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

Bulldock® Duo

INSECTICIDE

Active Constituent: 25 g/L BETA-CYFLUTHRIN
Solvent: 773 g/L LIQUID HYDROCARBONS

GROUP	3A	INSECTICIDE

For control of certain insect pests of canola, cereals, chickpeas, cotton, faba beans, field peas, grass and legume pastures, lucerne, lupins, sorghum and navy beans as specified in the DIRECTIONS FOR USE table

GENERAL INSTRUCTIONS

Insecticide Resistance Warning

Some naturally occurring insect biotypes resistant to Bulldock 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 Bulldock or other Group **3A** insecticides are used repeatedly. The effectiveness of Bulldock on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Bulldock to control resistant insects. Bulldock Duo may be subject to specific resistance management strategies. For further information contact your local supplier, Bayer CropScience representative or local agricultural department agronomist. Application of Bulldock Duo to synthetic pyrethroid resistant larvae longer than 5 mm will not only be ineffective but it may increase the level of synthetic pyrethroid resistance.

Mixing

Water application

Add the required quantity of Bulldock Duo to water in the spray tank and mix thoroughly.

Ultra low volume application

Add the required quantity of Bulldock Duo to mineral spraying oil, such as D-C-Tron® and mix thoroughly.

Application

Bulldock Duo can be applied by air or ground equipment. In common with other non-systemic insecticides adequate coverage with Bulldock Duo is essential for maximum effectiveness.

When applying Bulldock Duo by ultra low volume application, use only equipment that gives a droplet size of approximately 80-100 microns. Water should be drained from the aircraft hopper and spray lines before using Bulldock Duo with mineral spraying oil.

Spray in crosswinds. Do not spray in calms or when wind is light and variable in direction unless smoke indicators show spray is entering the crop uniformly. Spray application should be carried out during the cooler parts of the day or night.

Compatibility

Bulldock Duo is compatible with DiPel® SC. Do not mix concentrates together but add each to the spray tank separately. As formulations of other manufacturers' products are beyond the control of Bayer CropScience Pty Ltd, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, Bayer CropScience cannot be responsible for the behaviour of such mixtures.

PRECAUTION

Do not use manual flagging unless in enclosed cabs.

Re-entry period

Do not allow entry into treated areas until spray has dried. When prior entry is necessary, wear overalls and chemical resistant gloves. Clothing must be laundered after each day's use.

PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT spray any plants in flower while bees are foraging.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used container.
A strategy to minimise spray drift should be employed at all times when aerially applying sprays near sensitive areas. Such a strategy is illustrated by the cotton industry's Best Management Practice Manual.

STORAGE AND DISPOSAL
Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.
(5 L, 20 L & 200 L containers only)
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.
Container with dry-break connection (1000 L only)
If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products.
Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.
Schutz container with camlock valve connection (1000 L only)
If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. The container must be vented before discharging contents. To empty connect a camlock fitted hose to the bottom valve. Remove top cap when discharging for venting purposes. When the container is empty, close all caps and valves and return the container to the point of purchase.

SAFETY DIRECTIONS
Harmful if swallowed. Will damage eyes and skin. Avoid inhaling vapour or spray mist. Avoid contact with eyes and skin. When opening container and preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield. If clothing becomes contaminated with product remove clothing immediately. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. 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 and contaminated clothing.

FIRST AID
If poisoning occurs contact a doctor or Poisons Information Centre (13 11 26). If swallowed, do NOT induce vomiting. Give a glass of water. Remove from contaminated area. Apply artificial respiration if not breathing.

MATERIAL SAFETY DATA SHEET
Additional information is listed in the Material Safety Data Sheet, which can be obtained from www.bayercropscience.com.au.

