

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

Rygel

PacUp 250 Plant Growth Regulator

Active Constituent: 250 g/L PACLOBUTRAZOL

To reduce vegetative growth in Mango, Stone fruit and Apple Trees

APVMA Approval No: 63915/0709

Pack Size: 1L

GENERAL INSTRUCTIONS

Rygel PacUp Plant Growth Regulator (**PacUp**) is a systemic growth regulator that reduces internode lengths of new shoots and causes earlier formation of terminal buds. Use of **PacUp** should begin only when trees are nearing their optimum size. It is most suited to intensively managed orchards where trees are near to filling their allocated space and growth control is a prime requirement. It is not suitable for old or unhealthy trees. If a tree is under stress **PacUp** should NOT be used.

Stress can be caused by:

- moisture shortage due to lack of rain, or inadequate irrigation
- high temperature
- salinity
- moisture excess due to water table, flooding or inappropriate irrigation
- severe or successive frosts; poor fertility caused by imbalance of major or minor nutrients, diseases, insects, inappropriate herbicide use, mechanical damage.

Tree Management

Treated trees may produce heavier crops and require a higher level of fertilizer application. Ensure that treated trees are not over-watered or subjected to drought stress. In some instances, treated trees may set excess fruit and careful attention should be given to thinning operations. When replanting a treated orchard, at least 3 years should elapse since the last application for **PacUp**. In orchards, which have been treated with collar, drenches of **PacUp**, fresh soil should be provided to allow tree establishment and growth. Remove treated soil. An alternative is to avoid original tree-holes, and place young trees as far as practicable from the treated soil (minimum 1.5m). Where young trees are required to be planted in an established orchard which has been treated with collar

drenches of **PacUp** remove treated soil and replace with fresh soil.

MIXING

Foliar Sprays: To a clean bucket of water add the required amount of **PacUp** and stir to make a smooth mix. Add slurry to half filled spray tank of clean water. Add the required amount of Rygel Cropwett 600 or Agral and agitate during the completion of filling. Frequent or constant agitation of the spray mixture is recommended. Wash out spray tank after use.

Collar Drench: Mix required volume of **PacUp** with recommended volume of water. Periodic agitation may be necessary to prevent settling.

APPLICATION

Foliar Sprays: Apply in a sufficient volume of water to ensure penetration of the spray and good coverage of target tissue, new green stem tissue in the case of apples. Apply in minimum volume of 1000L of water per ha. CropWett 600 at 18mL/100L of water must be added to the final spray volume. It is not normally necessary to reapply the spray if rain follows soon after application.

Collar Drench: Uptake of **PacUp** is most efficient when it is applied to soil, which receives adequate water and where there is a high density of feeder roots. Apply required amount of **PacUp** in 0.5 to 2L of water per tree on to the soil/trunk crack line evenly around the base of the trunk. Where specific rates per tree are not given, the application rate per tree is determined by dividing the application rate per ha by the number of trees per ha. The volume of diluted drench required for even application without runoff will vary with the size of the tree and with soil type and moisture content. Use the higher volume on large trees. Ensure that trees are adequately irrigated following treatment under dry conditions.

Individual trees, which are smaller than average should be left untreated or given a proportionally smaller dose of **PacUp**.

Trickle Point: Apply in 200-300mL water per tree beneath each trickle or dripper point or through the trickle irrigation system. Follow application with a short period of irrigation. Alternatively, the required amount of **PacUp** can be applied through the trickle irrigation system. Equal distribution of water between trees is essential for this method to give a uniform effect.

RETREATMENT

In some cases, control of growth may persist for more than one year. Retreat trees when normal growth resumes. Use the interval between the first treatment and the resumption of normal growth as a guide for retreatment in subsequent seasons.

COMPATIBILITY

PacUp is compatible with any of the following products : Nimrod®, Omite® 300 W, Pirimor® or Dithane® M-45. However, mixing **PacUp** with more than any one of these products may give unpredictable results or may result in crop damage. If carbaryl is used as a thinning spray on apples, allow 21 days before application of **PacUp**.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND THE ENVIRONMENT

Do not contaminate streams, rivers or waterways with the chemical or used container.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, dry, well-ventilated place. 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 500mm 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

Avoid contact with the eyes and skin. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

Further information on this product is contained in a Material Safety Data Sheet [MSDS] available from product suppliers or the manufacturer.

