

POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

Indoxacarb 150 EC

Insecticide

ACTIVE CONSTITUENT: 150g/L S-INDOXACARB

GROUP 22A INSECTICIDE

For the control of various species of insect pests in Adzuki beans, Chickpeas, Cotton, Faba beans, Mungbeans and Soybeans as per the Directions for Use table.

IMPORTANT: READ THOROUGHLY BEFORE OPENING OR USING THIS PRODUCT.

APVMA Approval No.: 85561/125869

Contents: 10L-1000L



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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:**RESTRAINTS**

DO NOT apply if rain is expected within 2 hours of application, or if heavy dew is present on crops.

DO NOT apply when wind speed is less than 3 and greater than 20 kilometres per hour or during weather conditions when surface temperature inversions can develop.

DO NOT apply within 50m (aerial application) or 20m (ground application) when there are livestock, pasture or any land that is producing feed for livestock downwind from the application area.

Cotton: DO NOT apply more than three applications per field in any one cotton growing season and no more than two consecutive sprays per field per season.

Applications must be a minimum of seven days apart.

Adzuki beans, Chickpeas, Faba beans, Mungbeans, Soybeans: DO NOT apply more than one application per field for the crops entire growth cycle.

ENSURE YOU READ THE PROTECTION STATEMENTS BEFORE APPLYING THE PRODUCT

CROP	PEST	STATE	RATE	CRITICAL COMMENTS
Cotton	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>H. punctigera</i>)	QLD, NSW, WA, NT only	650mL/ha or 850mL/ha	Use the higher rate of TITAN Indoxacarb 150 EC when: (1) <i>H. armigera</i> specific field levels are greater than 60% prior to treatment application AND (2) egg and larvae pressure ARE AT 5-15 brown eggs and 2 very small (first instar) or small larvae (second instar) per 10 cotton terminals AND (3) where preservation of beneficial insects is desirable. Use the lower rate of TITAN Indoxacarb 150 EC when: (1) <i>H. armigera</i> specific field levels are less than or equal to 60% prior to treatment application AND (2) egg and larvae pressure ARE AT 5-10 brown eggs and 2 very small (first instar) or small larvae (second instar) per 10 cotton terminals AND (3) where preservation of beneficial insects is desirable.
	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>H. punctigera</i>)		650mL/ha + 2L/ha 200g/L Amitraz EC formulation	Use Titan Indoxacarb 150 + 200 g/L Amitraz EC when: (1) egg and larvae pressure ARE AT 15-20 brown eggs and 2 very small (first instar) or small larvae (second instar) per 10 cotton terminals AND (2) where limited preservation of beneficial insects is required.
	Green Mirid (<i>Creontiades dilutus</i>)		650mL/ha or 850mL/ha or 300 or 400mL/ha + salt (NaCl) at 5g/L spray volume by ground (100L/ha) or 10g/L spray volume by air (30L/ha).	Target nymphs and/or adults when they reach the economic spray threshold. Use 650 or 850mL/ha when controlling <i>Helicoverpa</i> spp. AND Green Mirids. Refer Heliothis recommendations. Use 300 or 400mL/ha + salt when controlling Green Mirids ONLY. Use the higher rate on infestations exceeding economic spray threshold levels and/or large canopy crops. Under high populations suppression only may be observed. Note: TITAN Indoxacarb 150 EC has limited residual activity in controlling new infestations of mirids (either new hatchings of nymphs or influx of adults) post-spray.
Chickpeas, Faba beans	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>H. punctigera</i>)	ALL STATES	300mL/ha	Target brown eggs and hatching (neonates or first instar) to small larvae (second instar) when they reach the economic spray threshold and before they become entrenched in flowers (particularly relevant to Faba beans) or pods.
Adzuki beans, Mungbeans, Soybeans	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>H. punctigera</i>)		400mL/ha	Target brown eggs and hatching (neonates or first instar) to small larvae (second instar) when they reach the economic spray threshold and before they become entrenched in flowers or pods.
	Mirid complex: Green Mirid (<i>C. dilutus</i>), Brown Mirid (<i>C. pacificus</i>), Crop Mirid (<i>Sidnia kinbergi</i>), Yellow Mirid (<i>Campylomma liebkechti</i>)		400mL/ha + salt (NaCl) at 5g/L spray volume by ground (100L/ha) or 10 g/L spray volume by air (30L/ha)	Target nymphs and/or adults when they reach the economic spray threshold. Under high populations suppression only may be observed. Please note: TITAN Indoxacarb 150 EC has limited residual activity in controlling new infestations of mirids (either new hatchings of nymphs or influx of adults) post spray.
	Soybean Looper (<i>Thysanoplusia orichalcea</i>)		200mL/ha	Target hatchling (neonates or first instars) to small larvae (second instar) when they reach the economic spray threshold.
	Red Shouldered Leaf or Monolepta Beetle (<i>Monolepta australis</i>) Soybeans only		200mL/ha	Target adult beetles when they reach the economic spray threshold. Ensure thorough spray coverage.