EXCLUSION OF LIABILITY
This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

APVMA Approval No.: 51100/0304

FOR 24 HOUR SPECIALIST ADVICE
IN EMERGENCY ONLY
PHONE 1800 033 111

DIRECTIONS FOR USE
Restraint
DO NOT apply if rain is expected within 6 hours

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Canola	Red legged earth mite, Blue oat mite	All states	200 mL/ha	H 14 days G 14 days	Apply one spray only when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of water per hectare to ensure thorough coverage.
	Budworms (*Helicoverpa* spp.)		200 or 400 mL/ha		Apply one spray only when damaging pest numbers first appear on the crop. Best results will be obtained by spraying at egg hatch. Use the higher rate when larvae are present or residual activity is required. DO NOT use on larvae longer than 5 mm if *Helicoverpa armigera* are present.
Cereals	Armyworm	All states	400 mL/ha	H 14 days G 7 days	Spray grubs 10-15 mm when active on the plants. Delay spraying when crop is haying off over a long period, until pests are active. DO NOT spray under cold, wet conditions. When conditions are not optimal a repeat spray may be necessary.
	Barley yellow dwarf virus vector control		250 or 500 mL/ha		Use the higher rate in high risk areas over 500 mm or moderate risk areas over 400 mm rainfall in seasons following summer rains. Apply 5 and 9 weeks post sowing or at 7 to 8 weeks following a Gaucho treatment.
	Cereal aphids		500 or 1000 mL/ha		Apply when damaging numbers of aphids are present. Use higher rate for: 1. Faster knockdown. 2. Dense crops (yield potential >3 t/ha). 3. Adverse application conditions. 4. High aphid populations (> 20 aphids per tiller) Ensure maximum crop penetration by using suitable water volumes: Ground booms 50 L/ha Aerial application 15 to 20 L/ha
	Redlegged earth mite, Blue oat mite		200 mL/ha		Apply when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of water per hectare to ensure thorough coverage.
	Webworm		100 or 200 mL/ha		Apply pre-sowing mixed with a minimum tillage herbicide (water application only), or apply post-sowing when pests or damage are first seen. Use the higher rate under cooler conditions, if grubs are large or if crops are dense.
Chickpeas	Budworms (*Helicoverpa* spp.)	Qld, NSW, Vic, SA, WA only	200 or 400 mL/ha	H 14 days G 7 days	Apply when damaging pest numbers first appear on the crop and repeat if necessary. Best results will be obtained by spraying at egg hatch. Use the higher rate when large larvae are present.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Cotton	Native budworm (*Helicoverpa punctigera*) Cotton bollworm (*Helicoverpa armigera*)	Qld, NSW, WA, NT only		H 4 weeks	Apply as indicated by field checks. Application should be timed to coincide with egg hatching and/or before larvae are entrenched in protected feeding sites. Careful monitoring of the pest population should be carried out to detect an economic rise in egg and/or larval numbers. Application intervals will be variable depending on the rate of growth of new unprotected terminals, the rate of new egg lays and environmental conditions.
			600 mL/ha		Apply when egg laying is light i.e. less than 10 eggs per metre based on 10 plants per metre (1 egg per terminal) and/or newly hatched larvae are present.
			700 mL/ha		Apply when egg laying is between 10 and 40 eggs per metre based on 10 plants per metre (between 1 and 4 eggs per terminal) and/or newly hatched larvae are present.
			800 mL/ha		Apply when egg laying exceeds 40 eggs per metre based on 10 plants per metre (4 eggs per terminal) and/or large numbers of larvae are present. If larvae are being treated they should not exceed 5 mm in length.
			460 to 800 mL/ha + 1.5 to 2 L/ha DiPel® SC		Use the lower rate of Bulldock Duo and Dipel SC when egg pressure is low (less than 10 eggs per metre), all larvae are less than 3 mm (very small category) and resistance levels are low. Use a higher rate of Bulldock Duo up to 800 mL/ha when egg pressure is higher and/or larvae between 3 mm and 5 mm are found. Use the higher rate of DiPel SC as the resistance level rises. Adhere to the guidelines of the appropriate Insecticide Resistance Management Strategy for DiPel.
	Rough bollworm		600 or 800 mL/ha		Apply as indicated by field checks. Application should be timed to coincide with egg hatching and/or before larvae are entrenched in protected feeding sites. Application intervals will be variable depending on the rate of growth of new unprotected terminals, the rate of new egg lays and environmental conditions. Use the higher rate of Bulldock Duo under heavier pest pressures.
	Mirids, Jassids, Flea beetles		600 mL/ha		When *Helicoverpa* spp. eggs or larvae ARE NOT present in the crop - apply when pest numbers reach treatment threshold levels as determined from field checks. When *Helicoverpa* spp. eggs or larvae ARE present in the crop - follow the above Bulldock Duo recommendation for *Helicoverpa* spp. control.
Faba beans	Red legged earth mite, Blue oat mite	All states	200 mL/ha	H 14 days G 7 days	Apply when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of water per hectare to ensure thorough coverage.
Field peas	Budworms (*Helicoverpa* spp.)		400 or 500 mL/ha	H 7 days G 7 days	Monitor crops with a sweep net at first flowering and then at weekly intervals. Spray when one or more larvae are caught in 5 sweeps of the net. Use the lower rate when larvae are less than 10 mm in length. Use the higher rate when larvae are 10 mm in length.
	Pea weevil		400 mL/ha		Monitor crops as for Heliothis. Spray when one or more adult beetles are caught in 25 sweeps of the net. **Note:** In seasons of high pest pressure or in areas of known pea weevil activity apply a 40 m border spray within 7 days of first flowering. A later cover spray should control later infestations of both pea weevil and *Helicoverpa* spp.
	Red legged earth mite, Blue oat mite		200 mL/ha		Apply when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of water per hectare to ensure thorough coverage.
Lucerne				G 3 days	

