

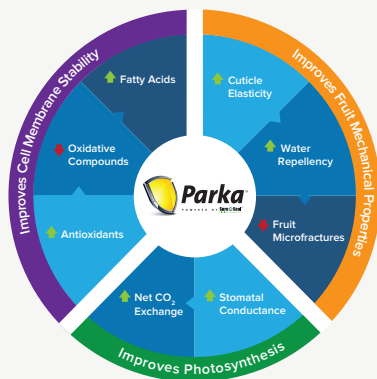
## TECHNICAL BULLETIN | APPLES

# Parka® Crop Cuticle Supplement

### Enhancing Apple Finish and Mitigating Sun Damage Risk

Parka® powered by Sure Seal™ biofilm technology is the only proven plant health solution that enhances the apple and leaf cuticle. Through three modes of action, the residue-free formula strengthens the fruit's first layer of defense against environmental stressors all season long while minimizing risks of sun damage and other fruit finish issues.

By expanding the plant's antioxidant capacity, anthocyanin concentration and key components of photosynthetically active tissue, the supplemental bilayer enables apples to use excess light energy for photosynthesis rather than developing the tissue necrosis associated with sunburn.



### Enhancing Apple Finish and Mitigating Sun Damage Risk

**MODE 1: Fruit Mechanical Properties**  
Parka enhances the existing plant cuticle by sealing microfractures and forming a barrier to unwanted moisture and pathogens.

**MODE 2: Cell Membrane Stability**  
By minimizing production of negative oxidative compounds, Parka preserves fatty acids resulting in stronger cell membranes.

**MODE 3: Energy Conversion**  
Photosynthetic activity is optimized with heightened leaf stomatal activity and net CO<sup>2</sup> exchange, allowing for plant use of solar radiation.

### Sunburn Protection With Parka

- Sunburn is the primary cause of apples culls, especially in the Pacific Northwest growing regions.
- Apples are very susceptible to burn because of their higher thermal mass.
- Solar damage is irreversible and costs apple growers millions of dollars annually.
- Sunburn intensifies disorders such as lenticel marking, cracking and russetting.

#### KEY FEATURES AND BENEFITS:

- Enhances the fruit and leaf cuticle with a clear, hydrophobic lipid bilayer that protects against UV radiation.
- Strengthens tolerance to environmental stressors and related cosmetic disorders; proven to minimize sunburn incidence by up to 43%.
- Transparent solution allows for accurate, efficient color and defect detection during harvest before reaching the bin.

### Improving Fruit Quality to Pack Out

#### External disorders managed with Parka include:

- Sunburn
- Cracking
- Micro-fractures
- Lenticel infection
- Russetting
- Fruit staining
- Bleaching

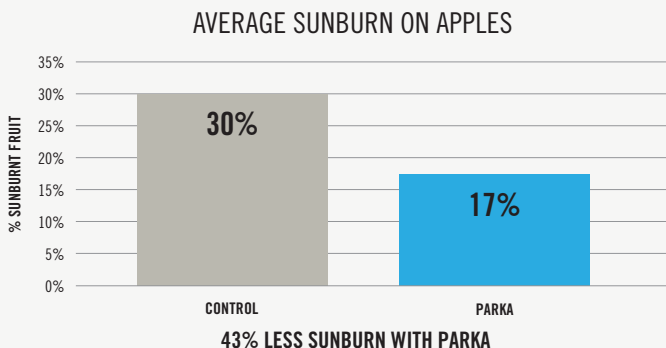
Parka increases fruit quality and finish by addressing additional environmental stressors, such as russetting from humid environments and lenticel infection as a result of extreme weather conditions.

#### Additional Benefits:

- Leaves no visible residue while exempt from maximum residue levels.
- Easily tank mixed with foliar nutrients and pesticides to fit into any program.
- Excellent worker safety profile.
- No pre-harvest or worker re-entry intervals.