CONDITIONS OF SALE

The use of Rygel PacUp 250 Plant Growth Regulator being beyond the control of the manufacturer, no warranty expressed or implied is given by Rygel Australia Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Rygel Australia Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

In an Emergency Dial 000 Police or Fire Brigade

DIRECTIONS FOR USE

DO NOT use on trees of low vigour or under stress (see General Instructions).

DO NOT use in orchards under-planted with any other crops.

DO NOT apply to young trees which have recently been inter-planted in orchards and which are required to make vigorous growth.

DO NOT apply by aircraft.

| Crop & Situation | State | Application Method | Rate | Critical Comments |
|---|--------------------|---|--|--|
| Mango | Qld, NT & NSW only | Collar, Drench: <u>Trees 3-6 yrs old:</u> Light sands, Clay, Red Volcanics <u>Trees over 6yrs:</u> Light Sands, Clay, Red Volcanics | Per Tree: 8 – 12 mL 12 – 16 mL 16 – 20 mL 20 mL | Apply within 4 weeks after harvest or no later than mid-February. Adjust rate within range according to tree age. Use high rate for older trees. Ensure trees are well watered before and after application. CAUTION: Do not treat young trees with a canopy of less than 3m diameter. CAUTION: Excessive compaction of flower panicles may result from application at times later than recommended or from delayed uptake caused by dry soil conditions. Care should be taken to ensure correct Plant Growth Regulator application to control webworm in compact flower panicles. RETREATMENT: The effects of PacUp on flowering and growth may persist for more than one season. Sandy Soils: Postpone retreatment until after the harvest following resumption of normal growth. Use the interval between the first treatment and resumption of normal growth as a guide to retreatment frequency in subsequent years. Clays & Red Volcanic soils: Retreat each season. If reduction of growth increases progressively from season to season postpone treatment until after the harvest following the resumption of normal growth. |
| Apples: Red Delicious & Granny Smith | All States | Spray | 500mL to 1 L/ha Add 18mL Rygel Cropwett 600 Surfactant per 100L water in final spray volume | Apply in a sequential spray program commencing 28 days after full bloom on Red Delicious or 35 days after full bloom on Granny Smith. Use lower rate on less vigorous trees. Apply subsequent sprays at the lower rate at intervals of 21 days for as long as growth control is required. Activity results from uptake of chemical by young green stem tissue. Do not apply more than 4L/ha per season. CAUTION: If using carbaryl as a chemical thinning agent, plan to allow 21 days between application of carbaryl and PacUp . |
| Peaches, Nectarines | All States | Trickle Irrigation Collar Drench | 2 L/ha 2 to 4 L/ha | Apply in early Autumn or in Spring between 14 days prior to bud burst and full bloom. Late Summer or early Autumn application is recommended for early maturing cultivars. Divide rate per ha by the number of trees per ha to determine the rate per tree. Use high rate on medium and heavy soil types. RETREATMENT: Retreat trees with 2L/ha (trickle) or with 2-3L/ha (collar drench) in subsequent season. Rates of application for retreatment may be reduced if a lesser degree of growth control is desired. On light soils, retreat when normal growth resumes. Use the low rate for retreatment of low vigorous varieties in cool districts. |
| Apricots, Plums | All States | Trickle Irrigation Collar Drench | 2 L/ha 2 to 4 L/ha | Apply in early Autumn or in Spring between 14 days prior to bud burst and full bloom. Bloom dates may be advanced. In plums, ensure that pollinator trees are treated at the same time to synchronise flowering. Divide rate per ha by the number of trees |

| Crop & Situation | State | Application Method | Rate | Critical Comments |
|------------------|------------|---|---------------------------|--|
| | | | | per ha to determine the rate per tree. Use high rate on medium and heavy soil types. RETREATMENT: Do not retreat until the season in which normal growth resumes. |
| Cherries | All States | Trickle Irrigation Collar Drench | 1 L/ha 1 to 2 L/ha | Apply in early Autumn or in Spring between 14 days prior to bud burst and full bloom. Use high rate on medium and heavy soil types. Bloom dates may be advanced. Ensure that pollinator trees are treated at the same time to synchronise flowering. Divide rate per ha by the number of trees per ha to determine the rate per tree. Use high rate on medium and heavy soil types. RETREATMENT: Do not retreat until the season in which normal growth resumes. |

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

**WITHHOLDING PERIOD: APPLES - DO NOT APPLY LATER THAN 21 DAYS BEFORE
HARVEST**