Less Extreme Conditions and/or a More Heat Tolerant Plant
(Stomata closure is not reached by either the Surround-treated or the untreated plant)

- Under these conditions the Surround-treated plant remains cooler all day and uses less water than the hotter, untreated plant. The environmental demand for water in the Surround-treated plant is reduced due to the lower canopy temperature.

More Extreme Conditions and/or a Less Heat Tolerant Plant

- Under these conditions both plants get hot enough that their stomata close down because they cannot meet the environmental demand for water. But because the Surround-treated plant remains cooler, it reaches the shutdown temperature later in the day than the untreated plant. In this example the Surround-treated plant will use more water during midday but will be more productive and will suffer less damage.

Washing Considerations

Kaolin, the active ingredient in Surround Crop Protectant, is approved for use as a food additive at levels up to 2.5 percent, according to the United States Food and Drug Administration (FDA). It is also exempted from the requirement of a tolerance by the United States Environmental Protection Agency (EPA), under CFR 40, 180.1001(c).

Fruits and vegetables that are to be marketed fresh but have a white film of Surround remaining at harvest can be washed to remove the film. Though Surround is designed to have moderate adhesion to fruit surfaces, the film is normally removed with common washing techniques found in packing houses. Perform a wash test under your packing house conditions before applying Surround to fresh market fruit.

Field-packed fruit that will not be washed may be sprayed early in the season for heat stress. The sprays should be discontinued when the fruit are still small. The remaining film coating will eventually loosen and fall off due to the expansion of the fruit and from rain and wind attrition. This attrition will be more pronounced in rainy climates. Remember, when Surround sprays are discontinued and the crop begins to “grow out” of its protective coating, sunburn protection will be lost. Consult the Surround Wash Guide for more information.
Light and heat are necessary for plant growth. Too much light can shut down photosynthesis. When plants experience conditions outside their optimum temperature and light conditions, they expand energy to adapt. However, plants’ adaptive mechanisms are slow to adjust to environmental change. If conditions go too far beyond the optimum, critical plant processes can suffer damage, the plant expends energy to repair the damage. Or with lesser stress and restricted water loss. With stomata closed, a plant will use less water than the untreated plant. And Surround can be tank-mixed with most pesticides. Surround should be applied when tank-mixed with pesticides. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers Without mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers without mechanical agitation. When tank-mixing, always add Surround to the tank first. 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This photosynthetic process is most significant stress, including cell damage as sunlight continues to deliver energy that the plant’s cells cannot productively absorb. During extreme conditions, cells and whole plants can suffer damage. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. 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When tank-mixing, always add Surround to the tank first. A premix tank is suggested for sprayers with mechanical agitation. Surround can be applied aerily using standard aerial application equipment. Consult the product label or Spray Guide for more information.