DuPont™ Altacor®

insecticide

Technical Information

Active Constituent:
350 g/kg CHLORANTRANILIPROLE

Pack Sizes:
5 kg

GROUP **28** INSECTICIDE

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

For the control of Lepidopteran species of insect pests in Cotton and Pulse crops, as per the Directions for Use

SAFETY DIRECTIONS
May irritate eyes. Avoid contact with eyes. Wash hands after use.

FIRST AID
If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

MATERIAL SAFETY DATA SHEET
For further information refer to the Material Safety Data Sheet that can be obtained from www.cropprotection.dupont.com.au

GENERAL INSTRUCTIONS
DuPont™ Altacor® insecticide is an anthranilic diamide insecticide in the form of a water dispersible granule. Altacor® is particularly active on Lepidopteran insect pests, primarily as a larvicide.

Altacor® should be applied after careful field monitoring of pest populations of 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.

For *Helicoverpa* species, spray applications should be timed to coincide with egg hatching and before larvae are entrenched in protected feeding sites.

Altacor® has been specifically designed for use in Integrated Pest Management (IPM) schemes. Altacor® does not give traditional larval "knockdown" control. Altacor® enters larvae primarily by ingestion of treated foliage, or through penetration of the insect cuticle. **After ingesting Altacor®, the larvae cease feeding and die four to five days later.** Altacor® provides square, flower and boll protection in cotton, and flower and pod protection in pulse crops.

INSECTICIDE RESISTANCE WARNING
For insecticide resistance management DuPont™ Altacor® insecticide is a Group 28 insecticide.

Some naturally occurring insect biotypes resistant to Altacor® insecticide and other Group 28 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Altacor® insecticide and other Group 28 insecticides are used repeatedly. The effectiveness of Altacor® insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use DuPont accepts no liability for any losses that may result from the failure of Altacor® insecticide to control resistant insects.

Strategies to minimise the risk of insecticide resistance are available. To help prevent the development of resistance to Altacor® insecticide observe the following instructions:

- Apply Altacor® or other Group 28 insecticides using a "window" approach to avoid exposure of consecutive insect pest generations to the same mode of action. Multiple successive applications of Altacor® or other Group 28 insecticides are acceptable if they are used to treat a single insect generation.
- Following a "window" of Altacor® or other Group 28 insecticides, rotate to a "window" of applications of effective insecticides with a different mode of action.
- The total exposure period of all "Group 28-active windows" applied throughout the crop cycle (from seedling to harvest) should not exceed 50% of the crop cycle.
- Incorporate IPM techniques into the overall pest management program.
- Monitor insect populations for loss of field efficacy.
- Cultivate all cotton and pulse crop fields as soon as possible after picking/harvest to destroy over-wintering pupae of *Helicoverpa armigera*.

For further information contact your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local DuPont Representative.

For additional information on insect resistance, modes of action and monitoring visit the Insecticide Resistance Action Committee (IRAC) on the web at http://www.irac-online.org

MIXING

Fill spray tank to ¼ to ½ full of water. Measure the amount of Altacor® insecticide required for the area to be sprayed. Add Altacor® insecticide directly to the spray tank with the agitation engaged. Mix thoroughly to disperse the insecticide. Once dispersed, the material must be kept in suspension at all times by continuous agitation. Use mechanical or hydraulic means, **DO NOT** use air agitation, premix or slurry.

If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. **DO NOT** allow spray mix to sit overnight, as resuspension may be difficult.

SURFACTANTS

Use a non-ionic surfactant/wetting agent at 125 g active/100 L, (e.g. BS1000* @ 125 mL/100 L).

DO NOT add a non-ionic surfactant/wetting agent if:

- mixing with another product which already contains a surfactant and/or the product label advises not to add a surfactant.
- mixing with a liquid fertiliser

APPLICATION

Application equipment should be calibrated to apply at least sixty (60) droplets per cm^2 of target foliage. Droplet VMD should be of medium spray quality according to ASABE S572 definition for standard nozzles.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour at the application site.

DO NOT apply where there are aquatic and wetland areas including aquacultural ponds or surface streams and rivers downwind from the application area and within the mandatory no-spray zone shown in the following table.

FOR AERIAL APPLICATION				
Usage	**Applications per season**	**Spray quality**	**Wind speed conditions**	**Downwind No-Spray Zone**
Cotton	3	Medium	3 - 8 km/h	100 metres
Chickpea, Mung bean, Soybean	2		8 - 14 km/h	200 metres
			15 - 20 km/h	400 metres
FOR GROUND APPLICATION				
Usage		**Applications per season**		**Downwind No-Spray Zone**
Cotton		3		20 metres
Chickpea, Mung bean, Soybean		2		

Ground application

Apply as a *blanket* spray or as a *banded* spray. Ensure thorough spray coverage on the foliage, using appropriate fan nozzles. Apply in a minimum spray volume of 100 L/ha and keep the boom low to avoid spray drift. A minimum spray pressure of 275 kPa (40 psi) should be used with fan nozzles applying insecticides. **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. For band spraying, increase the number of fan nozzles per crop row as the plant size increases.

Aerial application

DuPont™ Altacor® must only be applied with aircraft fitted with accurately calibrated equipment. Apply a minimum total spray volume of 30 L/ha with with nozzles (e.g. Micronaire rotary atomisers, CP nozzles or conventional hydraulic nozzles) set to medium spray quality according to ASABE S572 definition for standard nozzles. A spray drift minimisation strategy, should be employed at all times when applying this product. **DO NOT apply Altacor® insecticide using Ultra Low Volume (ULV) methods.**

Compatibility

Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of the desired tank mix and observe possible adverse changes (settling out, flocculation etc). Avoid complex tank mixtures of several products or very concentrated spray mixtures. DuPont™ Altacor® is compatible with Ovasyn* (amitraz) and Pix* (mepiquat chloride). DuPont™ Altacor® is not compatible with Ultra Low Volume (ULV) formulations.

