

HARMFUL • ECOTOXIC

Keep out of the reach of children



Payback™

**A growth regulator for cherries, apricots, peaches,
nectarines, avocados (Hass) and turf**

Active Ingredient: 250g/litre paclobutrazol in the
form of a suspension concentrate.

 **AGRECOVERY**

Net: 1 Litre



READ ENTIRE BOOKLET BEFORE USING

HAZARD CLASSIFICATION: 6.1D, 6.3B, 6.4A, 6.8B, 6.9B, 9.1C, 9.3C

This product must not be used for any purpose, or in any manner, contrary to this label unless authorised under appropriate legislation.

TOXICITY:

- Harmful – may be harmful if swallowed, inhaled or absorbed through the skin. May cause eye irritation or mild skin irritation. May cause liver damage or reproductive / development damage from repeated oral exposure.

ECOTOXIC:

- Harmful to aquatic life with long lasting effects. Avoid contamination of any water supply with product or empty container.

HANDLING PRECAUTIONS:

STORAGE: Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Store in accordance with NZS 8409 Management of Agrichemicals. Stores containing 1000 litres of Payback are subject to secondary containment and signage, and more than 1000 litres require emergency response plans.

PERSONAL PROTECTION: Avoid skin and eye contact, or inhalation of spray mist. Do not eat, drink or smoke while using. Wear protective clothing such as face shield, impervious gloves, overalls and boots when handling. Wash splashes of concentrate from skin immediately. Remove protective clothing and wash hands and face thoroughly before meals and after work.

EQUIPMENT: Apply using well maintained and accurately calibrated equipment. Clean equipment thoroughly after use.

DISPOSAL: Triple rinse empty container and add rinsate to soil drench mixture or spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill. Dispose of product only by using according to the label, or at an approved landfill.

First Aid: If swallowed do NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water. If inhaled, move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

Spillage: Wear appropriate protective clothing and prevent material from entering waterways. Absorb spills with inert material and place in waste containers. Dispose of waste safely.

Registered pursuant to the ACVM Act 1997, No. P3270.

See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval Code HSR000779

See www.epa.govt.nz for approval controls.

Marketed by: Nufarm Limited:
6 Manu Street,
Otahuhu,
Auckland, NZ
Telephone (09) 270 4157

Nufarm Emergency Phonenumber: 0800-651 911 toll free 24 hours



Batch No.

D.O.M.

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Transport: Do not carry more than 1 litre of Payback on a passenger service vehicle.

Shelf Life: When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

GENERAL INFORMATION:

It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards.

Payback is a systemic plant growth regulator which acts by reducing gibberellin production. When applied to the soil adjacent to fruit trees Payback is absorbed by roots, and tree extension growth is controlled by reduction of the internode lengths of new shoots and by earlier formation of terminal buds. Although Payback reduces extension growth in the first year of treatment, leading to less pruning, responses in the subsequent years following treatment can be greater due to the reduced vigour of the treated tree and 'carry over' effect of Payback. Fruit bud production, fruit colour and harvest yield can also be favourably influenced.

ORCHARD CROPS

DIRECTIONS FOR USE:

- Payback is most suited to intensively managed orchards where growth control and fruit regulation additional to rootstock influence is a prime requirement.
- Payback's influence on fruit trees is similar to a dwarfing rootstock. Rootstock effectiveness needs to be taken into account when selecting rates of Payback use, i.e. cherries on Mahalab rootstock requires less Payback than other rootstocks.
- Use of Payback should begin only when trees are approaching optimum size but a year or two before overcrowding and competitiveness between trees occurs.
- Payback frequently increases fruit bud number and can advance flowering date. Where cross pollination is required, pollinating trees should also be treated so that blossom times are synchronised.
- In some instances treated trees may set excess fruit and careful attention should be given to thinning operations.
- Treated trees may produce heavier crops and require a higher level of fertiliser application, particularly where high yields have been experienced for a number of seasons, on lighter soil types.

