POISON

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

Cypermethrin

200 Insecticide

ACTIVE CONSTITUENT: 200g/L CYPERMETHRIN
SOLVENT: 625g/L HYDROCARBON LIQUID

GROUP **3A** INSECTICIDE

For the control of certain insect pests in vegetables, cereals, field peas, lupins, cotton, sunflowers, sweet corn, maize, pulses and oilseed crops, sorghum, tobacco and tomatoes as as per directions for use table.

IMPORTANT: READ THOROUGHLY BEFORE OPENING OR USING THIS PRODUCT.

APVMA Approval No.: 52811/0207

Pack Size: 20L, 110L, 120L, 200L, 220 L

TITAN AG
CROP PROTECTION

TITAN AG Pty Ltd
3/14 Narabang Way, Belrose NSW 2085
Telephone 02 9986 2943 Fax 02 9986 2945
www.titanag.com.au

IN A TRANSPORT EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE

TRANSPORT AND HANDLING
NOT A DANGEROUS GOOD
ACCORDING TO THE AUSTRALIAN
DANGEROUS GOODS (ADG) CODE
FOR TRANSPORT BY ROAD AND RAIL.

DIRECTIONS FOR USE
Restraint: DO NOT use if rain is expected within 6 hours.

VEGETABLES

CROP	PEST CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Cabbages, Cauliflowers, Brussels, Sprouts, Broccoli, Chinese Cabbage, Kale, Kohlrabi, Turnips	Cabbage Moth (*Plutella xylostella*), Cabbagewhite Butterfly (*Pieris rapae*), *Helicoverpa* spp.	ALL STATES	**Low Volume:** 400mL/ha **High Volume:** 50mL/100L	Apply when pest populations indicate. When reinfestation is continuous, treatment every 7 to 10 days may be required. Add non-ionic wetter at 5-15mL/100L of spray mixture. **Low Volume:** By Ground: Apply with a fine spray and droplet size of 100 to 200 microns in 100 to 600L/ha of water. Aerial Application: Apply in 20 to 60L/ha of water with a droplet size of 100 to 150 microns. **High Volume:** Use a medium spray with droplet size of 200 to 400 microns. Apply 600L/ha spray mixture just after transplanting and increase gradually to 1000L/ha as crop approaches maturity.
	Cluster Caterpillar (*Spodoptera litura*)	NSW, SA, VIC, TAS, WA only		
Sweetcorn	Corn Earworm (*Helicoverpa armigera*)	ALL STATES	380mL/ha or 500mL/ha	**Fresh Market Corn:** Apply the initial spray at tassel emergence and then at intervals of 5-8 days until silks wither. **Processing Corn:** Apply every 5-8 days as required from early silking stage. Use the higher rate when larvae are larger than 1cm.
	Common Armyworm (*Mythimna comma*)	ALL STATES		
	Native Budworm (*Helicoverpa punctigera*), Southern Armyworm	TAS only		
Tomatoes	Native Budworm (*Helicoverpa punctigera*)	ALL STATES	20mL/100L of water or 40mL/100L of water or 150mL/ha or 300mL/ha	Apply as a programme spray every 7-10 days when pests are present. Use the higher rate when larvae are large or if reinfestation is severe.
			50mL/100L of water or 400mL/ha	For situations where larger larvae (up to 3cm) are established.
	Plague Thrips (*Thrips imaginis*)		18mL/100L of water or 130 mL/ha	Apply as pest numbers indicate.
	Tomato Grub (*Helicoverpa armigera*)	QLD, NSW, TAS, WA only	20mL/100L of water or 40mL/100L of water or 150mL/ha or 300mL/ha	Apply as a programme spray every 7-10 days when pests are active. Use the higher rate when lavae are large or if reinfestation is severe.
			50mL/100L of water or 400mL/ha	For situations where larger larvae (up to 3cm) are established or reinfestation is severe.