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

WITHHOLDING PERIODS:**Harvest**

COTTON: DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

ADZUKI BEANS, CHICKPEAS, FABA BEANS, MUNGBEANS, SOYBEANS: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.

Grazing

COTTON: DO NOT ALLOW LIVESTOCK TO GRAZE CROPS, COTTON STUBBLE OR GIN TRASH TREATED WITH TITAN INDOXACARB 150 EC INSECTICIDE.

ADZUKI BEANS, CHICKPEAS, FABA BEANS, MUNGBEANS, SOYBEANS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 21 DAYS AFTER APPLICATION.



LIVESTOCK DESTINED FOR EXPORT MARKETS

The label withholding period for grazing only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that the Export Slaughter Interval or the Export Grazing Intervals is observed before stock are sold or slaughtered.

EXPORT SLAUGHTER INTERVAL (ESI): 28 DAYS Livestock that have been grazing on or fed treated crops and/or over-sprayed should be placed on clean feed for 28 days (4 weeks) prior to export slaughter.

GENERAL INSTRUCTIONS

TITAN Indoxacarb 150 EC Insecticide is an emulsifiable concentrate formulation. TITAN Indoxacarb 150 EC Insecticide should be applied after careful field monitoring of pest populations for eggs and larvae to determine the need for application, the correct timing of the initial application and of any subsequent applications. Subsequent applications are dependent on economic thresholds, as well as the growth rate of new unprotected cotton terminals.

Spray applications should be timed to coincide with egg hatching and before larvae are entrenched in protected feeding sites.

TITAN Indoxacarb 150 EC Insecticide has been specifically designed for use in Integrated Pest Management schemes. The active ingredient, indoxacarb enters insects primarily by ingestion of treated foliage, or through penetration of the insect cuticle. After ingesting indoxacarb, the larvae cease feeding and die three to five days later. TITAN Indoxacarb 150 EC Insecticide does not give traditional larval "knockdown" control but controls *Helicoverpa* spp. larvae giving superior cotton square protection.

PRODUCT USE

Strategies outlined in the cotton industry's Best Management Practice Manual must be observed to minimise spray drift during both ground and aerial application. The interaction of equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions and determining off-target drift risks near the application.

APPLYING LARGER DROPLETS (volume median diameter (VMD) 150-250 microns) REDUCES DRIFT POTENTIAL, BUT WILL NOT MINIMISE DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVOURABLE ENVIRONMENTAL CONDITIONS.

Larger droplets may reduce the effects of evaporation.

MIXING

Agitate or shake the container immediately before use. Use only clean water. Half fill the spray tank with water and add the appropriate amount of TITAN Indoxacarb 150 EC Insecticide directly to the spray tank, agitate and add amitraz 200g/L EC, (if applicable), then completely fill the tank. Mix thoroughly and continue mechanical or hydraulic agitation.

Storage of spray mixture: Use the prepared spray immediately. If unforeseen conditions prevent immediate use of the TITAN Indoxacarb 150 EC Insecticide spray mix, the mix may be stored up to 72 hours. Before use, thoroughly agitate the spray mix until fully resuspended.

Mixtures of TITAN Indoxacarb 150 EC Insecticide plus amitraz 200g/L EC should not be stored.

APPLICATION

Application equipment should be calibrated to apply at least sixty (60) droplets per cm² of target cotton foliage. Droplet VMD should be in the range of 150-250 microns.

Ground Application: Apply either as a blanket spray or as a banded spray over the cotton plants. Apply in a minimum spray volume of 100L/ha. Ensure thorough spray coverage on the cotton foliage. This can be maximised by using appropriate sized hollow cone nozzles to deliver 100L spray volume per hectare. Increase the number of hollow cone nozzles per cotton row as the plant size increases. A minimum spray pressure of 275 kPa (40psi) should be used with hollow cone nozzles. Higher pressure reduces droplet size, DOES NOT improve canopy penetration and may increase drift potential.

WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.

Aerial Application: TITAN Indoxacarb 150 EC Insecticide must only be applied with aircraft fitted with accurately calibrated equipment. Apply a minimum total spray volume of 30L/ha with either Micronaire® rotary atomisers or conventional hydraulic nozzles set to spray droplets with a VMD in the range of 150-250 microns. A strategy as per the cotton industry's Best Management Practice Manual should be employed at all times to minimise spray drift during aerial application.

