

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

Guardian[®]
SEED TREATMENT INSECTICIDE

ACTIVE CONSTITUENT: 600 g/L IMIDACLOPRID

GROUP 4A INSECTICIDE

For the control of various insect pests in a range of crops and the prevention of spread of barley yellow dwarf virus in cereal crops as specified in the DIRECTIONS FOR USE table.

IMPORTANT: READ THIS LEAFLET BEFORE USE

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DIRECTIONS FOR USE

See GENERAL INSTRUCTIONS for specific application details.

CROP	PEST	RATE	CRITICAL COMMENTS
Cotton	Thrips	580 mL, 875 mL or 1.17 L/100 kg of seed	The degree of damage caused by thrips is dependent on the magnitude of the thrips population infesting cotton seedlings and the growth rate of the plants. Choose a higher rate if high thrips pressure is expected (e.g. winter cereals and weeds supporting thrips) and/or cotton seedlings are expected to experience slow growth (e.g. cool weather from early planting or sown in shorter season districts). The mid-rate is considered a general rate for normal conditions.
	Brown flea beetle		When applied for thrips control, these rates will also reduce damage to cotyledons caused by brown flea beetle.
	Aphids Wireworms	875 mL or 1.17 L/100 kg of seed	When applied for thrips control, these rates will also control early season aphids. Use the higher rate for increased length of control.
Maize, sorghum, sunflower, sweet corn	Sugarcane wireworm (<i>Agrypnus variabilis</i>) Eastern false wireworm (<i>Pterohelaeus darlingensis</i>) Striate false wireworm (<i>Pterohelaeus alternatus</i>) Southern false wireworm (<i>Gonocephalum macleayi</i>) Black field earwig (<i>Nala lividipes</i>) Wingless cockroach (<i>Cosmozosteria</i> spp., <i>Calolampira elegans</i> , <i>C. solida</i>) Field cricket (<i>Teleogryllus commodus</i>) Black sunflower scarab (<i>Pseudoheteronyx basicollis</i>)	Maize: 1.4 mL/1000 seeds Sorghum, sunflower, sweet corn: 430 mL/100 kg of seed	Apply only to high quality seed. Ensure thorough coverage of seed. See General Instructions for how to treat seed.
Canola	Aphids	400mL/100kg of seed	Guardian will protect canola seedlings from early season aphid damage.
	Redlegged earth mite Blue oat mite		Guardian will protect emerging seedlings for 3-4 weeks after sowing. Crops must be monitored in the first 4 weeks of emergence to ensure Guardian's performance.
	Forage and seed pasture, e.g. grasses such as ryegrass, fescue and phalaris; clovers such as subterranean, white, red and strawberry; medics; lucerne		For Autumn sowing: After a pasture phase sow Guardian treated seed following a well timed spring spray (prior to the development of diapause eggs) of Le-mat [®] 290 SL Insecticide. After a cropping phase a spring spray is not usually required, however if monitoring in spring finds moderate mite populations, a spring spray should be applied. For Spring sowing: After a pasture phase apply a spray of Le-mat prior to sowing Guardian treated seed. Guardian does not affect the viability of Rhizobia when Guardian is mixed with inoculant and seed is sown immediately into a moist soil.
Forage brassicas (kale, turnips, rape and swedes) Lupins		300 mL/100 kg of seed	
Cereals	Feeding damage caused by wheat aphid and corn aphid	120 or 240 mL/100 kg of seed	Use higher rate for increased length of control and in areas of high risk.
	Spread of barley yellow dwarf virus		In high risk areas with over 500 mm rain or moderate risk areas with over 400 mm rain in seasons following summer rains, a synthetic pyrethroid top-up spray should be applied 7 to 8 weeks after sowing.
	Protection against insect pests of stored grains: Granary weevil (<i>Sitophilus granarius</i>) Indian meal moth (<i>Plodia interpunctella</i>) Lesser grain borer (<i>Rhyzopertha dominica</i>) Rice weevil (<i>Sitophilus oryzae</i>) Rust-red flour beetle (<i>Tribolium castaneum</i>) Sawtoothed grain beetle (<i>Oryzaephilus surinamensis</i>) Tropical warehouse moth (<i>Ephesia cautella</i>)	120 mL/100 kg of seed	Guardian will control insect pests during the storage of cereal grains to be used for seed only. Seed treated with Guardian is not to be used for human consumption or animal feed.

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

HARVEST: Cotton and food producing crops: NOT REQUIRED WHEN USED AS DIRECTED

GRAZING: Maize, sorghum or sweet corn plants grown from treated seed: DO NOT GRAZE OR CUT FOR STOCK FOOD WITHIN FOUR WEEKS OF SOWING
Canola, forage brassicas, lupin plants and pastures grown from treated seed: DO NOT GRAZE OR CUT FOR STOCK FOOD WITHIN SIX WEEKS OF SOWING
Cereal plants grown from treated seed: DO NOT GRAZE OR CUT FOR STOCK FOOD WITHIN NINE WEEKS OF SOWING

GENERAL INSTRUCTIONS

Insecticide Resistance Warning

GROUP 4A INSECTICIDE

For insecticide resistance management, Guardian is a Group 4A insecticide. Some naturally occurring insect biotypes resistant to Guardian and other Group 4A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Guardian and other Group 4A insecticides are used repeatedly. The effectiveness of Guardian on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Arysta LifeScience Australia Pty Ltd accepts no liability for any losses that may result from the failure of Guardian to control resistant insects. Guardian may be subject to specific resistance management strategies. For further information contact your local supplier, Arysta LifeScience Australia Pty Ltd representative or local agricultural department agronomist.

