



Product Name: MULIGAN INSECT GROWTH REGULATOR
APVMA Approval No: 69692/117713

Label Name:	MULIGAN INSECT GROWTH REGULATOR
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 100 g/L PYRIPROXYFEN 678 g/L HYDROCARBON LIQUID
Mode of Action:	GROUP 7C INSECTICIDE
Statement of Claims:	For the control of silverleaf whitefly (<i>Bemisia tabaci</i> Biotype B) in cotton, rockmelon, capsicum and tomatoes, greenhouse whitefly in tomatoes and various scale species in citrus and olives as specified in the directions for use table.
Net Contents:	NET CONTENTS: 1L, 200L, 20L, 5L
Restrains:	RESTRAINTS: DO NOT apply if rain is forecast within 48 hours DO NOT apply to soils where surface water is evident DO NOT apply MULIGAN IGR more than twice per growing season. MULIGAN IGR should be alternated with other suitable products, the choice of which will depend on the need to maintain beneficial insects in the field or orchard.
Directions for Use:	

<p>Withholding Periods:</p>	<p>WITHOLDING PERIODS: (H) = Harvest, (G) = Grazing</p> <p>COTTON: DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION. DO NOT GRAZE TREATED CROP OR CUT FOR STOCK FEED. DO NOT FEED TREATED COTTON TRASH TO LIVESTOCK</p> <p>ROCKMELON, TOMATO, CAPSICUM: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION DO NOT GRAZE TREATED CROP FOR STOCK FEED.</p> <p>CITRUS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION..</p> <p>OLIVES: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION. DO NOT FEED TREATED OLIVE CROPS OR BY-PRODUCTS OF TREATED CROPS (e.g. OLIVE POMACE) TO LIVESTOCK.</p>
-----------------------------	---

<p>Trade Advice:</p>	<p>Treated citrus fruit, melons, tomatoes and olives destined for export may require extra time being allowed between application and harvest, to be accepted in some export markets. Before you use this product, you are advised to contact Proplan Plant Protections Company S.L. and / or your industry body about any potential trade issues and their management.</p>
----------------------	---

<p>General Instructions:</p>	
------------------------------	--

<p>Resistance Warning:</p>	<p>INSECTICIDE RESISTANCE WARNING</p> <p>For insecticide resistance management MULIGAN Insect Growth Regulator is a Group 7C Insect Growth Regulator. Some naturally occurring insect biotypes resistant to MULIGAN Insect Growth Regulator and other Group 7C insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if MULIGAN Insect Growth Regulator and other Group 2C insecticides are used repeatedly. The effectiveness of MULIGAN Insect Growth Regulator on resistant individuals is difficult to detect prior to use. Proplan Plant Protection Company S.L. accepts no liability for any losses that may result from failure of this product to control resistant insects. MULIGAN Insect Growth Regulator may be subject to specific resistant management strategies. For further information contact your local supplier, Proplan Plant Protection Company S.L. representative or local agricultural department agronomist.</p> <p>To ensure MULIGAN Insect Growth Regulator remains effective DO NOT use more than twice per season.</p>
-----------------------------------	--

<p>Precautions:</p>	<p>PRECAUTIONS: Re-entry Period Do not allow entry into treated areas until the spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.</p>
----------------------------	---

Protections:	<p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</p> <p>Very highly toxic to aquatic organisms. DO NOT contaminate streams, rivers or waterways or dams with this product or the used container.</p> <p>DO NOT apply under weather conditions, or from spraying equipment, that may cause off-target spray drift, particularly to wetlands, water bodies or watercourses.</p> <p>DO NOT spray across open bodies of water.</p> <p>DO NOT apply if waterbodies, watercourses or wetlands are within 50m downwind of the application area for tree crops when applied by ground equipment.</p> <p>DO NOT apply by air to crops other than cotton.</p> <p>DO NOT apply if waterbodies, watercourses or wetlands are within 200m downwind of the application area for cotton when applied aerially.</p> <p>For aerial application ensure a spray with a droplet size distribution of ASAE Fine (VMD 179 µm) or larger is used. A strategy to minimise spray drift should be employed at all times when aerially applying sprays to, or near, sensitive areas. Such a strategy is illustrated by the cotton industry's Best Management Practice Manual.</p>
---------------------	---

Storage and Disposal:	<p>STORAGE AND DISPOSAL:</p> <p>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 500 mm 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 the relevant local State or territory Government regulations. DO NOT burn empty containers or product.</p>
------------------------------	---

Safety Directions:	<p>SAFETY DIRECTIONS:</p> <p>Product is harmful if inhaled or swallowed.</p> <p>Will irritate the eyes and skin. Avoid contact with eyes and skin.</p> <p>Do not inhale vapour.</p> <p>When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow length nitrile or PVC gloves, goggles and half-face respirator with organic vapour cartridge or canister.</p> <p>If product on skin, immediately wash area with soap and water.</p> <p>If product in eyes, wash it out immediately with water.</p> <p>After each day's use, wash gloves, goggles and contaminated clothing.</p> <p>Wash hands after use.</p>
---------------------------	--

