

ProTone™ Plant Growth Regulator – *Picture the Possibilities™*



is an exciting new development for table grape production in Australia. ProTone SG, containing the natural plant hormone s-ABA (Abscisic Acid), allows growers to accelerate or increase the red colouration of their red table grape varieties.

ProTone SG applied to maturing grapes accelerates the accumulation of anthocyanin in the skins of maturing grapes. Anthocyanins are responsible for the red colour of the skins of the red grape varieties.

While the climate, soils and irrigation in the table grape growing areas of Australia help to produce the large tasty grapes that these areas are famous for, these conditions can also mean that developing the colour that the markets are looking for in red table grapes can be difficult.

Factors Influencing Colour Development in Red Table Grapes

- **Temperature** – Generally, the daytime temperatures in the Australian growing regions are above the optimal for photosynthesis in grapes and therefore berry maturity. This situation is partly helped by the cool night temperatures, but overall temperature is a major limiting factor in colour development.
- **Shading** – Sunlight is also important for colour development. The need for rain covers, shade netting and dense foliage all contribute to slowing colour development.
- **Nutrition, irrigation and crop load** – High rates of nitrogen fertilizer, excessive irrigation and large crop loads can all contribute to slowing colour.
- **Other factors** – Rootstocks, vine management, trellis systems and other cultural practices can all play a part in how quickly red table grapes develop colour.



ProTone SG is a powerful new tool to help growers overcome the problems that prevent achieving the desired colour in their red table grapes, but it should never be seen as a replacement for good grape cultural practices.



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Directions for Use

RESTRAINT:

Do NOT apply to plants under pest, nutritional or water stress.

Do NOT apply if rainfall or overhead irrigation use is likely within 6 hours of spraying.

Do NOT apply with aircraft.

Crop	Use	Situation	Rate	Timing	Critical comments
Table Grapes (<i>Vitis</i> spp.)	Accelerate or increase the colouration in berries and bunches	Where the time between veraison and 1st pick is expected to be less than 3-4 weeks	25-100 g/100 L	From 1 week prior to veraison until veraison	<p>Typical for varieties such as Flame Seedless and Ralli Seedless, but also suitable for some blocks of other varieties such as Crimson Seedless and Red Globes where rapid maturation is typical.</p> <p>Apply in 1750 to 2500 L water/ha with Pomade™ Wetting Agent as detailed in mixing instructions.</p> <p>Ensure even coverage of all bunches as uneven coverage may result in unevenly coloured bunches especially when using rates above 50 g/100 L.</p> <p>Colour responses increase with increasing dose rate and it is recommended that growers initially spray small areas with lower dose rates (25-50 g/100 L is the recommended starting point) in order to gain familiarity with ProTone SG effects on specific blocks as the effect will vary based on variety, canopy structure, crop load, rootstock and season.</p>
		Where the time between veraison and 1st pick is expected to be greater than 3-4 weeks	25-100 g/100 L	From 1 week prior to veraison to 2-3 weeks prior to harvest	<p>Typical for varieties such as Crimson Seedless and Red Globe, but also suitable for some blocks of other long-season varieties. These types of varieties typically respond best to treatments initiated one week after veraison.</p> <p>Apply in 1750 to 2500 L water/ha with Pomade Wetting Agent as detailed in mixing instructions.</p> <p>Ensure even coverage of all bunches as uneven coverage may result in unevenly coloured bunches especially when using rates above 50 g/100 L.</p> <p>Colour responses increase with increasing dose rate and it is recommended that growers initially spray small areas with lower dose rates (25-50 g/100 L is the recommended starting point) in order to gain familiarity with ProTone SG effects on specific blocks as the effect will vary based on variety, canopy structure, crop load, rootstock and season.</p> <p>Multiple applications may be necessary in poor colouring blocks or where growers have used a lower dose rate at veraison and the colour enhancement is still insufficient for marketing. Maximum effect of ProTone SG is achieved 2-3 weeks after application (although the grapes may continue to colour naturally) and growers should examine the sprayed blocks after 2-3 weeks in order to determine if further sprays are necessary.</p> <p>In varieties with multiple and extended harvests, applications can be made to enhance the colour of later harvests by applying ProTone SG at 25 g/100 L 2-3 weeks prior to the next harvest.</p> <p>When making multiple applications do NOT apply more than 5 kg/ha ProTone SG per season.</p>

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.

