

SUNNY[®]

Optimising marketable yield in avocados



**Approved for
use when fruit is
still on the tree.
Suitable for use
in all states.**



SUNNY

INTRODUCTION

SUNNY® is a plant growth regulator successfully used by avocado growers around the world to improve orchard productivity and fruit quality.

SUNNY is applied as a foliar spray to healthy trees at flowering. It is absorbed by the tree's soft tissue comprising leaves, stems and flowers and translocated acropetally (upwards and outwards) via transpiration flow in the xylem.

There are several key benefits from using SUNNY:

- Increased average fruit size
- Higher marketable yield and profitability
- Premium grade fruit
- Short 14 day with holding period
- No long-term negative impact to trees from bio-accumulation
- Improved fruit shape (produce rounder, less pear-shaped fruit)



Sunny treated
Shepard vs untreated



- Can use more than once per season if required

SUNNY IS ABOUT PRODUCING LARGER FRUIT AND LARGER PROFITS

Growers around the world know that SUNNY is an investment that pays dividends. Here is what leading Australian growers have to say about SUNNY.

"It works for both yield and size – we chase size. You know you're going to get best quality fruit and more of it. Even in low yield years it has still paid for itself."

Denham Rackemann
Goodwood Plantation
Childers, Queensland

"Size is the number one advantage and kilos of fruit is the number two advantage. If you're interested in improving yield in healthy trees, SUNNY is certainly something to consider."

Don Lavers
Atherton, Queensland

"Increased profit, size and more fruit set. You're definitely better off using it – miles in front."

James McCulloch
Mt Tambourine, Queensland

INCREASED AVERAGE FRUIT SIZE

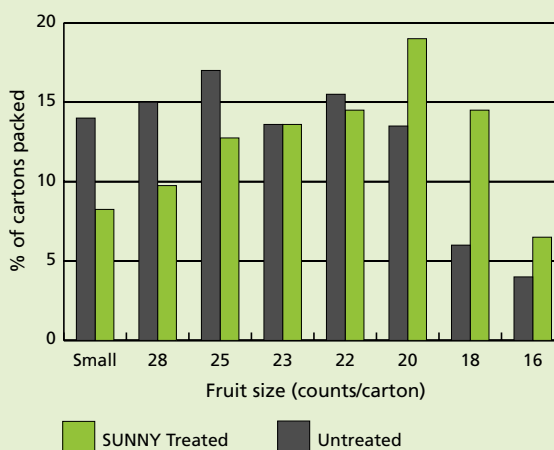
To optimise returns, growers aim for a high pack-out of the 18-23 count cartons which attract premium market prices.

In field trials conducted by QDPI in commercial orchards in Australia, SUNNY has consistently increased average fruit size and significantly improved pack-out performance.

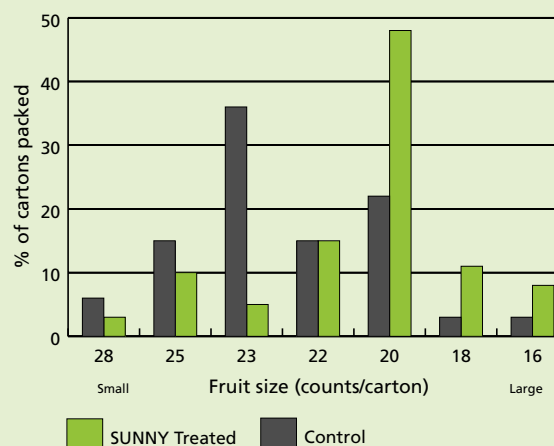
The following experimental results demonstrate the response with increased fruit size to the pack-out performance of SUNNY treated trees compared to untreated controls.

Pack-out results from trials

Childers, 1999/00 fruiting season. Shepard treated with 1% SUNNY. Trial conducted by Tony Whaley, Principal Horticulturist, Queensland Horticulture Institute, QDPI.



Glasshouse Mountains, 1998/99 fruiting season. Hass treated with 1% SUNNY. Trial conducted by Tony Whaley, Principal Horticulturist, Queensland Horticulture Institute, QDPI.



DIRECTIONS FOR USE:

RESTRAINTS:

DO NOT use on avocado trees that are under stress from disease, lack of moisture or nutritional deficiencies.

