



RAYNOX[®]

*A Clear Solution
to Sunburn*

Effective and Convenient Sunburn Protection

The Choice is Clear!

- RAYNOX[®] does not leave a visible residue, allowing growers to colour pick.
- Aggressive cleaning is not necessary to eliminate residues in the packingline.
- Won't wash off easily and does not require reapplication after rain.
- No negative effects on beneficial insects; does not encourage "mite flare ups".
- Does not cause irritation to nasal passages or skin of orchard workers.
- RAYNOX[®] reduces sunburn by 50% on average.
- RAYNOX[®] is an easy to use liquid formulation, available in 200L & 25L containers.



Raynox is distributed exclusively in Australia by:

Colin Campbell (Chemicals) Pty Ltd

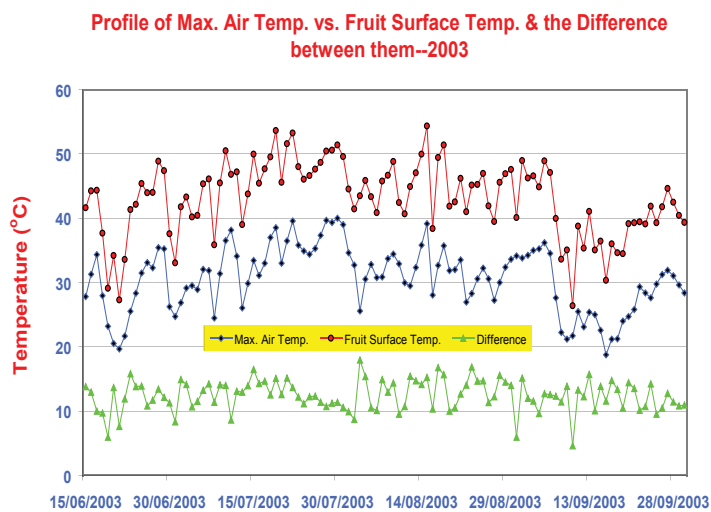
RAYNOX[®] is a
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of FruitGard, LLC.
Manufactured by

Pace
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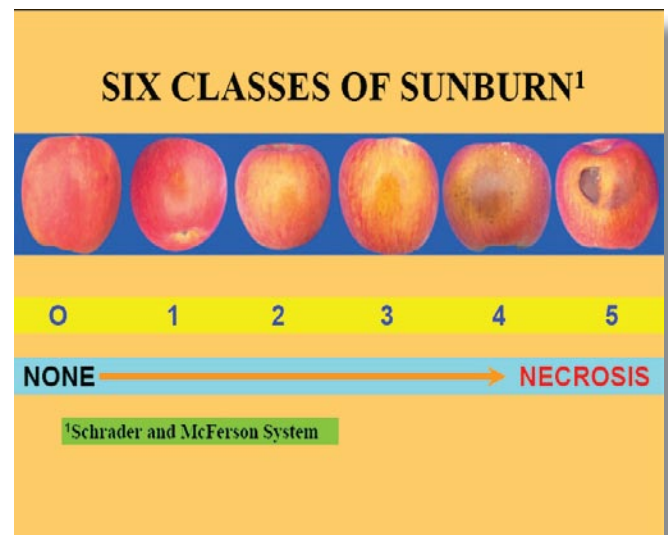
Sunburn in Apples

- Is caused by excessive heat and exposure to solar radiation (UV light).
- Sunburn is induced when the apple surface temperature reaches 45°C to 49°C for a period of 1 hour. For this to occur in Australia the key conditions would be an air temperature of about 30°C and/or low humidity, (see graph below).
- Sunburn Necrosis (see below) occurs when the apple surface temperature exceeds 52°C for only 10 minutes. Thermal death occurs and necrosis appears.
- Sunburn is also a major source of cullage in packing sheds, costing growers large amounts of money every year.

This graph illustrates the relationship between air temperature & fruit surface temperature. Note that fruit surface temperature can be considerably higher than air temperature, and it is fruit surface temperature that determines the level of sunburn.



