Aspe

SunScreen

Solar protector

INTRODUCTION

What causes sunburn fruit?

The energy of sunlight can cause damage to the sunexposed surface layers of fruit. Sunburn is more due to radiative force of the sun than air temperature.

Types of apple sunburn

1.Sunburn necrosis
2.Sunburn browning
3.Photo/oxidative sunburn (or bleaching)

What are spray-on sun protection products?

Leaves and fruit of agricultural crops can be sprayed with suspension of tiny, white mineral particles (clay or calcium carbonate) or with wax emulsions to create a film that provides some protection from the damaging effects of sunlight.

HOW DO THEY WORK?

The mineral particles form a white film that blocks and reflects some of the direct sunlight to reduce the fruit's surface temperature and the probability of sunburn.

The wax-based product forms a film that absorbs some of the damaging UV radiation and reflects a small amount of the incoming radiation.

These products must be applied several times during the season to maintain a protective cover on the fruit as it increases in size.

All spray-on sun protection products must be applied before severe summer heat wave conditions occur and applications must be main-tained throughout the hot season to maintain coverage on the expanding fruit.

Resellers usually recommend a minimum of three to four applications, separated by seven to 21 days. More frequent applications are likely to provide greater protection.

QUALITY AND HEALTH IN PRE-HARVEST

REFLECTS UV RAYS

PROTECT FROM HIGH TEMPERATURES

APPLIED PRODUCT

SUNBURN EFFECT

PRODUCTS

SunScreen *is a solar protector for fruit and vegetables based on Zinc Oxide in an excipient of Calcium Carbonate, which reduces damage by heat and sunburn stress.*

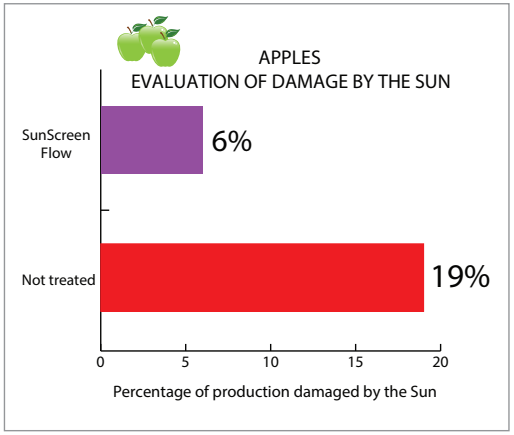
COMPOSITION	%w/w
Calcium Carbonate	99,8
Zinc: Traces	

1 Kg · 5 Kg · 10 Kg · 20 Kg

SunScreen Flow *is a micronized calcium carbonate liquid sunscreen and next-generation silicon, designed to provide protection to the plant and fruit during the period of growth, improves the health of the plant and eliminating sunburn.*

COMPOSITION	%w/v
Calcium (CaO)	34,0
Calcium silicate ($CaSIO_3$)	5,0
pH (solution 1%) 7-8	

1L · 5L · 20 L · 1000 L



Granny Smith Apples
Application date: 13/5/2016
Damage by sunburn evaluated: 18/7/2016

ADVANTAGES OF SPRAY-ON SUN PROTECTION

- *Less sunburn allowing better pack-outs of quality fruit.*
- *Can be applied with existing orchard spraying equipment.*
- *The particle film products (clay and calcium carbonate) can be tank mixed with many other common orchard chemicals.*
- *The particle film products may inhibit or repel some damaging insect pests.*
- *The particle film products may reduce heat stress.*
- *The particle film products significantly increase reflected sinlight within the tree canopy, tending to improve the distribution and penetration of sunlight to the "deeper" shaded parts of the tree.*

Calcium carbonate-based spray-on sun protection.

Fuji apple with three applications of wax-based sun protection. (Picture from Larry Schrader)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SunScreen
new
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