



TECHNICAL BULLETIN | APPLES

# Improve Fruit Quality and Packout With Parka®

## Minimizing Sun-Related Damage and Fruit Finish Issues

Apples can be damaged pre-harvest by environmental stressors that impact tree health and production. The majority of apple disorders that lead to diminished quality and higher cull rates stem from sun exposure. Sunburn on apples has been linked to skin disorders, many of which show up later in storage and reduce quality and increase culls.

Sunburn is one of the largest sources of culls for apple growers, averaging nearly 10% of the total crop loss. The losses from environmental stress can add up quickly and significantly decrease profits. By effectively preventing sunburn, the occurrence of these disorders is significantly reduced.

## Optimizing Fruit Quality and Yields

Utilizing cuticle supplements such as Parka® can effectively mitigate sunburn and related fruit finish issues, reducing cull rates and increasing marketable yields. Through three modes of action, Parka enhances the tolerance to environmental stressors and associated cosmetic defects, demonstrating a proven reduction in sunburn incidence by up to 42%.

### External Disorders Managed With Parka Include:

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

## Strengthening the Cuticle Leads to Increased Yield of Premium Apples and Enhanced Orchard Profitability

	BINS	PACKS PER BIN	TOTAL PACKS	ESTIMATED PRICE PER PACK	INCREMENTAL VALUE
PARKA COMBINED	101	18.64	1,882	\$20.00	\$37,645.60
CaCO <sub>3</sub>	111	16.49	1,830	\$20.00	\$36,607.80

**THE PARKA DIFFERENCE +\$1,037.80**

In 2023, Granny Smith apples treated with Parka at a large Washington orchard packed at 18.64 packs per bin, priced at \$20.00\* per pack, yielding \$37,645.60. This represented a \$1,037.80 advantage over the Granny Smith apples treated with CaCO<sub>3</sub>.

Enhancing marketable yields can be achieved by producing quality apples with Parka.

\*Estimated average price.

## Value-Added Advantages for Enhanced ROI

Parka not only improves fruit quality and finish by addressing environmental stressors but also delivers additional advantages, enhancing operational efficiencies and yielding a greater return on investment.

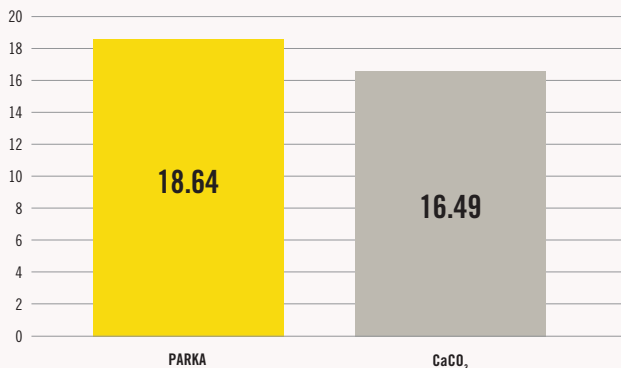
- Enhances plant tolerance to environmental stressors. Shown to reduce culls by up to 7%.
- Optimizes fruit quality for premium pricing, yielding a higher return on investment.
- Generates operational efficiencies by reducing spray passes across the field and tractor time.
- Clear coating facilitates accurate and efficient color and defect identification during harvest.
- Leaves no visible residue and is exempt from maximum residue levels.
- Easily tank mixed with foliar inputs to fit into any program so no dedicated sprayer is needed.
- No pre-harvest or worker re-entry intervals.
- Excellent worker safety profile.
- Reduces washes through packout.

KEY ISSUE: PACKOUT

### Increasing Packout with Parka

Parka was applied to Granny Smith apples during the summer of 2023 at 1 gallon per acre. The Parka treatment resulted in 13% more equivalent packs per bin compared to CaCO<sub>3</sub>.

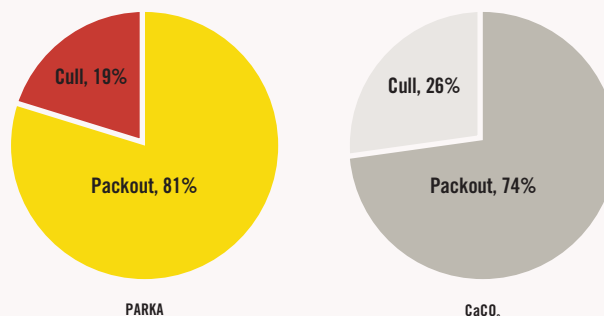
EQUIVALENT PACKS PER BIN



KEY ISSUE: CULLED FRUIT

### Minimizing Culled Fruit

Parka was effective in reducing culls due to environmental stressors such as sunburn and other quality issues during the 2023 growing season in Washington. Parka included six applications starting at petal fall and reapplied every 21 days.



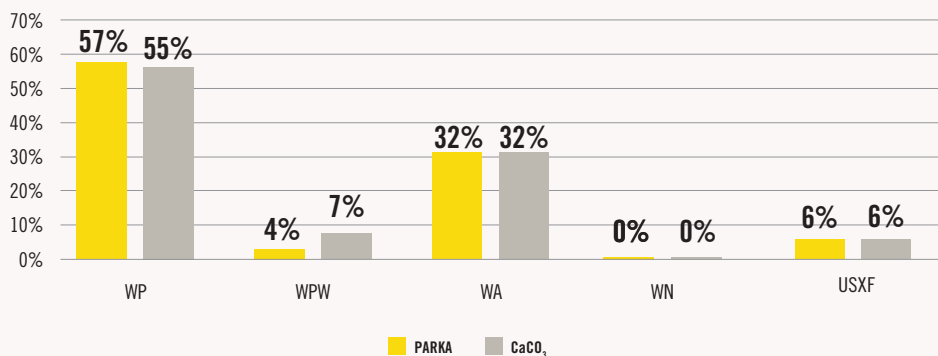
KEY ISSUE: QUALITY AND SIZE DISTRIBUTION

### Securing High-Quality Fruit

Granny Smith apples grade categorization after six Parka applications in summer 2023 at 1 gallon per acre compared to four CaCO<sub>3</sub> applications at 2.5 gallons per acre.

QUALITY (HIGHEST TO LOWEST)	
WP:	WA Extra Fancy Premium
WPW:	Washout Premium
WA:	WA Extra Fancy 1
WN:	WA Extra Fancy 2
USXF:	US Extra Fancy

PARKA V. CaCO<sub>3</sub> QUALITY COMPARISON



### Crop Application Directions

CROP	RATE / AC	USE GUIDELINES/PROGRAM
Apples	1 gal. (9.5 L)	Apply at fruit set. Reapply every 21 days.

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, evening 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, evening applications are recommended.

**Compatibility:** Parka is compatible with most other crop protection products, provided application coincides with the conditions on each label. Do not tank mix or overlap Parka applications within 10 days of applications of Captan. 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. Do not tank mix with EC-based materials. Do not tank mix with any material containing oil. Do not tank mix with surfactants, stickers or pinolene-based materials. Parka should be the last product added to the tank. For best results, finished spray solution pH should be between 5 and 7.