The Schrader & McFerson sunburn Scale.

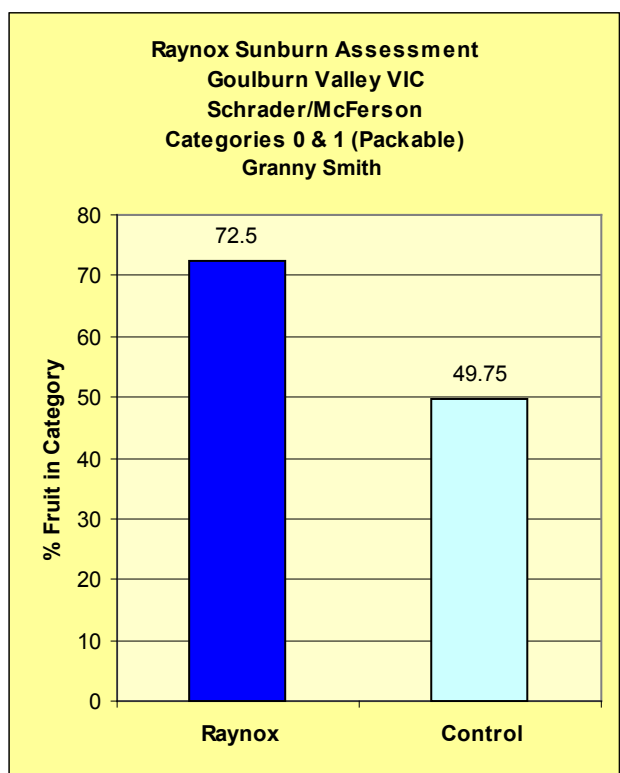


How does RAYNOX[®] Effectively reduce sunburn?

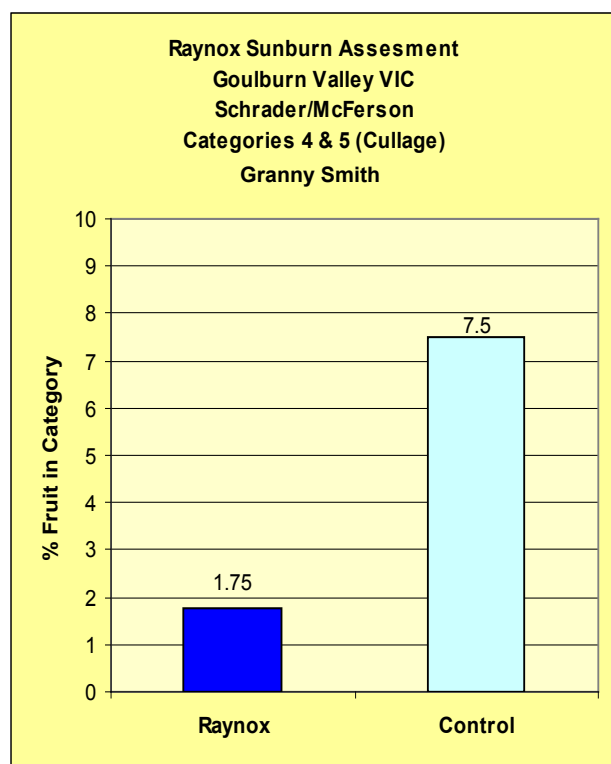
- RAYNOX is a liquid concentrate formulation that produces a CLEAR film on the fruit surface.
- RAYNOX protects the fruit from Sunburn by reducing the amount of UV and visible light reaching the fruit surface.
- RAYNOX lowers the "stress load" in the fruit reducing the generation of oxidative molecules, resulting in fewer sunburn symptoms.
- Independent testing worldwide has shown that Raynox performs as good as any particle film product available in the market.



Results of an Australian RAYNOX® trial, 2005.



Assuming only top quality fruit is packed (sunburn level 0 or 1 from Schrader/McFerson scale left) RAYNOX® treated fruit had 46% more fruit for packing as first grade than untreated fruit.