First Aid Instructions:	<p>FIRST AID:</p> <p>If poisoning occurs, contact a doctor or Poison Information Centre (telephone 13 11 26).</p> <p>If swallowed DO NOT induce vomiting. Give a glass of water.</p>
--------------------------------	---

First Aid Warnings:	
----------------------------	--

DIRECTIONS FOR USE:

CROP	PEST	RATE	CRITICAL COMMENTS
Cotton	Silverleaf whitefly (<i>Bemisia tabaci</i> Biotype B)	500 mL/ha	Ensure thorough coverage (See APPLICATION). Apply when industry recommended thresholds of silverleaf whitefly (SLW) are exceeded. If a second spray is required, a minimum re-treatment interval of 2 weeks must be observed. DO NOT apply more than twice in any one season. Apply as per current Cotton Industry Insecticide Resistance Management Strategy.
Rockmelon, Tomato, Capsicum (Field and greenhouse)	Silverleaf whitefly (<i>Bemisia tabaci</i> Biotype B) Greenhouse whitefly (<i>Trialeurodes</i> <i>vaporariorum</i>)		Ensure thorough coverage (See APPLICATION). Apply in 100-150 L water per hectare. Use a higher water volume (500-1000 L/ha) for dense crops. If applying more than 1000 L/ha use a rate of 50 mL/100L water. Apply at first appearance of whitefly. If a second spray is required, a minimum re-treatment interval of 2 weeks must be observed. DO NOT apply more than twice in any one season. To avoid resistance build-up, MULIGAN IGR must be rotated with other approved products with a different mode of action. Apply in accordance with the SLW Resistance Management Strategy.
Citrus	Red scale (<i>Aonidiella</i> <i>aurantii</i>) Black scale (<i>Saissetia oleae</i>)	50 mL/ 100L water	Ensure thorough coverage (See APPLICATION). Red scale: Apply at the time of crawler release. There are usually multiple periods of crawler release from spring through to autumn. Ideally MULIGAN IGR should be applied to control the first generation but if the infestation persists and there is significant crawler release later in the season then MULIGAN IGR can be applied again. DO NOT apply more than twice in any one season on tree crops.
Olives	Black scale (<i>Saissetia oleae</i>)		Black scale: Apply at the time of crawler release which is usually December to January but also may occur in autumn. DO NOT apply more than twice in any one season.

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

GENERAL INSTRUCTIONS:

MULIGAN IGR acts by suppressing embryogenesis with the insect egg and by inhibiting metamorphosis and adult emergence of target insects. MULIGAN IGR has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

MIXING:

Partly fill the spray tank with water. Measure the required amount of MULIGAN IGR, and add to the partly filled spray tank. Add the remaining water required.

APPLICATION:

COTTON:

Ensure thorough coverage. Apply in 100-150 L water/ha when using a ground rig boom spray. Apply in 20-30 L water/ha for aerial application. Ground application must be the first option undertaken. Aerial application may only be applied in cases where canopy closure prevents ground access. Apply when industry recommended thresholds of silverleaf whitefly (SLW) are exceeded. **DO NOT** apply more than two applications per crop. **DO NOT** apply consecutive applications. Apply as part of a SLW management strategy with other approved chemistry for SLW, in particular a non Insect Growth Regulator (IGR) product. The minimum re-treatment interval permitted between the first and second MULIGAN IGR spray is 14 days.

A strategy to minimise spray drift should be employed at all times when aurally applying sprays near sensitive areas. Such a strategy is illustrated by the cotton industry's Best Management Practice Manual.

ROCKMELON, TOMATO AND CAPSICUM:

Ensure thorough coverage. Apply by foliar spray with ground rig in 100-150 L water/ha. Use a high volume 500-1000 L water/ha for dense crops. If applying more than 1000 L/ha use a rate of 50 mL/100L water. Apply at first appearance of whitefly. **DO NOT** apply more than two applications per crop. **DO NOT** apply consecutive applications. Apply the product as part of a silverleaf whitefly (SLW) management strategy with other approved chemistry for SLW, in particular a non-Insect growth Regulator (IGR) product. The minimum re-treatment interval permitted between the first and second MULIGAN IGR spray is 14 days. Apply in accordance with the SLW Resistance Management Strategy.

CITRUS AND OLIVES

It is essential to apply in sufficient water to ensure thorough coverage. For young trees this will be approximately 1000L/ha. **DO NOT** apply in less than 1000 L/ha to bearing trees.

CLEANING SPRAY EQUIPMENT:

After using MULIGAN IGR empty the tank and completely drain the system. Rinse the tank, pump, lines, hoses, filters and nozzles by circulating clean water through the system. Drain and repeat the rinsing procedure twice.