CAUTIONS:

- Payback is NOT suitable for old, low vigour or unhealthy trees.
- Do not apply to trees known or suspected to be suffering from disease i.e. phytophthora.
- If a tree is under stress Payback should NOT be used. Stress can be caused by moisture shortage due to a lack of rain or inadequate irrigation, high temperature, salinity, moisture excess due to high water table, severe or successive frosts, poor fertility caused by imbalance of major or minor nutrients, weed competition, diseases, insects, inappropriate herbicide use or mechanical damage.
- Very large mature trees or vigorous trees can be more difficult to control and results may be unsatisfactory.
- When replanting a treated orchard, at least three years should elapse since the last application of Payback. In orchards which have been treated as a collar soil drench, 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 replacement trees are required to be planted in an established orchard which has been treated with collar drenches of Payback, remove treated soil and replace with fresh soil.
- Do not apply Payback to young trees which have recently been interplanted in orchards and which are required to make vigorous growth.
- Individual trees which are smaller than the average being treated, should be left untreated for a season or two, or given a proportionally smaller dose of Payback.
- Do not use in orchards under-planted with any other crop.

TIME OF APPLICATION:

Cherries and Apricots: Payback should be applied during the time between fruit harvest (post-harvest) and mid August. Application to heavy or high organic matter soils should be early within that period.

Peaches and Nectarines: Application can be extended until September.

Avocado (Hass): Autumn or early winter applications are preferred. Late spring applications can lead to results not being seen that season.

METHOD OF APPLICATION:

Preparation for Soil Drench: Only treat trees growing in weed free strips or squares. Remove any weeds or leaf litter before treatment. If mulched, remove from around the tree base before treatment. Form a furrow 2-3cm deep encircling the trunk, no greater than 0.5 metres from the trunk, or form a collar around the base of the trunk. Uptake of Payback is most efficient when it is applied to soil which receives adequate water and where there is a high density of feeder roots. For trickle point applications, the hard pan at the dripper end may need to be lightly forked to allow even penetration of the dose. If more than one dripper feeds a tree, ensure the correct tree dose is divided by the number of drippers, and ensure even dosage beneath each dripper, by diluting in 500ml of water at each point.

Preparation for Mixing: Slowly invert the container several times before measuring out to ensure uniform mixture. The volume of diluted drench required for even application without run-off will vary with the size of the tree and with soil type and moisture content. Use the higher volume on large trees. Apply the required amount of Payback in 500ml – 2 litres of water per tree onto the soil/trunk crack line or prepared furrow evenly around the base of the trunk.

RATES OF APPLICATION:

(Payback per tree)

AGE OF TREE	Cherries mls	Apricots mls	Nectarines & Peaches mls	Avocado (Hass) mls (See Note*)
Young trees (3 to 5 years)	1-3	2-4	2-4	1.5-2.0/sq m
Established trees (5 to 10 years)	3-6	4-8	4-6	2.0-3.0/sq m
Large trees (older than 10 years)	6-8	8-10	not recommended	not recommended

NOTE: Light to medium soils - use the lower rates
Heavy or organic soils - use the higher rates
High vigour trees - use the higher rates

*RATES (Avocado)

Determine rates by measuring the canopy area of the tree. For even blocks of trees randomly select a minimum of 10 trees, measure height x width in metres then calculate by multiplying measurements to give a canopy area in sq. m i.e. 4.2 m high x 3.6 m wide = 15 sq. m. For blocks of mixed age and vigour trees, calculate each tree canopy. Use 1.5-3.0 ml/sq. m of tree canopy area. Results on large mature avocado trees may not be as obvious as on younger trees.

On heavy or organic soils and where older, large trees are involved, response to Payback application can be delayed. This should be taken into account when choosing the re-treatment regime.

STONEFRUIT:

Dilute the required amount of Payback in 500ml-1 litre of water per tree and apply as a soil drench having cleared away leaves and other plant debris. In high density plantings, apply half the dose in a narrow (5 cm) band on both sides of the tree row.

- Drip or micro irrigation – apply diluted Payback below “drippers” or, in the case of micro-jets or micro-sprinklers, apply the dose around the base (collar) of the tree.
- Overhead sprinklers, flood irrigation or no irrigation – apply diluted Payback around the base (collar) of the tree.