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Lupins	Cutworms (*Agrotis* spp.), Native budworm (*Helicoverpa punctigera*)	All states	200 or 400 mL/ha	H 14 days G 7 days	Apply when larvae are active. Do not apply in cold conditions. Use the higher rate under cooler conditions, if grubs are large or if crops are dense.
	Redlegged earth mite, Blue oat mite		200 mL/ha		Apply when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of spray mixture per hectare, and ensure thorough coverage.
Navy beans (dried *Phaseolus vulgaris* beans)	Budworms (*Helicoverpa* spp.)		600 mL/ha or 800 mL/ha	H 3 weeks G 14 days	Apply according to local Heliothis threshold and insecticide strategy. Use higher rate for heavier egg lays and/or infestations of *Helicoverpa* spp. larvae. DO NOT use on larvae longer than 5 mm if *Helicoverpa armigera* are present.
Pastures (grass and legume pastures)	Redlegged earth mite, Blue oat mite		200 mL/ha	G 3 days	Apply when mite activity is first seen in the autumn. The best timing is 2 to 5 weeks after opening rains. Apply in at least 50 L of water per hectare, to ensure thorough coverage.
Sorghum	Sorghum midge	Qld, NSW, WA only	300 mL/ha	H 14 days G 14 days	Scout carefully following head emergence and during flowering. Spray when there is an average of 2 midges per head. Repeat as necessary.
	Native budworm (*Helicoverpa punctigera*), Corn earworm (*Helicoverpa armigera*)	Qld, NSW, WA, NT only	600 mL/ha		Do not apply to tight-headed varieties. Preferably apply to eggs. Apply to larvae only if they are less than 5 mm long. Repeat as required.

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

WITHHOLDING PERIODS (WHP)
***Harvest* (H)**
Navy beans: DO NOT HARVEST FOR 3 WEEKS AFTER APPLICATION
Cotton: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION
Field peas: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION
Canola, Cereals, Chickpeas, Faba beans, Lupins, Sorghum: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

***Grazing* (G)**
Pastures, Lucerne: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 3 DAYS AFTER APPLICATION
Cereals, Chickpeas, Faba beans, Field peas, Lupins: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION
Canola, Navy beans: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION
Sorghum: DO NOT GRAZE FOR 14 DAYS AFTER APPLICATION