DO NOT apply TITAN Indoxacarb 150 EC Insecticide using Ultra Low Volume (ULV) methods.

COMPATIBILITY

TITAN Indoxacarb 150 EC Insecticide is compatible with amitraz EC formulations. TITAN Indoxacarb 150 EC Insecticide is not compatible with ultra low volume (ULV) formulations or the following foliar fertilisers: Supa K30, Zip and Triple 7. Since formulations may be changed and new ones introduced, it is recommended that users pre-mix a small quantity of the desired tank mix and observe possible adverse changes (settling out, flocculation, etc.).

Salt

When the addition of salt is indicated in the Directions for use table, TITAN AG recommends the use of salt from the following sources: Table or cooking salt, Pool salt or salt approved for use in livestock feed eg Cheethan RAM (No. 2) Dried Fine Salt, Olsson's Kiln Dried Coarse Refined Salt.

Spray Equipment Cleanout

Only apply product using clean, well-maintained equipment. Immediately following application, thoroughly clean all spray equipment to reduce risk of deposits forming that might become difficult to remove.

Drain spray equipment into a disposal pit designed for this purpose.

Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water. Fill the sprayer with clean water and household ammonia (one litre of 3% active for every 100L of water). Flush hoses, boom and nozzles. Turn off boom and top off the tank with clean water. Circulate through the spraying system for at least 15 minutes. Flush the hoses, boom and nozzles and drain the tank. Remove and clean nozzles, screens and strainers in a bucket of fresh ammonia and water. Thoroughly rinse the sprayer, hoses, boom and nozzles with clean water several times. Clean all other associated contaminated application equipment.

INSECTICIDE RESISTANCE WARNING

For Insecticide resistance management

TITAN Indoxacarb 150 EC Insecticide is a

GROUP **22A** INSECTICIDE

Group 22A insecticide. Some naturally occurring insect biotypes resistant to TITAN Indoxacarb 150 EC Insecticide and other Group 22A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if TITAN Indoxacarb 150 EC Insecticide and other group 22A insecticides are used repeatedly. The effectiveness of TITAN Indoxacarb 150 EC Insecticide on resistant individuals could be significantly reduced.

Since occurrence of resistant individuals is difficult to detect prior to use, TITAN AG accepts no liability for any losses that may result from failure of TITAN Indoxacarb 150 EC Insecticide to control resistant insects. TITAN Indoxacarb 150 EC Insecticide may be subject to specific resistance management strategies. For further information contact your supplier, TITAN AG representative or local agriculture department agronomist.

PRECAUTION

Human flagging is not supported unless flaggers are protected by engineering controls such as vehicles with cabs.

RE-ENTRY PERIOD

DO NOT allow entry into treated areas until spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrists, a washable hat and chemical resistant gloves. Clothing must be laundered after each day's use.

PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT apply when bees are actively foraging. Avoid direct application or drift of the spray mix onto beehives. After the spray has dried, bees can safely forage flowering crops.

AVOID SPRAY DRIFT ONTO ADJOINING PROPERTIES OR STOCK AREAS.

Assess the treatment area before application to identify animal exposure risks. Avoid aerial application where possible.

Observe the buffer zone for aerial and ground application. If unexpected conditions cause spray drift onto pasture or fodder crops that livestock may potentially graze or may be cut for livestock feed, seek advice from TITAN AG Pty Ltd.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Retain irrigation water and DO NOT allow the chemical to enter adjacent paddocks, crops or water supplies.

PROTECTION OF NON-TARGET BENEFICIAL INSECTS

Beneficial insects contribute to control of secondary pest outbreaks. TITAN Indoxacarb 150 EC Insecticide applications are unlikely to affect spiders and lacewings.

Applications MAY temporarily reduce populations of predatory beetles, transverse ladybirds, ants and pirate bugs, but populations quickly recover.



PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby non-target plants/crops, cropping lands or pastures.

Refer to the Product Use section above and cotton industry's Best Management Practice Manual to manage spray drift during application.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple-rinse containers before disposal. Add rinsings to 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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. DO NOT burn empty containers or product.

Refillable containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Wash hands after use. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrists, a washable hat and elbow-length PVC gloves. After each day's use wash, gloves and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766.

SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Indoxacarb 150 EC Insecticide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 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.

* Other trademarks

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Combustible liquid. Harmful if swallowed. May cause damage to organs. (Central nervous system) Causes damage to organs through prolonged or repeated exposure. (Central nervous system) Toxic to aquatic life with long lasting effects. **Precautionary:** Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ eye protection/ face protection. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician. Get medical advice/ attention if you feel unwell. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Collect spillage. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/ container to an approved waste disposal plant.

