



Product Name: Floratech PROLONG Growth Regulator
APVMA Approval No: 83316 / 107964



Label Name:	Floratech PROLONG Growth Regulator
Signal Headings:	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	22 g/kg 1-METHYLCYCLOPROPENE
Mode of Action:	
Statement of Claims:	For the Post-harvest treatment of certain fruits and vegetables for improved quality after shipping, storage or handling, as specified in the DIRECTIONS FOR USE table.
Net Contents:	3.8 to 300 gram presented as 5 or 10 water-soluble measure packs which it is illegal to sell separately
Restrains:	DO NOT treat fruit stressed from poor fertility, heat, drought or sun-scald.
Directions for Use:	
Other Limitations:	
Withholding Periods:	NOT REQUIRED WHEN USED AS DIRECTED.
Trade Advice:	
General Instructions:	

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Resistance Warning:	
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Precautions:	<p>Warning Statements and General Safety Precautions After the area is sealed, post a sign on all the entrances to the treatment area. The sign should read "CAUTION. Do not enter area. FLORATECH PROLONG treatment in progress." Do not enter or allow worker entry into treated areas prior to venting the volatile active ingredient from the treatment room.</p> <p>RE-ENTRY PERIOD Do not allow entry into treated areas for 30 minutes after the room has been vented. For early entry to treated areas wear a full face-piece respirator with organic vapour/gas cartridge or canister.</p>
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Protections:	<p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT DO NOT contaminate streams, rivers or waterways with the chemical or used containers.</p>
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Storage and Disposal:	<p>Keep out of reach children. Store in the closed, original container in a cool, dry, well ventilated area. Do not store for prolonged periods in direct sunlight. Do not dispose of unused chemical on site. After use, triple rinse the PROLONG Application Container(s) with water. Any remaining treatment solution and rinsate can be disposed of on site by pouring down a drain connected to a sewage treatment plant (or other treatment facility) or at an approved disposal facility. Do not burn empty containers or product.</p> <p>To return any PROLONG Application Container(s) or equipment, contact your Floratech International Pty Ltd agent or representative.</p>
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Safety Directions:	<p>Will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use, wear chemical resistant clothing buttoned to the neck and wrist and washable hat, elbow-length butyl rubber gloves and full facepiece respirator with organic vapour/gas cartridge or canister. Wash hands after use. After each day's use, wash gloves, respirator and if rubber wash with detergent and warm water, and contaminated clothing.</p>
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First Aid Instructions:	<p>If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.</p>
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First Aid Warnings:	
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DIRECTIONS BEFORE USE:

Crop	Mode of Action	Rate grams per 100m ³	Critical Comments
All situations			<p>Apply using a minimum of 200mL of water per gram of PROLONG powder, with a minimum of 1500mL water per application container.</p> <p>In large treatment rooms, or if using more than two pouches of PROLONG, use two, or more evenly spaced application vessels to get an even distribution of the 1-MCP gas.</p> <p>When using PROLONG for the first time, use an amount of powder near the higher rate. A lower rate can be used as local experience is developed for each particular use situation.</p> <p>Fruit may benefit from repeat application.</p> <p>See Application Section for details.</p>
Apples Mango Plums	Post harvest application in an enclosed area, eg cool room, truck, shipping container, plastic tent or bag	6.5 – 9.2 g	Apply to apple, mango, melon and plum as soon after harvest as possible.
Apricot Broccoli Cabbage Carrot Cucumber Kiwifruit Melons Nectarines Persimmons		4.4 – 6.2 g	Apply to apricot, broccoli, cabbage, carrot, cucumber, kiwifruit, melon, nectarine, persimmon as soon after harvest as possible.
Tomatoes			Apply to tomatoes between colour stage breaker (USDA Colour Stage 2) and light red (USDA Colour Stage 5).
Avocados		2.6 – 6.2 g	Apply to avocado as soon after harvest as possible. For late season and mature fruit, use high end of application range.
Bananas Lettuce Papaya Pears		2.6 – 3.8 g	Apply to bananas at colour stage 3 – 3.5. Apply to lettuce, papaya and pears as soon after harvest as possible.

