



Surround® WP

Crop Protectant

Applying Surround® with Du-Wett[†]

Perfect partners to maximise protection against sunburn and heat stress.

Surround has been proven to reduce sunburn and heat stress in a wide range of crops in many parts of the world. Du-Wett is a unique adjuvant specifically designed to improve spray coverage in agricultural crops.

In line with a growing trend to use low volume orchard sprayers such as the Quantum Mist[†] or standard airblast sprayers that have nozzle modifications this AgNote highlights application strategies to maximise protection, and minimise application costs.

Any Surround program needs to be well planned to give the best value to the grower.

The end result



1. An apple showing satisfactory coverage of Surround.

The aim of any Surround application should be to have the exposed leaves and/or fruit covered evenly with 2 or more sprays (total combined application rate of approximately 75 kg/ha) before the first heat event occurs.

In cooler districts it may be early December. In hotter areas of Australia this is likely to be in early to mid November.

Application

Surround application strategies vary between growers and depend on their individual situation and application equipment.

One of the key benefits of Surround is its high visibility allowing growers to easily check on the quality of their application and make adjustments to improve it.

While the Surround label recommends the initial application at 5kg/100 L of water many growers choose to apply the product in lighter concentrations applied more frequently.

Just like spray painting, many light coats are better than one heavy coat. If high concentrations are applied with large spray droplets application can be blotchy and spray solution can run off the surface into the stem end or calyx, leading to removal problems on the packing line.

The sprayer should be adjusted to apply a fine coat to exposed leaves and fruit. It is not necessary to blast Surround through the canopy if it is applied alone. Some growers achieve this spray pattern by switching off the fan and blocking the bottom nozzles on air blast sprayers.

Alternating the direction of travel down the rows with subsequent applications will assist achieving even coverage.

Sprayer set up

Sunburn occurs mainly from the top. Using a sunburn product like Surround, it makes sense to deposit the product on the top of the fruit. This can be optimised if the spray is directed from the top, eg. Croplands Quantum Mist Apple Tower. Conventional airblast machines, blasting from the bottom, struggle to achieve an even coverage on top. However, because there is significant inter-row interaction / deposition some product will always find its way on top of the fruit.

Water Volumes and Du-Wett

Du-Wett is the perfect partner for Surround.

Du-Wett increases the spread area of droplets on the plant leaf surface by up to eight times compared with the area covered by conventional non-ionic surfactants.



2. Initial spray with Surround at 1000L per hectare of water.



3. Surround sprayed with Du-Wett in 400 L per hectare of water



Croplands Quantum Mist Apple Tower.

The distribution is more even, like a film (see photograph 3), so large water volumes are not required. For products like Surround the result is significantly improved coverage. Once enhanced with Du-Wett, a single drop will cover more evenly the same area that needed many drops previously. Consequently the plant surface **can't hold dilute water rates**: the volume (and Surround) would simply run off. When using Du-Wett it is essential to use at least 3 times concentrate.

Du-Wett Rate

Typically, in tree fruit, Du-Wett and Surround would be used at water volumes of around 250 L/ha to 400 L/ha (large trees). In a single spray Du-Wett should be used at a rate of 1 L/ha when using 50 Kg of Surround/ha and at 700 mL / ha when using 25 kg of Surround/ha.

To achieve the lower water volumes many growers downsize nozzles. Commercial experience has proven that this strategy is not only effective but reduces application costs.

Surround[®] Protection you can see. Performance you can trust.

For more information contact your local retailer or visit www.agnova.com.au

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