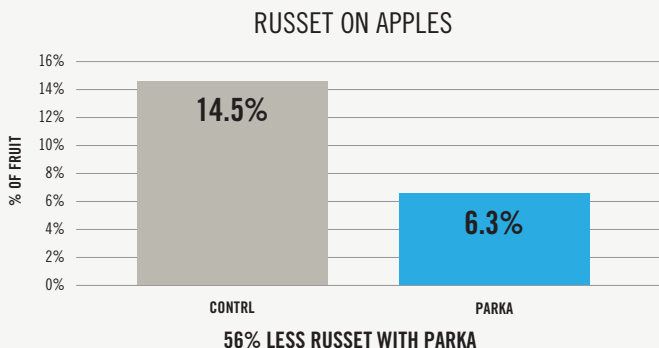
### Sunburn Reduction

**Varieties:** Fuji, Honeycrisp, Gala, Cripp's Pink, Smitten, Red Chief, Pink Lady, Ryan Red  
**Rate:** 0.5-1 gal/ac  
**Applications:** Petal fall, +14-30 days - 3 to 7 apps total  
**Location:** USA, Argentina, Chile, South Africa  
**Source:** Average of 21 replicated trials – Third party, 2017-2025



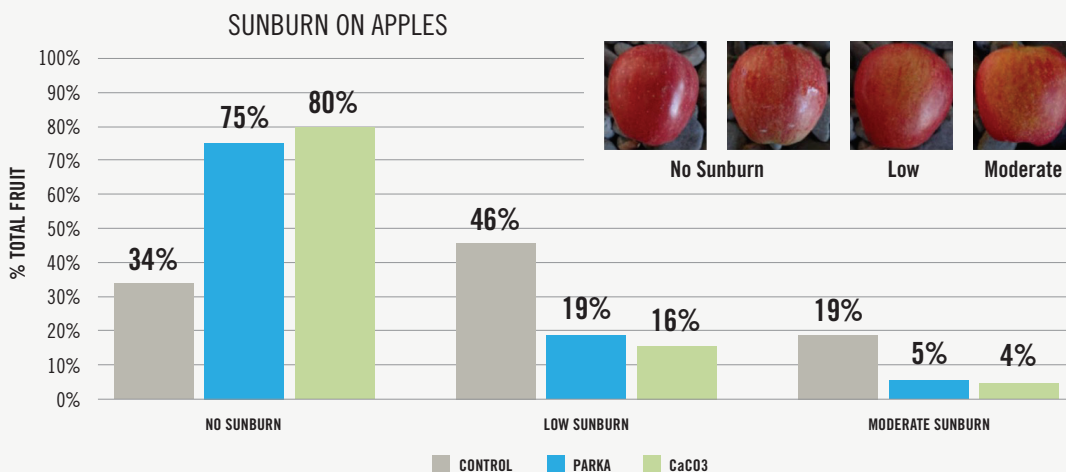
### Fruit Finish Improvement

**Variety:** Fuji  
**Rate:** 1 gal/ac  
**Applications:** Petal fall, +21 days - 5 apps total  
**Location:** Washington, USA  
**Source:** 3 Pillars, 2023



### Sunburn at Harvest on Honeycrisp Apples

**Variety:** Honeycrisp  
**Rate:** Parka 1 gal/ac - CaCO3 3 gal/ac  
**Applications:** Parka – 10-12 mm fruit, +21 days, +21 days, +21 days  
 CaCO3 – Late spring, +21 days, +21 days, +21 days  
**Location:** Washington, USA  
**Source:** University, 2020



### Crop Application Directions

CROP	RATE / AC	USE GUIDELINES/PROGRAM
Pome Fruit (Apples, Pears)	0.5-1 gal. (9.5 L)	Apply at fruit set. Reapply every 14-21 days. If using 0.5 gal rate, do not exceed 14-day intervals.

Parka is exempt from tolerance. Applications per season not limited. For best results, complete coverage on the crop is required. Avoid excessive runoff. Do not apply when temperatures are above 90°F; if temperatures are expected to exceed this threshold, evenings applications are recommended.

### Applications and Use

**Application:** For best results, complete coverage on the crop is required. Avoid excessive runoff. Do not apply when temperatures are above 90°F; if temperatures are expected to exceed this threshold, evenings applications are recommended.

**Compatibility:** Parka is compatible with most crop protection products, provided application coincides with the conditions on each label. Do not tank mix or overlap Parka applications within 5 days of CAPTAIN.® If using micronized or dusting sulfur, do not apply Parka within 3 days of a sulfur application. If using Lime Sulfur, wait 7 days before applying Parka. Prior to tank mixing with any Emulsifiable Concentrate (EC) or oil-based materials, conduct a jar test to determine compatibility. Do not tank mix with surfactants, stickers or pinolene-materials. Parka should be the last product added to the tank. For best results, finished spray solution pH should be between 5 and 7.