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

GENERAL INSTRUCTIONS

FLORATECH PROLONG Growth Regulator is a Wettable Powder (WP) product packaged in a water soluble pouch that, when mixed with water, releases the volatile, active ingredient 1-methylcyclopropene (1-MCP) as a gas.

PROLONG is a post-harvest tool for counteracting many of the undesirable effects of both internal (produced within the fruit) and external sources of ethylene on harvested fruit.

PROLONG counteracts ethylene production during transport and storage by :

- Maintaining firmness
- Maintaining titratable acidity
- Preventing superficial scald on apples
- Reducing incidence of peel greasiness in apples
- Reducing incidence of mealiness

PROLONG can be used immediately after harvest, prior to storage, prior to shipment and/or just prior to sale.

PROLONG is effective under both cool (below 13°C) and warm (above 13°C) temperature conditions. To realise maximum benefit in controlling senescence, products should be treated as soon as possible after harvest.

Harvested fruits must be exposed to the volatile active ingredient of **PROLONG** in enclosed areas, such as storage rooms, coolers, shipping containers, enclosed truck trailers, or ambient temperature, refrigerated, or controlled atmosphere food storage facilities. This product is not intended for use outdoors or in other non-enclosed areas. These enclosed treatment areas should be gas tight as leakage will reduce the effectiveness of **PROLONG**.

Fruit Storage Conditions

PROLONG is compatible with, and complementary to, fruit stored under both controlled atmosphere and regular air fruit storage conditions. Treated avocado should be stored under regular air only. **PROLONG** must be used in air-tight treatment areas.

Timing of Harvest and Application

PROLONG should be added to the treatment area containing fruit immediately after harvest, upon entering storage or in transit.

For best results, **DO NOT** use with fruit previously treated with Ethephon.

To realise maximum benefit for optimum quality, fruit should be pre-cooled promptly and **PROLONG** should be applied in the treatment area as soon after harvest as possible and before the climacteric peak of respiration has occurred.

Best results from **PROLONG** are obtained with fruit at the optimum maturity level for long term storage. Fruit may benefit from repeat application. After application, fruit not for immediate sale should be stored, according to good standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere is recommended for fruit that is to be held longer than 6 months.

It must be emphasised that maintaining the cold chain (keeping the fruit cool at all times) and strict adherence to phytosanitary practices remain essential in maintaining safe and high-quality fruit.

For optimum control of superficial scald on pome fruits, **PROLONG** must be applied within two weeks of harvest.

APPLICATION

Prior to application, ensure that the treatment area can be properly and promptly sealed following application. Treatment areas should be checked for vapour leakage as excessive leakage reduces effectiveness of **PROLONG**. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more air tight. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute **PROLONG**.

Important : During the application make sure that scrubbers (carbon dioxide and ethylene) and ozone generators are **switched off**.

PROLONG is applied by adding the required number of water soluble pouches of product to water contained in a suitable application container. On addition to the water the pouch will dissolve, releasing the product, which then interacts with the water to slowly release the 1-MCP gas over several hours.

Selection of Quantity of PROLONG Powder

The selection of the amount of **PROLONG** powder is based on the volume of the treatment area and crop to be treated. When using **PROLONG** for the first time, use an amount of powder near the higher rate. A lower rate can be used as local experience is developed for each particular use situation. Consult your local Floritech International Pty Ltd representative for more information.

Firstly, Calculate the treatment area volume by measuring the length, width and height of the treatment area in meters. Multiply these three numbers together to obtain the **treatment area volume** in cubic meters.

For example, if a room is 4 metres wide, 5 metres long and 5 metres high, the **treatment area volume** is 4m x 5m x 5m, which equals 100 cubic metres

Secondly, Calculate the amount of PROLONG powder, by multiplying the **treatment area volume** by the **use rate** shown in the Direction For Use table for the selected crop and use the single pouch, or number of pouches that corresponds most closely to the calculated amount.

