



Fall armyworm (*Spodoptera frugiperda*)

Australian Pesticides and Veterinary Medicines Authority (APVMA) permits for
insecticide - emergency/minor use

(Retrieved: 21 September 2020 from apvma.gov.au)

Fall armyworm damage (Image: Clemson University - USDA Cooperative Extension Slide Series , Bugwood.org)

Signs and symptoms of fall armyworm infestation



Image 1: 1st instar emergence (William Lambert, University of Georgia, Bugwood.org)

Image 2: early instar larvae damage on cotton (*Gossypium hirsutum* L.) (Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org)

Image 3: mature larva (Clemson University - USDA Cooperative Extension Slide Series , Bugwood.org)

Image 4: larva and damage on corn (*Zea mays* L.) (John C. French Sr., Retired, Universities: Auburn, GA, Clemson and U of MO, Bugwood.org)

Integrated pest management (IPM) should be implemented to manage fall armyworm (FAW) with consideration to the preservation of beneficial insects and incorporation of cultural control practices

See individual permit document for

- Application rates
- Critical use comments
- Withholding periods
- Jurisdiction
- Additional conditions /constraints



Image 5: spotted lady beetle (*Coleomegilla maculata*) feeding on FAW eggs (Frank Peairs, Colorado State University, Bugwood.org)

- ✓ Regularly scout crops (at least twice a week) to monitor for incidence of eggs/larvae and crop damage
- ✓ Target spray against eggs and newly hatched larvae (prior to third instar stage) before they become entrenched

* Group 1A, 1B insecticide resistance detected in FAW larvae collected from maize fields in Kununurra, and sorghum and Rhodes grass crops in Broome, Western Australia

Mode of action group	Chemical group
Ryanodine receptor modulators (nerve and muscle action)	28 (Diamides)
Voltage-dependent sodium channel blockers (nerve action)	22A (Oxadiazines) 22B (Semicarbazones)
Ecdysone receptor agonist (growth regulation)	18 (Diacylhydrazines)
Inhibitors of chitin biosynthesis, type 0 (growth regulation)	15 (Benzoylureas)
Glutamate-gated Chloride (GluCl) channel allosteric modulators (nerve action)	6 (Avermectins, Milbemycins)
Nicotinic Acetylcholine receptor (nAChR) allosteric modulators (nerve action)	5 (Spinosyns)
Nicotinic Acetylcholine receptor (nAChR) competitive modulators (nerve action)	4A (Neonicotinoids) 4B (Nicotine) 4C (Sulfoximine)
Sodium channel modulators (nerve action)	3A (Pyrethroids, Pyrethrins)
Acetylcholinesterase inhibitors (nerve action)	1A (Carbamates) 1B (Organophosphates)

Product name	Permit no. (link to document)	Active constituent	Chemical Group (mode of action)	Permit expiry date	Crop type
PHEROCON FALL ARMYWORM PHEROMONE LURE AN UNREGISTERED PRODUCT	PER89169	(Z)-9-DODECENYL ACETATE (Z)-9-TETRADECENYL ACETATE (Z)-11-HEXADECENYL ACETATE (Z)-7-DODECENYL ACETATE	Pheromone lure	28 FEBRUARY 2023	For use in enclosed pheromone lure traps for fall armyworm monitoring Each trap to contain: 1 dose of pheromone lure Plus 1 dichlorvos cube
SPODOPTERA FRUGIPERDA LURE BIO SPODOPTERA AN UNREGISTERED PRODUCT	PER89169	(Z)-11-HEXADECENYL ACETATE (Z)-9-TETRADECENYL ACETATE (Z)-7-DODECENYL ACETATE	pheromone lure	28 FEBRUARY 2023	For use in enclosed pheromone lure traps for fall armyworm monitoring Each trap to contain: 1 dose of pheromone lure Plus 1 dichlorvos cube
BIOTRAP DDVP CUBES (APVMA No. 68989)	PER89169	DICHLORVOS	1B	28 FEBRUARY 2023	For use in enclosed pheromone lure traps for fall armyworm monitoring Each trap to contain: 1 dose of pheromone lure Plus 1 dichlorvos cube
CORAGEN INSECTICIDE (APVMA No. 61519) ALTACOR INSECTICIDE (APVMA No. 61824) ALTACOR HORT INSECTICIDE (APVMA No. 69957)	PER89259	CHLORANTRANILIPROLE	28	31 MARCH 2023	Brassica vegetables Brassica leafy vegetables Stalk and stem vegetables Leafy vegetables Fruiting vegetables (including cucurbits) Legume vegetables Potatoes Sweet corn Lettuce Cotton >cont. page 4