FIELD CROPS

CROP	PEST CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Winter Cereals	Armyworms (*Mythimna* spp. and *Persectania* spp.)	NSW, ACT, VIC, TAS, WA only	170mL/ha	Apply when pests are first noticed.
Soybeans, Navy beans, Mung bean	Native Budworm, Cotton Bollworm (both *Helicoverpa* spp.)	QLD, NSW only	380mL/ha or 500mL/ha	Treat when numbers of pod or flower feeding larvae reach 2 per metre of row in soybeans, 1 to 2 per metre of row for navy beans and 1 per metre of row for mung beans. Use the higher rate when the canopy is dense or when larvae are larger than 1cm.
	Soybean Looper (*Diachrysia orichalcea*)			Apply as pest numbers indicate. Use the higher rate when larvae are larger than 15mm.
Canola	Redlegged Earth Mite (*Halotydeus destructor*)	NSW, ACT, VIC, TAS, SA, WA only	50mL-75mL/ha	Apply by ground rig only. Thorough spray coverage is essential. Inspect fields and crop regularly. Spray post seedling emergence (1-6 leaf stage). DO NOT apply as bare earth treatment. Spray as pests appear in large numbers. Avoid spraying if rain is imminent or when pests are sheltering. Use higher rate for heavy infestations. Repeat applications after10-14 days if necessary.
	Native Budworm (*Helicoverpa punctigera*)		200mL-250mL/ha	Thorough spray coverage is essential. Time application to coincide with egg hatch and closely monitor pest populations. Use lower rate on eggs and small larvae, and light to moderate infestations. Use higher rate on large larvae (1-2cm) long and heavier infestations. Repeat application once only if necessary at 10-14 day interval.
Chickpea	Native Budworm (*Helicoverpa punctigera*)	NSW, VIC, TAS, SA, WA only	200mL-250mL/ha	Thorough spray coverage is essential. Time application to coincide with egg hatch and closely monitor pest populations. Use lower rate on eggs and small larvae. Use higher rate on large larvae (1-2cm) long and heavier infestations. Apply maximum two applications per crop with a 14 day spray interval.