Cotton

Mixing and seed treatment

Prior to pouring or pumping Guardian from the container, either shake container vigorously or operate pump by-pass to

ensure thorough mixing of the contents. Flowable formulations will settle over time. Add most of the water into the mixing vat followed by flowable fungicides (e.g. quintozene), coating agents (e.g. Peridiam, Nacret) and Guardian and stir until homogeneous. Then add the emulsifiable liquid fungicide (e.g. Apron 200 SL i.e. metalaxyl-M) slowly whilst stirring. Calibrate commercial seed dressing equipment to ensure the seed throughput is mixed with the correct dose of slurry seed dressing. Ensure the seed dressing mixture is applied to the maximum number of seeds when initially applied to the seed. Retain seed in mixing chamber until coverage on seed is good. Store treated seed under cover in cool, dry conditions. Do not treat seed with poor viability. Do not store treated seed near foodstuffs or where likely to prove hazardous to humans or animals.

Forage and seed pasture, canola, forage brassicas, lupin, summer crops

Mixing and seed treatment

Prior to pouring, shake container vigorously, then add the required quantity of Guardian to sufficient water to give even coverage of the seed to be treated. Place seed in mixing equipment and rotate. Mix Guardian with sufficient water to give even coverage of seed and spray onto seed. For small seeds, apply a total volume of Guardian plus water of 1.5 L/100 kg seed. For large seeds, apply a total volume of Guardian plus water of 500 mL/100 kg seed. Continue rotation until all liquid is distributed on seed. Store treated seed under cover in cool, dry conditions. Do not treat seed with poor viability. Do not store treated seed near foodstuffs or where likely to prove hazardous to humans or animals. Do not carry over maize, sorghum, sunflower or sweet corn seed from one season to the next season. The insecticidal activity of Guardian on the seed is maintained for a minimum of two seasons.

Flow rate: Guardian treated seed may slow flow rate of seed. Check flow rate of seed through sowing machinery before sowing to ensure the desired seeding rate is achieved.

Cereal crops

Mixing and seed treatment

Prior to pouring, shake container vigorously, then add the required quantity of Guardian to sufficient water to give even coverage of the cereal seed to be treated. The quantity of water used for mixing will vary depending on type of equipment and quality of seed. Use a minimum of 400 mL of mixture (i.e. Guardian plus water) with each 100 kg of seed. Do not use more than 600 mL of mixture (product + water) with each 100 kg of seed. Whatever dilution is used it is essential that 120 mL (or 240 mL) of Guardian is applied/100 kg seed. The mixture should be gently stirred regularly.

Seed quality

Guardian should not be used on seed with more than 12% moisture content, or on sprung, sprouted, damaged or severely pinched seed, or seed of poor viability. If in doubt, have a germination test carried out on the seed before treatment to ensure that it is of acceptable standard. Treating with Guardian as directed may raise the moisture level of the seed by up to 0.6%, depending on conditions at treatment. The use of Guardian mixed with water at recommended rates will have no effect on the storage life of treated sound seed.

Compatibility

Guardian is compatible with Proleaf[®] Seed Treatment, Foliarflo[®] Seed Treatment and Proguard[®] Seed Treatment for use on cereal seeds. Do not use more than 600 mL of total mixture/100 kg seed (i.e. Guardian plus Proleaf or Foliarflo or Proguard plus water). Guardian may be applied with Quantum[®] Seed Treatment. Guardian is compatible with triadimenol + cypermethrin flowable seed dressings for use on cotton seed.

Storage of treated seed

Do not store treated seed near foodstuffs or where likely to prove hazardous to humans or animals. If the seed is not used immediately after treatment it should be stored in a dry, well

ventilated place. Although Guardian has no effect on the viability of treated seed, subsequent germination can be adversely affected by poor storage conditions such as high moisture combined with high temperatures. No liability can therefore be accepted for the performance of stored treated seed.

PRECAUTIONS

When treated seed is stored it should be kept apart from other grain and the bags or other containers should be clearly marked to indicate the contents have been treated with this product. Do NOT allow seed treated with this product to contaminate seed intended for human consumption. Do NOT use treated seed for human consumption. Bags which have held treated seed are not to be used for any other purpose.

PROTECTION OF LIVESTOCK

Seed treated with this product must not be used for animal consumption or poultry feed or mixed with animal feed. Do NOT allow seed treated with this product to contaminate seed intended for animal consumption.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Do NOT contaminate ponds, waterways and drains with this product, used containers or bags which have held treated seed. Do NOT feed treated seed or otherwise expose to wild or domestic birds. Any spillages of treated seed, however minor, must be cleaned up immediately, preferably by recovery and re-use. If disposal is required, ensure treated seeds are thoroughly buried and not accessible to birds and other wildlife.

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 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.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container and using the product, wear elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26; New Zealand 0800 764 766.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet, which can be obtained from Arysta LifeScience Australia Pty Ltd.

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, Arysta LifeScience Australia Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

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