					Winter and Summer pulse crops including; Chickpea, Faba/Broad bean, Field Pea, Lentil, Lupin, Vetch, Mung bean, Soybean, Azuki/Adzuki bean, Cow pea, Navy bean, Pigeon pea Almonds Pome fruit, grapes Stone fruit
CORAGEN INSECTICIDE (APVMA No. 61519) ALTACOR HORT INSECTICIDE (APVMA No. 69957)	PER89281	CHLORANTRANILIPROLE	28	31 MARCH 2023	Blueberries (Field and Protected) Avocadoes
ALTACOR HORT INSECTICIDE (APVMA No. 69957) ALTACOR INSECTICIDE (APVMA No. 61824) CORAGEN INSECTICIDE (APVMA No. 61519)	PER89354	CHLORANTRANILIPROLE	28	30 APRIL 2023	Citrus fruit
ALTACOR HORT INSECTICIDE (APVMA No. 69957) CORAGEN INSECTICIDE (APVMA No. 61519)	PER89353	CHLORANTRANILIPROLE	28	31 MAY 2023	Rubus spp. (field and protected) Tree nuts (except almonds) Strawberries (field and protected) Parsley (field and protected) Root and tuber vegetables (except potatoes) (field only)
ALTACOR INSECTICIDE (APVMA No. 61824) CORAGEN INSECTICIDE (APVMA No. 61519)	PER89384	CHLORANTRANILIPROLE	28	31 MAY 2023	Sugarcane
ALTACOR INSECTICIDE (APVMA No. 61824)	PER89366	CHLORANTRANILIPROLE	28	31 MAY 2023	Maize cereals (including Maize, Popcorn, Teosinte)

AVATAR INSECTICIDE (APVMA No. 52546)	PER89278	INDOXACARB	22A	31 MARCH 2023	Broccoli Brussels sprouts Cabbage (closed head varieties only) Cauliflower Celery Capsicum Eggplant Peppers Tomato (field or trellis) Leafy vegetables Chinese leafy vegetables Apples Nashi pear Pears Apricot Nectarine Peaches Plums Grapes Cherries Blueberries and Rubus species Strawberries Macadamia nuts
STEWARD EC INSECTICIDE (APVMA No. 59573)	PER89311	INDOXACARB	22A	30 APRIL 2023	Pigeon Pea
STEWARD EC INSECTICIDE (APVMA No. 59573)	PER89306	INDOXACARB	22A	31 MARCH 2023	Cotton
STEWARD EC INSECTICIDE (APVMA No. 59573)	PER89530	INDOXACARB	22A	31 MAY 2023	Maize cereals (including Maize, Popcorn and Teosinte)

AVATAR EVO INSECTICIDE (APVMA No. 86106) AVATAR INSECTICIDE (APVMA No. 52546) STEWARD EC INSECTICIDE (APVMA No. 59573)	PER89705	INDOXACARB	22A	31 DECEMBER 2020	Sweetcorn
PROCLAIM OPTI INSECTICIDE (APVMA No. 83844)	PER89285	EMAMECTIN present as EMAMECTIN BENZOATE	6	31 MARCH 2023	Brassica leafy vegetables Other leafy vegetables (Protected cropping) Celery (Field only) Blueberries (Field and Protected cropping)
AFFIRM INSECTICIDE (APVMA No. 51321)	PER89371	EMAMECTIN PRESENT AS EMAMECTIN BENZOATE	6	31 AUGUST 2023	Wheat, similar grains, and pseudo cereals without husks. Maize cereals
AFFIRM INSECTICIDE (APVMA No. 51321)	PER89344	EMAMECTIN PRESENT AS EMAMECTIN BENZOATE	6	31 MARCH 2023	Cotton
AFFIRM INSECTICIDE (APVMA No. 51321)	PER89300	EMAMECTIN present as EMAMECTIN BENZOATE	6	30 APRIL 2023	Canola (for grain production) Pulse
PROCLAIM OPTI INSECTICIDE (APVMA No. 83844)	PER89263	EMAMECTIN present as EMAMECTIN BENZOATE	6	31 MARCH 2023	Brassica vegetables Root and tuber vegetables (except potato) Leafy vegetables, Brassica leafy vegetables Sweet Corn Strawberries Lettuce Cucurbits Legume vegetables >cont. p. 7