AVOCADO (HASS):

Apply as a collar soil drench. Clear away leaves and debris and form a furrow 2-3cm deep encircling the trunk no greater than 0.5 metres from the trunk. Avoid applying to the drip line or anywhere between trees. Use 1-2 litres of water to evenly apply the dose around the tree.

RETREATMENT:

Treatment programmes will differ between different fruit species, and will also be different between first and subsequent years of application. This is because carry-over effects may reduce the required total dose in the second and subsequent years. In some cases control of growth will persist for more than one year. Retreat trees just prior to resumption of normal growth. Use the interval between the first treatments resumption of normal growth as a guide for retreatment in following seasons. Apply the same rate the following year ONLY if new shoots grow strongly by the end of the first season's treatment. Retreatment is often not required until the second or third year after initial treatment; this can be judged by regrowth rates. Consult your local advisor on retreatment rates. If extension growth has been severely repressed, retreatment should be postponed for one year. On heavy or organic soils and where older, large trees are involved, response to Payback application can be delayed. This should be taken into account when choosing the retreatment regime.

TURF:**DIRECTIONS FOR USE**

For use on **bent grass, perennial ryegrass, Kentucky bluegrass.**

1. To reduce vertical growth, enhance colour and evenness, and improve playing surface speed.

Apply 0.75-1.5 litres/ha at 4-8 week intervals when turf species are actively growing. Use a minimum water volume of 500 litres/ha for even coverage. Irrigate with 4-6mm of water within 24 hours of application. Apply only when there is adequate soil moisture to ensure best growth regulation effect.

2. To suppress annual poa (*Poa annua*) and allow a gradual transitioning to desirable cool-season turf, including bent grass, perennial ryegrass and Kentucky bluegrass.

Apply 1.5-2.25 litres/ha. Make no more than 2 applications in spring, and 1 application in autumn. Use the lower rate where the percentage of annual poa is high and the resultant yellowing would be unacceptable. Apply in a minimum water volume of 500 litres/ha for even coverage. Irrigate with 4-6mm of water within 24 hours of application. Continue normal cultural practices after application. However do not scarify and topdress while annual poa is undergoing growth regulation.

General Comments:

Suppression of annual poa. The degree of suppression will be influenced by turfgrass management practices, climate, soil type, grass variety and annual poa biotype. The growth and competitive ability of annual poa will be reduced within 1-2 weeks of application. After treatment the annual poa will discolour (yellow-brown) and stop or slow growth and allow the desirable turf species to dominate. Application 1-2 weeks prior to seedhead emergence will reduce seedhead visibility but not seedhead formation.

Repeat applications 6-8 weeks apart are required where annual poa content is high and for long term control. (See Constraints). Use in areas containing more than 70% annual poa will result in widespread discolouration of the turf surface and may not appear acceptable to the user. Use of other cultural techniques are encouraged to lower the percentage of annual poa below 70% before treating.

Overseeding: Overseeding is recommended to hasten the conversion from annual poa to more desirable grasses. To avoid stunting the growth of desirable seedlings, allow at least 2 weeks following treatment before overseeding, and in newly overseeded areas, make treatments at least 6 weeks after overseeding.

Constraints:

Do NOT apply when daytime temperatures are consistently above 32° C, or when turf is stressed from heat, cold, or lack of moisture.

Do NOT apply when soils are waterlogged as fixing onto the soil will not occur and the paclobutrazol may move with heavy rainfall or irrigation.

Do NOT apply when the turf has been thinned from disease or insect infestation or damaged from aerification or scarifying.

Do NOT overdose especially under the branch spread of trees and shrubs.

Do NOT scarify and topdress greens whilst annual poa is undergoing growth regulation.

Do NOT use on sportsfields under stress from heavy traffic where maximum growth potential of turf is desired.

Do NOT apply to newly sprigged or sodded turf until grass has knitted down and rooted firmly.

™ Payback is a trademark of Nufarm

CONDITIONS OF SALE:**CAUTION: READ THIS NOTICE BEFORE OPENING THE CONTAINER**

If you open this container you will be deemed to have accepted the conditions below.

The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier or manufacturer of the product or any of their employees and agents.