TITAN AG CROP PROTECTION

FIELD CROPS – *continued*

CROP	PEST CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Cotton	Native Budworm (*Helicoverpa punctigera*)	QLD, NSW, WA, NT only	200mL-250mL/ha	Apply as indicated by field checks using rates appropriate for the infestation level determined. Application should be timed to coincide with egg hatching and before larvae are in protected feeding sites.
			300mL/ha	Apply when there are up to 75 eggs and/or up to 5 larvae less than 5mm long per 100 terminals.
			400mL/ha	Apply when there are up to 150 eggs when larvae between 5 & 10mm.
			500mL/ha	Apply when there are more than 150 eggs and/or more than 10 larvae less than 5mm long per 100 terminals and/or when larvae longer than 10mm are present.
	Cotton Bollworm (*Helicoverpa armigera*)			Preferably apply to eggs. Apply to larvae only if they are less than 5mm long.
			300mL/ha	Apply when there are up to 75 eggs and/or up to 5 larvae less than 5mm long per 100 terminals.
			400mL/ha	Apply when there are up to 150 eggs and/or up to 10 larvae less than 5mm long per 100 terminals.
			500mL/ha	Apply when there are more than 150 eggs and/or up to 10 larvae less than 5mm long per 100 terminals.
	Rough Bollworm (*Earias huegeli*)		300mL or 400mL/ha	Apply when on average 2 or more larvae are present per 100 bolls. It is essential to detect and treat infestations in the early stages of before larvae are established or concealed in bolls deep in the canopy. Use the higher rate if larvae are longer than 10mm arepresent. Best results will be obtained by applying at egg hatch.
Field Peas	Pea Weevil (*Bruchus pisorum*)	VIC, SA, WA only	200mL/ha	Monitor crops on warm days (20°C or higher) when flowers are formed and then every 23 days or less. Apply when one or more adult beetles per 25 sweeps are found.
	Native Budworm (*Helicoverpa punctigera*)		200mL/ha or 250mL/ha	Monitor the crop as for Pea Weevil. Apply when average numbers exceed one per sweep using the lower rate if caterpillars are less than 1cm long.
Lupins	Native Budworm (*Helicoverpa punctigera*)	NSW, ACT, VIC, SA only	200mL-300mL/ha	Apply when damaging pest numbers first appear on the crop and repeat if necessary. Use the higher rate if larvae larger than 10mm are present. Best results will be obtained by spraying at egg hatch.
		WA only	120mL/ha	Spray only when caterpillars reach 20mm and when damage to maturing pods is imminent. When caterpillars are small they do not damage pods and their numbers may decline naturally.
	Cutworm (*Agrotis* spp.)	NSW, ACT, WA only	75mL/ha	Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray late afternoon or evening.
Maize	Corn Earworm (*Helicoverpa armigera*)	QLD, NSW, ACT, VIC, NT only	300mL/ha or 400mL/ha	Thoroughly and regularly check the crop. Apply from early silking according to pest incidence. Use the higher rate when larvae longer than 10mm are present. In QLD, NSW and NT, preferably apply to eggs or apply to larvae only if they are less than 5mm long.
	Native Budworm (*Heliothis punctigera*)	VIC only		
Sorghum	Corn Earworm (*Helicoverpa armigera*)	QLD, NSW only	300mL/ha or 500mL/ha	Apply when larval numbers reach 2 per head using the higher rate if larvae are greater than 1cm in length.
	Sorghum Midge (*Contarinia sorghicola*)		190mL/ha or 380mL/ha	Apply from head emergence to completion of flowering when pest numbers reach 1-2 per head across the whole field. Use the higher rate for severe infestations or if residual protection is required after infesta-tion early in the flowering period.
Sunflowers	Native Budworm, CottonBollworm (both *Helicoverpa* spp.)	QLD, NSW, VIC, SA, WA only	380mL/ha or 500mL/ha	Apply when damaging pest numbers are present using the higher rate if larvae are greater than 1cm in length or if better knockdown is required.
	Grey Cluster Bug (not VIC), Rutherglen Bug (*Nysius vinitor*)			Apply at budding when pest numbers reach 10-15 adults per plant in dry land crops or 20-25 in irrigated crops. Apply, after flowering, when number of adults is 20-25 on the face of the heads. **Note:** Once flowering has commenced, spraying should be delayed until after flowering has ceased but before heads turn down to avoid damage to foraging bees. If treatment is unavoidable due to pest numbers, apply during very early morning or very late afternoon, when bee activity is minimal.

FIELD CROPS – *continued*

CROP	PEST CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Tobacco	Native Budworm (*Helicoverpa punctigera*), Tobacco Budworm (*Helivoerpa armigera*)	QLD, NSW, VIC only	38mL in 100L of water at 200L to 1000L/ha or 50mL in 100L of water at 200L to 1000L/ha	Apply as number of pests indicates ensuring good spray coverage. Use the higher rate if larvae are larger than1 cm.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS:

TOMATOES, CRUCIFERS: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

MAIZE, MUNGBEANS, NAVY BEANS, SOYBEANS, SWEETCORN:
DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

COTTON, SORGHUM: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

WINTER CEREALS (wheat, barley, triticale):
DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.
DO NOT GRAZE OR CUT FOR STOCKFEED FOR 35 DAYS AFTER APPLICATION.

LUPINS (NOT WA), SUNFLOWERS: DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

LUPINS (WA ONLY): DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

FIELD PEAS: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.

CANOLA: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.

CHICKPEA: ***Harvest*:** DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.
***Grazing*:** DO NOT GRAZE FOR 35DAYS AFTER APPLICATION.

GENERAL INSTRUCTIONS
This product is a contact and residual insecticide. Best results are obtained if the product is sprayed at regular intervals as a protective spray preferably at egg hatch.