					Fruiting vegetables (field grown and protected cropping) Grapes (except grapes grown for dried fruit production)
ENTRUST ORGANIC INSECTICIDE (APVMA No. 88118)	PER89870	SPINOSAD	5	31 JULY 2023	Banana Brassica vegetables Brassica leafy vegetables Cucurbits Culinary herbs (as per label) Fruiting vegetables Leafy vegetables (as per label) Legume vegetables (succulent seeds and immature pods only) Root and tuber vegetables Stalk and stem vegetables Berryfruit Citrus fruit Coffee Pome fruit Stone fruit Tropical and sub-tropical fruit crops (inedible peel) including avocado, kiwifruit and mango Ornamentals Grapes Sweetcorn
SUCCESS NEO INSECTICIDE (APVMA No. 64109)	PER89331	SPINETORAM	5	31 MARCH 2023	Bulb onions
SUCCESS NEO INSECTICIDE (APVMA No. 64109)	PER89390	SPINETORAM	5	30 APRIL 2023	Maize Cereals Maize Popcorn Teosinte >cont. p. 8

					Sorghum Grain and Millet (prior to flowering) Sorghum grain Millet Hungry rice Job's tears Teff or Tef
SUCCESS NEO INSECTICIDE (APVMA No. 64109)	PER89327	SPINETORAM	5	31 MARCH 2023	Olives
SUCCESS NEO INSECTICIDE (APVMA No. 64109)	PER89284	SPINETORAM	5	31 MARCH 2023	Leek Spring onion Shallot Galangal
SUCCESS NEO INSECTICIDE (APVMA No. 64109) DELEGATE INSECTICIDE (APVMA No. 61717)	PER89241	SPINETORAM	5	31 MARCH 2023	Sweet corn Brassica vegetables Leafy vegetables Cotton Cucurbits Fruiting vegetables Legume vegetables Stalk and stem vegetables Culinary herbs Root and tuber vegetables Citrus fruits Soybean Pulses (excluding chickpeas) Chickpeas Bananas Ornamentals Tropical and sub-tropical fruits (inedible peel, including avocado, mango and kiwifruit) >cont. p. 9

					Macadamias Berryfruit Coffee Pistachios Forage brassicas Canola Grapes Pome fruit Stone fruit
DURIVO INSECTICIDE (APVMA No. 63936)	PER89280	THIAMETHOXAM CHLORANTRANILIPROLE	4A 28	31 MARCH 2023	Brassicas including broccoli, brussels sprouts, cabbage, cauliflower, brassica leafy vegetables Leafy vegetables including lettuce, endive, silverbeet, spinach Fruiting vegetables (excluding cucurbits) including tomatoes, capsicum, eggplant
TROJAN INSECTICIDE (APVMA No. 63180)	PER89358	GAMMA-CYHALOTHRIN	3A	30 APRIL 2021	Canola Field peas Chickpeas Faba beans Lentils Vetch Barley Wheat Lupins Navy beans Mung beans Sorghum Sunflower Soybeans

TITAN ALPHA-CYPERMETHRIN 250 SC INSECTICIDE [APVMA Approval No. 80598] FASTAC DUO INSECTICIDE [APVMA Approval No. 51858]	PER85447	ALPHA-CYPERMETHRIN	3A	30 APRIL 2026	Maize Sweetcorn Chickpea Faba beans Field peas Mung beans Navy beans Soybeans Sorghum Millet Winter cereals
AXE INSECTICIDE (APVMA No. 54245)	PER89295	PERMETHRIN (40:60::CIS:TRANS)	3A	31 MARCH 2023	Sugarcane
NUDRIN 225 INSECTICIDE (APVMA No. 47470)	PER89400	METHOMYL	1A	30 APRIL 2021	Millet
ALPHANEX 100 EC INSECTICIDE (APVMA No. 81781) KENDON CARBARYL 500 SC INSECTICIDE (APVMA No. 69359)	PER89425	ALPHA-CYPERMETHRIN CARBARYL	3A 1A	31 MAY 2023	Rice
ACCENSI ALPHA-CYPERMETHRIN 100 INSECTICIDE (APVMA No. 62491) LYMO 225 INSECTICIDE (APVMA No. 83117) FURY 100 EC INSECTICIDE (APVMA No. 51880) STEWARD EC INSECTICIDE (APVMA No. 59573)	PER89279	ALPHA-CYPERMETHRIN METHOMYL ZETA-CYPERMETHRIN INDOXACARB	3A 1A 3A 22A	31 MARCH 2023	Maize, Sorghum and Sweetcorn Millet Pulse crops listed on the product label (including chickpea, faba bean, field pea, lupin, soybean, mung bean, and navy bean) Soybean and Peanut Soybean