Getting the Best from ProTone SG

- **Application timing** – The earliest ProTone SG can be applied is one week prior to veraison, and the latest is 3-4 weeks prior to harvest.
- **Number of applications** – Given that in the early season varieties the period from veraison to harvest can be very short, only one application is usually possible. In later varieties multiple applications may allow for progressive build up of colour evenly over the bunch.
- **Water volume/Coverage** – Thorough coverage of the berries and the bunch is essential for good results with ProTone SG. The product is not systemic or translocated. To achieve good colour on the entire bunch, rather than good colour only on the exposed portion of the bunch, uniform coverage is essential and can only be achieved by using correct water volumes and excellent sprayer setup. The recommended water volume per hectare is between 1750 and 2500 litres. Exposing the bunches to the application by leaf plucking and cane pruning will assist in even coverage. Spray when conditions will allow slow drying of the spray on the bunch (high humidity, low temperature).
- **Dose rate** – The colour response increases with increased dose rate. Where only one application is going to be made 50 g/100 litres is recommended. Where multiple applications are to be made, 25 g/100 litres is a good starting point.
- **Wetters** – Pomade wetting agents should be added at 20 mL/100 litres of spray.



Poor coloured grapes

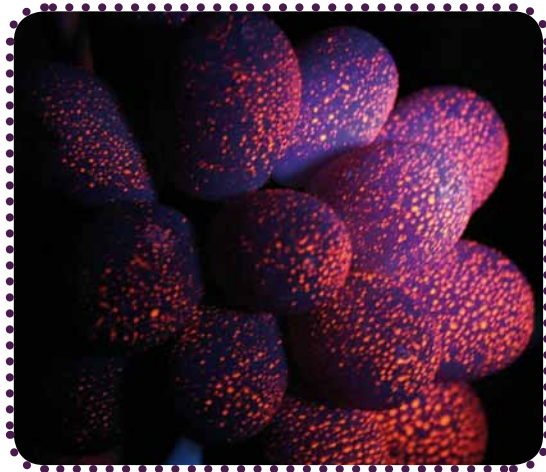


Colour after application

Another new ground breaking Plant Growth Regulator from Sumitomo Chemical

ProTone is registered by Valent BioSciences Corporation (VBC), which is a subsidiary of Sumitomo Chemical. VBC was created 10 years ago when Sumitomo Chemical acquired the Ag Specialities Business of Abbott Laboratories. This heritage has helped Sumitomo Chemical Australia deliver an unequalled range of environmentally compatible plant growth regulators (PGRs) that are naturally occurring or chemically derived. Many fruit growers will be familiar with some of the products in this range of PGRs.

- ProGibb® SG and Liquid to increase the yield and quality of table grapes, citrus and prunes and increase winter pasture growth.
- Cytolin® to enhance quality and yield of apples.
- MaxCel® fruit thinner that increases apple size.
- Ralex™ for thinning stone fruit and citrus.
- ReTain® for harvest management fruit quality and storage improvement in apples and stone fruit.
- NAA 20 for fruit setting and thinning in apples and pears.
- Cyan™ for regulating bud burst in grapes and kiwifruit.
- Sunny® to enhance fruit shape and size and regulate vegetative growth in avocados.
- Thin-It™ for blossom thinning in apples and stone fruit.



Thorough spray coverage illustrated by using fluorescent dye to analyse application



The newest addition to this range is ProTone SG is an exciting new tool for growers looking to enhance the red colouration of table grapes.

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