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules (Altacor insecticide), wettable powders, water based suspension concentrates, water soluble concentrates, oil based suspension concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers.

Spray Equipment Cleanout

Prior to application, start with clean, well-maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove. Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. **DO NOT** clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

PROTECTION OF LIVESTOCK

Based on Good Agricultural Practices (GAP) Altacor® should not be applied when bees are actively foraging.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to aquatic invertebrates. Drift and run off from treated areas may be hazardous to aquatic organisms in neighbouring areas. **DO NOT** contaminate streams, rivers or waterways with the chemical or used containers.

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

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN.

Store in the closed, original container in a dry, well-ventilated area, as cool as possible out of direct sunlight.

Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should **NOT** be burnt.

PRECAUTION

DO NOT use human flaggers/markers unless they are protected by engineering controls such as vehicles with enclosed cabs.

IN A MEDICAL EMERGENCY CALL
1800 674 415 All hours

NOTICE TO BUYER

To the extent permitted by the Competition and Consumer Act (2010) or any relevant legislation of any State or Territory (the "Legislation") all conditions and warranties and statutory or other rights of action, whether arising in contract or tort or whether due to the negligence of DuPont or Seller, which buyer or any other user may have against DuPont or Seller are hereby excluded provided however that any rights of the buyer pursuant to non excludable conditions or warranties of the Legislation are expressly preserved. DuPont hereby gives notice to buyer and other users that to the extent permitted by the Legislation it will not accept responsibility for any indirect or consequential loss of whatsoever nature arising from the storage, handling or use of this Product. Where permitted by the Legislation DuPont's liability shall in all circumstances be limited to the replacement of the product, or a refund of the purchase price paid therefor.

The Product must be used and applied strictly in accordance with the label instructions and other directions for use. It is impossible to eliminate all risks associated with the use of this product. Such risks may arise from factors such as weather conditions, soil factors, off target movement, unconventional technique, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont or the Seller. Buyer accepts these risks.

APVMA Approval Number: 61824/60085

DIRECTIONS FOR USE

RESTRAINTS:

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

DO NOT make more than 3 applications per cotton crop per season, and no more than 2 consecutive sprays per field per season. Applications must be a minimum of 7 days apart.

DO NOT make more than 2 applications per chickpea, soybean or mung bean crop per season. Applications must be a minimum of 7 days apart.

EXPORT STATEMENT: Import tolerances for produce treated with DuPont™ Altacor® insecticide may be pending in some countries. Consult with your exporter or DuPont before applying Altacor® insecticide to export crops.

For use in all States where appropriate for the crop and/or insect pest.

CROP	PEST	RATE/HA	WHP	CRITICAL COMMENTS
Cotton	Cotton bollworm (*Helicoverpa armigera*) Native budworm (*H. punctigera*) Cluster caterpillar (*Spodoptera litura*)	90 or 150 g + non ionic surfactant @ 125 gai/100 L	28 days	Target brown eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in squares, flowers and bolls. Use the **low** rate on **threshold larvae pressure** (2 larvae per metre row) and low egg pressure. Use the **high** rate with high egg and/or larvae pressure (where potential for > 2 larvae per metre row produced) and so as to achieve longer residual control of *Helicoverpa* spp.
	Northern rough bollworm (*Earias vittella*) Rough bollworm (*Earias huegeliana*)	150 g + non ionic surfactant @ 125 gai/100 L		Target eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in terminals or bolls.
Chickpea	Cotton bollworm (*Helicoverpa armigera*) Native budworm (*Helicoverpa punctigera*)	70 g + non-ionic surfactant @ 125 gai/100 L	14 days	A maximum of two applications are to be applied to any one crop per season. Further treatments should be made with alternative mode of action insecticides. Regularly scout crops to monitor for larvae. Target sprays against larvae. Apply as larvae reach threshold numbers. Larvae in entrenched feeding sites will not be controlled. Use enough water to ensure thorough coverage of the crop. Target a minimum of 100 L/ha by ground rig and a minimum of 30 L/ha by aircraft. Use in accordance with Crop Life Insecticide Resistance Management Strategy guidelines. Target brown eggs and hatchlings (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.
Mung bean, Soybean	Bean podborer (*Maruca vitrata*) Cotton bollworm (*Helicoverpa armigera*) Native budworm (*Helicoverpa punctigera*) Soybean looper (*Thysanoplusia orichalcea*) Bean looper (*Mocis alterna*) Irrorated tabby (*Anticarsia irrorata*)			

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.

CHICKPEA, MUNG BEAN, SOYBEAN: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

GRAZING

COTTON: DO NOT ALLOW LIVESTOCK TO GRAZE CROPS, COTTON STUBBLE OR GIN TRASH TREATED WITH ALTACOR® INSECTICIDE.

CHICKPEA, MUNG BEAN, SOYBEAN: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION

Du Pont (Australia) Pty Ltd
7 Eden Park Drive,
Macquarie Park NSW 2113
Phone: (02) 9923 6111
www.cropprotection.dupont.com.au

Emergency Telephone

Transport Emergency: (02) 9923 6275
24 hr Emergency Medical Information: 1800 674 415