sabero, Sharda, Sinon, Smart, Spalding, Strike-Out, SureFire Fortune, Task, Titan
1B Organophosphates	Chlorpyrifos 600 g/L	IA Outperform, Imtrade Outperform (also contains group 3A bifenthrin 30g/L)
1B Organophosphates	Chlorpyrifos 700 g/L	Imtrade Outplay, IA Outplay Veriphy, Imtrade Outplay Veriphy
1B Organophosphates	Dimethoate 400 g/L	4Farmers, Accensi, Adama, Apparent Decimator, AW, Choice Di Met, Cropro

Insecticide group	Chemical names	Trade names
		Stalk, Danadim, Dimethon, Farmalinx Dimetholinx, Genfarm, Imtrade, Katar, Relyon, Rover, Titan
1B Organophosphates	Malathion 440 g/L	Fyfanon 440
1B Organophosphates	Malathion 1000 g/L	Fyfanon 1000
1B Organophosphates	Omethoate 290 g/L	Le-Mat
1B Organophosphates	Phosmet 150 g/L	Imidan
1B Organophosphates	Trichlorfon 500 g/L	AC Tipster, Dipterex, Imtrade Tyranex Lepidex, Surefire Trepidex
1B Organophosphates	Trichlorfon 900 g/L	Imtrade Tyranex
3A Pyrethroids Pyrethrins	Alpha-cypermethrin 100 g/L	4Farmers, AC Ferocity, Accensi, Agvantage, Alphanex, Alpha Duop, Alphasip Duo, Alpha-Scud Elite, Apparent Annihilate Duo, AW Alf, Biotis Alpha, Campbell Antares, Chieftain Duo, Ciperkey, Conquest Alpha Duo, Cropro Buzzard, Dominex Duo, Echem, Ezycrop, Farmalinx Alpacyper, FSA AlphaCy, Fyfanom, Fury, Genfarm Alpha Duo, Genfarm Centaur, Gharda Alphaguard, Grass Valley, Halley, Hemani, Imtrade Dictate Duo, Indogulf, Kenso Agcare Ken-Tac, Maya Alfa, Nufarm Astound Duo, NovaGuard, Opal Alpha Duo, Ozcrop Alpha C, Pacific, Rygel Alpha-Cyper, Rainbow, Relyon Alpha Duo, Sabakem, Smart Ace, Titan Alpha Duo, Trump, Trio, Unichoice, WSD
3A Pyrethroids Pyrethrins	Alpha-cypermethrin 250 g/L	4Farmers, Accensi, Agroshine, Alphanex, Conquest Alpha Forte, Cyrux, Genfarm, Genfarm Cyper Plus, Googly Alpha-Duo, Hemthrin Plus, Relyon Alpha, Rygel Alpha Forte, Titan
3A Pyrethroids Pyrethrins	Alpha-cypermethrin 300 g/L	Apparent Alpha Omega, Alpha-Scud, CropSure Alpha Cyper, IA Ellias, Imtrade Ellias, Titan
3A Pyrethroids Pyrethrins	Alpha-cypermethrin 400 g/L	Imtrade Ellias Plus

Insecticide group	Chemical names	Trade names
3A Pyrethroids Pyrethrins	Alpha-cypermethrin 500 g/L	Genfarm Alpha-Cypermethrin, Relyon
3A Pyrethroids Pyrethrins	Beta-Cypermethrin 100 g/L	Banshee, Chix
3A Pyrethroids Pyrethrins	Bifenthrin 20 g/L	Pyrinex Super (also contains Group 1B Chlorpyrifos 400g/L)
3A Pyrethroids Pyrethrins	Bifenthrin 30 g/L	Outperform 630 Veriphy (also contains group 1B Chlorpyrifos 600g/L)
3A Pyrethroids Pyrethrins	Cypermethrin 200 g/L	Cyrux, Genfarm Boom, Halley, Imtrade Cypershield, Titan, WSD
3A Pyrethroids Pyrethrins	Cypermethrin 250 g/L	Accensi, Cyrux, Genfarm Cyper Plus, Hemthrin Plus, Selene Plus
3A Pyrethroids Pyrethrins	Cypermethrin 260 g/L	AW
3A Pyrethroids Pyrethrins	Deltamethrin 27.5 g/L	Apparent Deltamethrin Duo, Ballistic Elite, CropPro D-Sect, Decis Options, Deltashield, Halley Deltamethrin Duo, NovaGuard Deltamethrin Duo, Sinon Dicast
3A Pyrethroids Pyrethrins	Esfenvalerate 50 g/L	Sumi-Alpha Flex
3A Pyrethroids Pyrethrins	Gamma-cyhalothrin 150 g/L	Trojan
3A Pyrethroids Pyrethrins	Lambda-cyhalothrin 240 g/L	Nufarm Kaiso
3A Pyrethroids Pyrethrins	Lambda-cyhalothrin 250 g/L	4Farmers, AC Longbow, AgMerch, Agroceania, Agro-Essence, Apparent Miyagi, Arysta LifeSciences, Conquest Lambda, Cyhella, Easyfarm, eChem Lambda, Ezycrop Lambda, Flipper, FSA, Hemani Lambda, Imtrade Kung Fu, Indogulf, Kenso Agcare, Karate Zeon, Kick, LW-Lamdathrin, Macro Protect, Matador with Zeon Technology, Naadco, Namda, Pilarmd, Profeng, Rainbow, Raystar, Sabakem Lambda, Submarino Lambda, Sunjoy, Sunrise, Titan, Unocaps
3A Pyrethroids Pyrethrins	Permethrin 500 g/L	Ambush, CropPro Pounce, Kendon Permekil, Nufarm Axe, Permerid, Stakeout, Zeeper

Insecticide group	Chemical names	Trade names
3A Pyrethroids Pyrethrins	Zeta-cypermethrin 100 g/L	Fury
4C Sulfoximine	Sulfoxaflor 240 g/L	Transform
4C Sulfoximine	Sulfoxaflor 500 g/kg	Expedite
5 Spinosyns	Spinetoram 120 g/L	Success Neo
6 Avermectins	Emamectin benzoate 17 g/L	Affirm, Conquest Warrior, Titan, Warlock
9D Pyropenes	Afidopyropen 100 g/L	Versys
11A Biological control (microbial disrupters)	<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i> (Btk)	Delfin WG, Dipel DF, Dipel SC, Sipcam Delfin WG
11A Biological control (microbial disrupters)	<i>Bacillus thuringiensis</i> subspecies <i>aizawai</i> (Bta)	Agree WG, Campbell Bacchus WG
28 Diamides	Chlorantraniliprole 350 g/kg	Altacor
28 Diamides	Chlorantraniliprole 400 g/L	Shenzi
28 Diamides	Chlorantraniliprole 600 g/L	Genfarm Chlorantragen, Presticor, Relyon Chlorantragen, Titan Peacekeeper, Vantacor
28 Diamides	Cyantraniprole 100 g/L	Exirel
29 Flonicamid	Flonicamid 500 g/L	Aria Broadacre WG, Mainman WG
31 Biological control (baculoviruses)	<i>Helicoverpa</i> spp. nucleopolyhedrovirus (NPV)	Gemstar LC, Gemstar Xtreme, Helicovex, Vivus Armigen, Vivus Gold Vivus Max

Important Disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

Copyright © State of Western Australia (Department of Primary Industries and Regional Development), 2024.