Assuming that sunburn levels 4 and 5 (from Schrader/McFerson scale left) are cullage, RAYNOX® treated fruit had 77% less cullage than untreated fruit.

How do I use RAYNOX®?

Applications of Raynox need to **start before sunburn occurs and effective sunburn reduction occurs using a 4-5 spray program.**

1. The first application should be applied 7 weeks after full bloom. This usually occurs about mid-late November but make sure that you apply it before the first heat event around this time.
2. A second application should be made 7 – 10 days later.
3. The third application should be made 3 weeks later
4. The fourth application should be made 4 weeks later.
5. The fifth application (if needed) should be made 4 weeks later.

Any subsequent applications that are needed should be made at 4 weekly intervals.

Apples are most vulnerable to sunburn when air temperature is 30°C with low humidity.

If these conditions are likely to occur around the time an application of Raynox is due, apply Raynox **before** these conditions occur.

How much do I use?

For the commonly ground application (by airblast) apply 25L Raynox/975L treated water for each hectare (ha) (1:40 ratio). Apply this solution at a rate of 1,000L per ha.

For aerial application (by helicopter only) apply 25L Raynox per hectare in 120L of solution per hectare (120L solution = 25L Raynox & 95L treated water).

No matter what application method you use make sure that use you the correct amount of Raynox Water Softener!

Frequently Asked Questions (FAQ)

Do I need to use this water softener?

YES! The use of the correct amount of Raynox Water softener is crucial to the use and performance of Raynox. If you do not use the correct amount of water softener you can suffer product degradation and it may adversely affect Raynox's performance and fruit finish.

Does Raynox need to re-applied after rain?

No! Raynox is rainfast within about 1 hour after application and does not need to be re-applied after rain.

Can I just spray my crop when temperatures are hot?

To get sufficient sunburn reduction you must follow the 4-5 spray program. The multiple sprays are designed to keep up with the apples natural growth and coat newly grown areas with Raynox. If applications are too far apart then newly grown areas are unprotected and are easily sunburnt.

My spray tank holds more than 1,000L water. Do I still put 25L Raynox in?

You must maintain a dilution of 1:40. Using 25L of Raynox in more than 1,000L will dilute Raynox too much and result in lower efficacy.

This means if your tank holds:

1,500L water add 37.5L of Raynox

2,000L water add 50L of Raynox

2,500L water add 62.5L of Raynox

My spray equipment is calibrated to less than 1,000L per hectare. What should I do?

A water volume of 1,000L/ha is preferable. However, if a lower volume of water is used (minimum 500L/ha) a Raynox rate of 25L/ha must be maintained.

I don't think a 1,000L per hectare is enough water volume to effectively treat my trees?

When applying Raynox we do not need coverage on the whole tree. We are mainly concerned with treating the exposed fruit and the tops of the trees. It is always advisable to shut off the bottom 2 nozzles on each side of the sprayer. This will help you achieve 1,000L/ha and get full coverage.

It is during the season and I see sunburn on my fruit, why hasn't Raynox worked?

On the contrary Raynox has been working! Like all sunburn products Raynox reduces the effect of sunburn and moves the majority of your fruit into categories 0 and 1 of the Schrader McFerson sunburn scale. There will always be sunburnt fruit but when you use Raynox there will be less of them!

Also unlike particle film products Raynox is clear and does not hide any sunburn, so the human eye will automatically go towards that sunburnt fruit. The best way to assess the performance of Raynox is to analyse the pack out percentages of that particular block.

Australian growers have reported a 10-15% better packout after using Raynox!

Can I tank mix Raynox with any other product?

NO! Raynox needs to be applied on its own as compatibility and interaction with any other product in a tank mix has not been established.

Make the clear choice and call us today for the location of your nearest retailer and to learn more about how RAYNOX can help reduce your cullage and increase your profits.



Raynox is distributed exclusively in Australia by:

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