

Parka Cuticle Supplement



The First Line of Defense: The Cuticle

The cuticle is a plant's first line of defense between the environment and the epidermal cells. It protects against environmental and physiological stress early in development through cell elongation when fruits and vegetables are expanding rapidly in size. Lack of an adequate cuticle can negatively impact fruit quality and increase the potential of physiological disorders, such as sunburn and cracking.

What is the cuticle?

- Protective film covering the surface of leaves, young shoots & fruit
- Composed of lipids and polysaccharides impregnated with wax
- Wax, resin and salts can deposit on the surface as crystals
- Synthesized exclusively by the epidermal cells
- Inert, continuous layer and resistant to oxidation

What is the role of the cuticle?

- First line of defense between the environment and the epidermal cells
- Regulates water loss and uptake
- Acts as a barrier, restricting pathogen infection
- Protects against UV radiation
- Provides mechanical support

What is Parka?

Parka is a phospholipid and polysaccharide-based product that was originally designed to supplement the plant's cuticle. This additional layer of protection reduces both fruit microfractures and cracking, and increases water repellency. Additionally, Parka's novel mode of action (MOA) allows plants to use solar radiation for photosynthesis instead of promoting the development oxidative compounds. It has a direct impact to reduce heat stress and related disorders such as sunburn.

Parka attributes



ELASTIC

Coating flexes & expands with plant & fruit growth.



EDIBLE

Made up of food grade ingredients



HYDROPHOBIC

Repels water.



CLEAR

Leaves no white residue



PERMEABLE

Allows continued transpiration and gas exchange. Not an antitranspirant.



COMPATIBLE

High tank mixing capability
No surfactant needed

Parka's MOA and functions are summarized in Figure 1. As a result, plants treated with Parka are better equipped to sustain growth under environmental stress conditions to deliver high fruit quality and marketable yields.

Plant cuticle

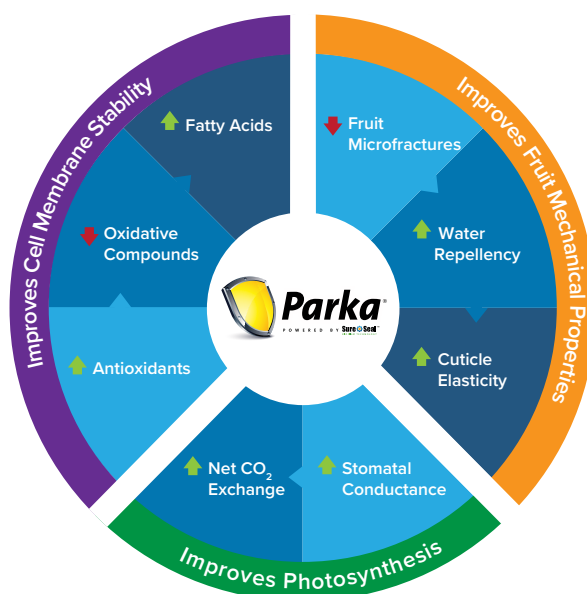
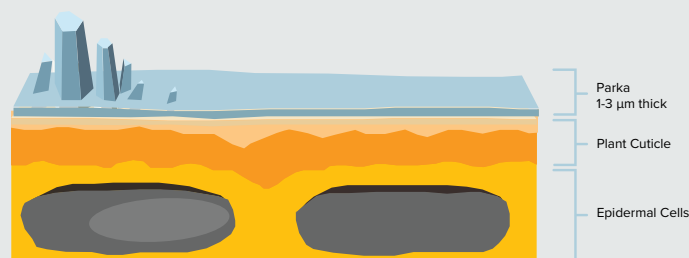
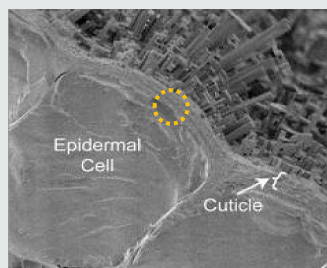
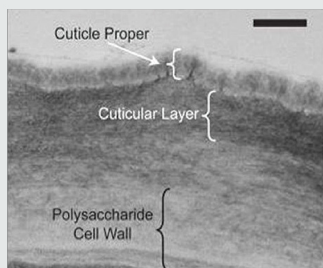


Figure 1. Parka's MOA and functions to improve fruit quality and marketable yields.