Situation	Purpose	Rate	Critical Comments
Avocados	To enhance fruit shape and increase average fruit size. Reduction in vegetative growth.	Dilute Spraying Apply SUNNY as a foliar spray at the rate of 0.5 to 1 L /100 L water plus Agral* non-ionic wetting agent at 0.05%. Concentrate Spraying Refer to Application section	Apply at mid bloom i.e. when 50% of flowers have opened. (See additional notes under Application) DO NOT apply to trees where symptoms of Phytophthora root rot are present. See Orchard Management in General Instructions. Growing conditions can affect plant response to this product, i.e. day length, temperature, water regime, seasonal factors etc. Dose rate will depend on factors such as uniformity of flush, tree vigour etc and growers should consult Sumitomo Chemical or their SUNNY supplier before deciding on the dose rate applicable to their orchard. Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.

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

WITHHOLDING PERIOD:

DO NOT harvest fruit for 14 days after application.

GENERAL INSTRUCTIONS:

SUNNY is a plant growth regulator that acts by influencing gibberellin production. Its use will result in enhanced fruit shape (less necky fruit) and increased average fruit size. In well managed, healthy orchards an increase in total yield may result.

Orchard management:

1. Do not apply SUNNY to trees that have shed more than 15% of their leaves when flowering as it is likely that these trees have a significant level of Phytophthora infection.
2. Harvest the SUNNY-treated trees as soon as the fruit reaches maturity as "hanging" fruit will continue to accumulate oil to the detriment of flowering and cropping the following season.
3. Maintain optimum growing conditions and good orchard management to minimise stress and alternate bearing.

MIXING INSTRUCTIONS:

Water pH and hardness: SUNNY should not be applied in alkaline water or hard water (>1000 mg/kg solutes). Where necessary use a buffer agent to reduce pH to between 4.5 and 5.5. Balance NP Buffer can be used to reduce water pH and soften water. Balance NP Buffer will also act as a foliar fertilizer which may aid in the uptake of SUNNY.

Shake container well before use. Half fill the spray tank with clean water and whilst constantly agitating add the required amount of SUNNY. Thereafter, add the wetting agent and, if required, Balance NP Buffer. Fill the spray tank to the required level with water while agitating. Ensure vigorous agitation of the mixture in the tank during mixing and spraying.

DO NOT allow spray mixture to stand for prolonged periods.



SUNNY



APPLICATION

SUNNY is ideally applied during wind free and high humidity conditions – preferably in the early morning or late afternoon.

SUNNY should be applied to trees at mid bloom i.e. when 50% of the flowers on the tree have opened. This will mean that 70% of flowers will have opened on the northern side of the tree and 20% on the southern side. There should be no more than 10% of the vegetative terminals growing at the time of application. Failure to apply SUNNY at the correct timing can give a poor result.

Direct spray so that it reaches the green vegetative growing points:

- 65% of spray volume should be aimed at the top 1/3 of the tree
- 25% of spray volume should be aimed at the centre 1/3 of the tree
- 10% of spray volume should be aimed at the bottom 1/3 of the tree

DILUTED SPRAYING

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of wetness, avoiding run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to point of wetness, avoiding run-off. Soil contamination should be prevented.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

CONCENTRATE SPRAYING

- Use a sprayer designed and set up for concentrate spraying (that is, a sprayer which applies water volume less than those required to reach point of run-off) an matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine an appropriate dilute spray volume (See *Dilute Spraying* opposite) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way:

Example only:

1. Dilute spray volume as determined above:
for example 1500 L/ha
2. Your chosen concentrate spraying volume:
for example 500 L/ha
3. The concentration factor in this example is:
 $3 \times$ (that is, $1500 \text{ L} \div 500 \text{ L} = 3$)
4. If the dilute label rate is 1 L/100 L, then the concentrate rate becomes $3 \times 1 \text{ L}$, that is, 3 L/100 L of concentrate spray.

- The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows.
- For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

PROTECTION OF LIVESTOCK, WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Do not contaminate streams, rivers, waterways or dams with the chemical or used containers. Do not allow the chemical to contact other crops, pastures or desirable vegetation.



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