For example, to calculate the amount of **PROLONG** powder for a 300 cubic meter apple room, multiply 300m³ times 9.2 g/100m³, and then divide by 100 to give 27.6 grams of **PROLONG** powder. Select the number of pouches to provide an amount of **PROLONG** powder that falls within the use rate range. In this case, the selection of 3 x 9gram pouches to give a total of 27 gram of **PROLONG** powder is acceptable.

Application Container and Water Rate

A suitable Application Container is an open plastic or metal bucket with enough space to hold the water and pouches and allow for any foaming that may occur. The bucket can be static, or agitated mechanically or by using a battery operated aerator, if required. Adding a small amount of an anti-foam agent, such as **Floritech Antifoam C**, may be required if an aerator is used. Contact your Floritech International Pty Ltd agent or representative for more details on application equipment.

The amount of activation water required is not critical but needs to be sufficient to ensure the full dissolution of the water soluble pouches and not evaporate to a low level during application in the

cool-room or treatment area.

Use water at a temperature of between 20 degrees and 40 degrees Centigrade.

Recommended Water Rates and Application Details

Situation /Quantity of PROLONG Powder	Activation Water Quantity	Critical Comments
Less than 8grams	1500mL minimum	Use an open 2 litre or larger application vessel, such as a plastic or metal bucket.
More than 8grams	200mL water per gram	Select an open applicator vessel such as a plastic or metal bucket sufficiently large to contain the all the water and product and allow for ample ullage in case of foaming.
Small rooms, tents	200mL per gram	One applicator is usually sufficient
Large stores, coolrooms	200 – 400mL per gram	Consider dividing the required amount of powder amongst two or more suitably spaced applicators within the room to ensure a more even distribution of the 1-MCP gas. Use of the higher rate of 400mLof water per gram of product may be more suitable in some situations depending on availability of application vessel sizes, agitation and water evaporation rates in the space. Users need to rely on local experience for each particular situation

Application Checklist

1. Fill the treatment area with fruit. Place the appropriate Application Container on a stable surface of the treatment area in a position that would be within the flow of air from the internal refrigeration system.
2. Fill the Application Container with the required amount of ambient, or slightly warm (20°C-40°C), water. If using an agitated Application Container, add antifoam as per the supplier’s recommendations, Commence agitation or aeration if using.

3. Remove the appropriate size and number of **PROLONG** water soluble pouches from the protective foil packets and drop the pouches into the water contained in the Application Container.
4. Immediately leave the treatment area and seal the door(s) in order to contain the 1-MCP gas and ensure the maximum efficacy of the 1-MCP. The release of the 1-MCP to the area will start several minutes after the water soluble pouch is added to the Application Container.
5. After the area is sealed, post a sign on all of the entrances to the treatment area. The sign should read :

**"CAUTION. Do not enter area.
FLORATECH PROLONG treatment in progress."**

Treatment Times

The doors to the storage area should remain sealed for the following periods of time to ensure an effective **PROLONG** treatment :

Crop	Treatment Time
Apple, Apricot, Banana, Broccoli, Cabbage, Carrot, Cucumber, Kiwifruit, Nectarine, Papaya, Pear, Persimmon, Plum	24 hours
Avocado	16-24 hours
Lettuce, Mango, Melon, Tomato	12-24 hours

Entrance to the room prior to these times may compromise the treatment. During the treatment, the internal refrigerated air circulation should be running to ensure good air circulation within the room. All vents to outside air should be closed.

Finishing the Treatment

At the end of the **PROLONG** treatment period, vent the treated area or room by opening the doors for a minimum of thirty minutes with continued full internal ventilation before allowing workers to enter.

After room venting, remove the **PROLONG** Application Container(s). The spent water in the Application Container(s) and any rinsate, should be disposed of by pouring down a drain connected to a sewage treatment plant or other treatment facility.

Treated fruit not intended for immediate sale should be stored according to good, standard commercial practices, in either refrigerated air or controlled atmosphere. Storage in controlled atmosphere conditions is recommended for fruit that is planned to be held longer than 6 months.