INSECTICIDE RESISTANCE WARNING
GROUP **3A** INSECTICIDE

For insecticide resistance management TITAN Cypermethrin 200 Insecticide is a Group 3A insecticide. Some naturally occurring insect biotypes resistant to TITAN Cypermethrin 200 Insecticide and other Group 3A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if TITAN Cypermethrin 200 Insecticide or other Group 3A insecticides are used repeatedly. The effectiveness of TITAN Cypermethrin 200 Insecticide on resistant individuals could be significantly reduced.
Since occurrence of resistant individuals is difficult to detect prior to use, TITAN AG Pty Ltd accepts no liability for any losses that may result from the failure of TITAN Cypermethrin 200 Insecticide to control resistant insects.
TITAN Cypermethrin 200 Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, TITAN AG Pty Ltd representative or local agricultural department agronomist.
Helicoverpa (= Heliothis) *armigera* resistance is present in NSW and QLD. To help contain pyrethroid resistance in *Helicoverpa* (= Heliothis) *armigera*, the Summer crop Insecticide Strategy as developed by the Queensland Department of Primary Industries and NSW Agriculture should be adhered to. Failure to observe the strategy may result in widespread resistance affecting the future viability of Summer cropping.

CROP CHECKING
Frequent and thorough checking of crops should be made over a random sample of plants which are representative of the whole crop. Inspections after treatment should determine if a thorough kill has been obtained but it may take up to 48 hours for effects to be complete. After the initial treatment frequent checks must be made (no more than two days apart when insect pressure is high) to determine if re-treatment is necessary.

APPLICATION
Good coverage is necessary to ensure good insect control. The product may be applied by air or by ground. For aerial application apply in at least 20-30 litres water/ha unless specified otherwise.
For ground application apply in 30-100 litres of water/ha unless specified otherwise.

Cotton: The spray interval should not exceed 9 days when using the lower rate. Aerial application in 10-20 litres of water/ha is preferred over ground spraying. Spraying should be undertaken during the cooler parts of the day or night.
DO NOT spray if rain is expected within 6 hours.

Maize, Sweetcorn: Apply from the tasselling stage to control larvae before they penetrate the cob where they are protected from the spray.

Sorghum: For the control of sorghum midge one or two applications are required if flowering is even across the field. If flowering is uneven several applications, using the lower rate, may be required.

Mung beans, Navy beans, Soybeans, Sunflowers: Preferably use micronair equipment for aerial spraying. For ground spraying use drop arms when the crop is taller than 30cm.

Tomatoes: Apply in at least 10-20 litres of water/ha for aerial application. For low volume spraying use 100-400 litres water/ha. For high volume application use 200-1000 litres of spray mixture/ha. Use the higher water volume on mature plants.

MIXING
The product mixes readily with hard or soft water. Add the required amount of product to water with agitation engaged to ensure thorough mixing. Maintain agitation whilst spraying.
DO NOT allow mixed solution to stand longer than 24 hours before use.
In very alkaline water (pH 9 or above) spray immediately after mixing.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
Dangerous to bees. DO NOT apply to any plants in flower while bees are actively foraging. Dangerous to fish and other aquatic wildlife. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL
Store in the closed, original container in a well-ventilated area, as cool as possible out of direct sunlight. DO NOT store near foodstuffs, fertilisers or seed. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers at a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

SAFETY DIRECTIONS
Product is poisonous if swallowed. Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, face shield or goggles and contaminated clothing.

FIRST AID
If poisoning occurs contact a Doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, and if more than 15 minutes from a hospital, induce vomiting, preferably using Ipecac Syrup APF.

MATERIAL SAFETY DATA SHEET
Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for TITAN Cypermethrin 200 Insecticide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9986 2943 or visit www.titanag.com.au

CONDITIONS OF SALE
TITAN AG Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on TITAN AG's skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of TITAN AG Pty Ltd has any authority to add to or alter these conditions.

TITAN AG
CROP PROTECTION