Parka® Crop Cuticle Supplement is a patented blend of phospholipids designed to supplement the cuticle of growing fruit and foliage. Supplementing the cuticle of the fruit reduces microfractures to minimize cracking from rain, improve finish, reduce post-harvest disorders as well as provide sunburn protection. Parka applications provide support to the cuticle of the foliage and reduce stress to improve fruit quality and yield. Parka is exempt from tolerance and there is no limit on the number of applications per season. ***It all goes back to the cuticle.™***

Crop	Rate/ac (ha)	Use Guidelines
Apples	1 gal (9,5 L)	For sunburn control apply when fruit is 12-15 mm in size. Reapply as needed every 21–30 days for a minimum of 4 applications per season. For fruit finish improvement start applications at fruit set.
Berry crops (Blueberries, Caneberries, Strawberries)	0.5 - 1 gal (4,75 – 9,5 L)	Apply when first fruit is 5-7 mm in size. Reapply as needed every 14–21 days for a minimum of 3 applications per season.
Cherries - Cracking	1 gal (9,5 L)	Apply in a preventative program with the first application at 100% shuck fall and the second application at straw color. If rain events are expected after straw, reapply as needed. For reactionary applications, apply within 24-48 hours before a rain event.
Cherries - Doubling	1 gal (9,5 L)	Apply 1-2 weeks post-harvest. Reapply as needed every 14-21 days for a minimum of 2 applications.
Citrus	0.5 - 1 gal (4,75 – 9,5 L)	Apply prior to the first fruit drop. Reapply as needed every 21-30 days.
Field crops (Leafy Greens, Melons, Peppers, Tomatoes)	0.5 - 1 gal (4,75 – 9,5 L)	Leafy Greens: Apply 10-14 days after transplant, reapply as needed every 14-21 days. Melons, Peppers, Tomatoes: Apply at first fruit set; reapply as needed every 14-21 days.
Grapes (Table and Wine)	0.5 - 1 gal (4,75 – 9,5 L)	Apply at 10 mm (pea size) and at pre-bunch closure. Reapply as needed every 14-21 days. For post-harvest quality enhancement apply 10-14 days prior to harvest.
Nut Crops (Almonds, Pistachios, Walnuts)	1 gal (9,5 L)	Apply 10 days after nut set. Reapply as needed every 21-30 days for a minimum of 3 applications per season.
Olives	0.5 - 1 gal (4,75 – 9,5 L)	Apply at pre-bloom. Reapply as needed every 10–30 days until pre-harvest.
Pears	1 gal (9,5 L)	Apply at fruit set. Repeat as needed every 14-21 days as needed for a minimum of 3 applications per season.
Stone Fruits (Peaches, Nectarines, Plums, Apricots)	0.5 - 1 gal (4,75 – 9,5 L)	Apply at fruit set. Reapply as needed every 21–30 days for a minimum of 3 applications per season. For fruit finish improvement apply 14 days and 7 days pre-harvest.

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 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.

FIRST AID

If in Eyes:	Rinse with slowly and gently running water for 15-20 minutes. If wearing contacts remove after five (5) minutes of rinsing and then continue rinsing. If irritation persists get medical attention.
If Swallowed:	Give large quantities of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
If on Skin:	Remove contaminated clothing. Thoroughly wash exposed skin area(s) with soap and water. If irritation occurs get medical attention. Do not reuse contaminated clothing until washed and cleaned.
If Inhaled:	Remove individual from area. Give symptomatic and supportive care if required. Get medical attention.

STORAGE AND HANDLING

Storage: Protect from freezing. Store in a cool, dry, shaded area away from children and animals. Store above 50F.

Spills: Surround and dike area of spill. Prevent runoff into streams, other waterways, or sewer systems. Soak up spill and place in containers. Wash contaminated area with soap and water.

Disposal: Dispose of material and rinsate as directed by local state, or Federal authorities. Keep out of streams and other waterways.

WARRANTY AND DISCLAIMER STATEMENT

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

CONDITIONS: Use directions must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of factors including, but not limited to: weather conditions; presence of other materials; or the manner of use or application, all of which are beyond the control of the manufacturer or seller. The buyer shall assume all such risks.

NET CONTENTS: 2.5 Gallons (9.5 Liters) U.S. Patent #8,752,328

Emergency Contact / Number: (888) 638-1955 (US only); (702) 987-6203 (outside US)

cultiva

Cultiva LLC

4780 West Harmon Ave., Suite 6
Las Vegas, NV 89103
(888) 638-1955 • cultiva.com