<p>LANNATE-L INSECTICIDE (APVMA No. 47336) EUROCHEM SENECA ULTRA 400 SP INSECTICIDE (APVMA No. 83859)</p>	<p>PER89293</p>	<p>METHOMYL</p>	<p>1A</p>	<p>30 APRIL 2023</p>	<p>Apples Pears Blueberries Strawberries Citrus Stone fruit Cherries Non-bearing ornamentals Mango Persimmon Grapes Brassica vegetables Capsicums (sweet peppers) Sweet corn Beans (legume only) Peas (legume only) Potatoes Macadamia Turf Tomatoes Shallots Spring onion Fruiting Vegetables (including cucurbits) Fruiting vegetables (excluding cucurbits) Legume vegetables (snow and sugar snap peas) Sweet potato Radish Swede Turnip >cont. page 12</p>
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					Lettuce (head and leafy lettuce) Root and tuber vegetables Celeriac Silverbeet Myoga Ginger Rakkyo Parsley Spinach Fennel Brassica leafy vegetables Bulb onion Fennel bulb Leeks Avocado Celery
MAGNET INSECT ATTRACTANT TECHNOLOGY (APVMA No. 58788) Lannate-L Insecticide Electra Insecticide Nudrin Insecticide	PER89398	METHOMYL	1A	30 JUNE 2022	INCLUDING: an insecticide selected from the Insecticide List below at the rate as specified (refer to Mixing in General Instructions on Magnet label). Cotton Maize Sorghum Sweet corn Native & improved pastures Canola Sunflower Wheat, oats & barley >cont. p. 13

Larvin 375 Insecticide Showdown 375 Insecticide		THIODICARB	1A		Cotton Maize Sweet corn
ACELEPRYN TURF INSECTICIDE (APVMA No. 63085) ACELEPRYN GR TURF INSECTICIDE (APVMA No. 85185)	PER89290	CHLORANTRANILIPROLE	28	31 MARCH 2023	Turf production
PROVAUNT TURF INSECTICIDE (APVMA No. 85434)	PER89286	INDOXACARB	22A	31 MARCH 2023	Turf production
LANCER 750 DF INSECTICIDE [APVMA No. 50892] ORTHENE XTRA INSECTICIDE [APVMA No. 50469] CORMORAN INSECTICIDE [APVMA No. 70152] DOMINEX DUO INSECTICIDE [APVMA No. 53487] CONQUEST ALPHA FORTE 250 SC INSECTICIDE [APVMA No. 65245] AZAMAX INSECTICIDE [APVMA No. 61980] CORAGEN INSECTICIDE [APVMA No. 61519]	PER89330	ACEPHATE ACETAMIPRID + NOVALURON ALPHA-CYPERMETHRIN AZADIRACHTIN CHLORANTRANILIPROLE	1B 4A + 15 3A UNKNOWN 28	30 JUNE 2022	VARIOUS NURSERY STOCK (NONFOOD) – SEEDLINGS, TUBES & PLUGS, POTTED COLOUR, TREES AND SHRUBS, FOLIAGE PLANTS, PALMS, GRASSES, FRUITING PLANTS (NON-BEARING), CUT FLOWERS AND ORNAMENTALS DO NOT use on vegetable and herb seedlings in a production nursery system. DO NOT use on fruit trees that will bear fruit within 12 months of treatment. >Cont. page 14

<p>ACELEPRYN GR TURF INSECTICIDE [APVMA No. 85185]</p>					
<p>DURIVO INSECTICIDE [APVMA No. 63936] SPINNER TURF INSECTICIDE [APVMA No. 66637]</p>		<p>CHLORANTRANILIPROLE + THIAMETHOXAM</p>	<p>28 + 4A</p>		
<p>PROCLAIM INSECTICIDE [APVMA No. 50919]</p>		<p>EMAMECTIN BENZOATE</p>	<p>6</p>		
<p>AVATAR INSECTICIDE [APVMA No. 52546] PROVAUNT TURF INSECTICIDE [APVMA No. 85434]</p>		<p>INDOXACARB</p>	<p>22A</p>		
<p>KARATE ZEON INSECTICIDE [APVMA No. 51422]</p>		<p>LAMBDA-CYHALOTHRIN</p>	<p>3A</p>		
<p>LANNATE-L INSECTICIDE [APVMA No. 47336]</p>		<p>METHOMYL</p>	<p>1A</p>		
<p>PRODIGY INSECTICIDE [APVMA No. 61605]</p>		<p>METHOXYFENOZIDE</p>	<p>18</p>		
<p>PYGANIC ORGANIC INSECTICIDE [APVMA No. 59684]</p>		<p>PYRETHRINS</p>	<p>3A</p>		