



# Parka™

POWERED BY **SureSeal™**  
BIOFILM TECHNOLOGY



**SUPERIOR PROTECTION STARTS WITH PARKA™**



- **SUPPLEMENTS** the Cuticle
- **REDUCES** the Impact of Environmental Stress
- **INCREASES** Marketable Yields
- **IMPROVES** Fruit Quality and Finish
- **FOOD GRADE**, Hydrophobic Formulation is Edible, Colorless and Tasteless
- **ELASTIC** Properties Allow Protection to Grow With the Fruit
- **EXEMPT** from Federal Registration

**cultiva**®

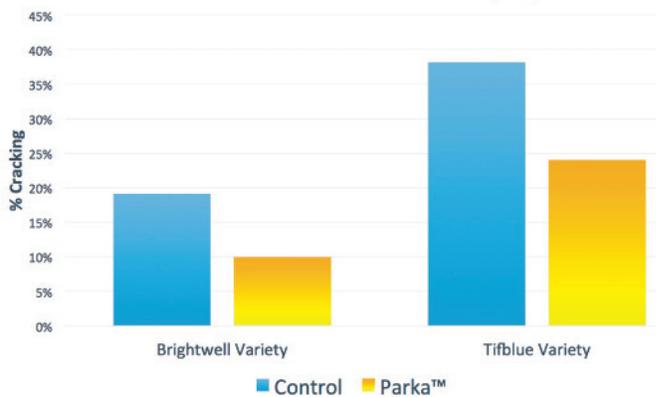




## Parka™ for Cherries and Blueberries

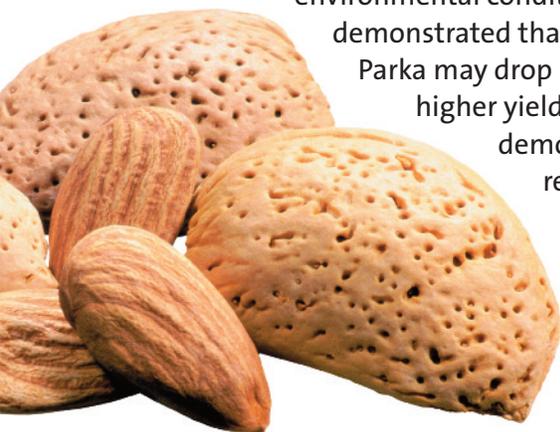
By supplementing the cuticle on the fruit, Parka has demonstrated it can reduce rain cracking by an average of 50%. Its hydrophobic properties repel moisture from the fruit surface to minimize external water damage. The unique elasticity of Parka allows a simple application program starting at fruit set. Our research has indicated that early applications of Parka reduce the number of micro-fractures that develop in the cuticle which directly improves quality at harvest and shelf life.

**37% - 48% LESS CRACKING WITH PARKA™**  
Trial on Blueberries – MBG Horticulture, GA, 2013

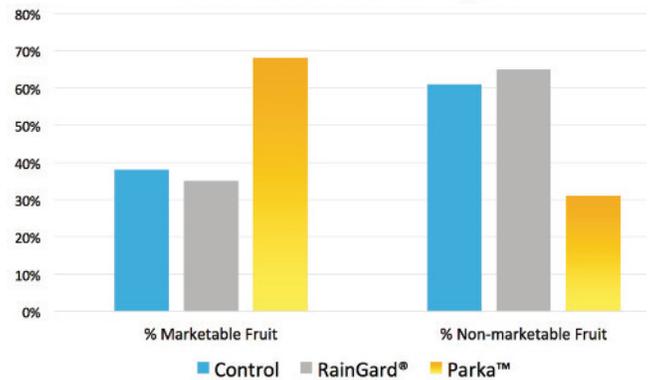


## Parka™ for Almonds

Applications of Parka on almonds supplement the cuticle of the leaf and have resulted in enhanced yields through nut retention. The cuticle is the barrier to water loss and a key component in gas exchange and transpiration. As such, it is also key in managing crop stress under hostile environmental conditions. Research has demonstrated that almonds treated with Parka may drop less fruit resulting in higher yields. Research has also demonstrated almonds respond to Parka by optimizing daily water utilization.



**BEST CRACKING SUPPRESSION WITH PARKA**  
Trial on Skeena cherries – GS Long 2016

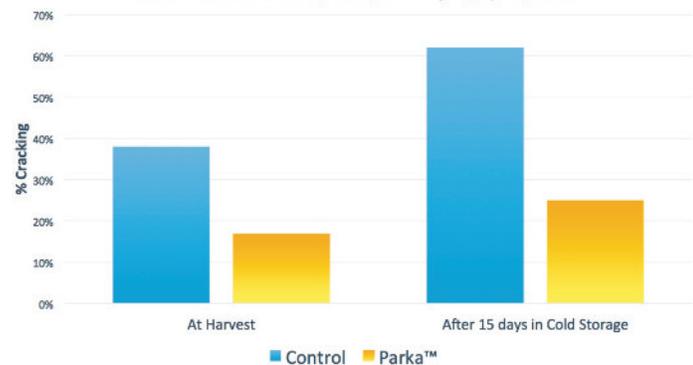


## Parka™ for Pome Fruit

Supplementing the cuticle of apples with Parka™ has demonstrated improvements in coloring, finish and quality. During cell elongation the apple is expanding rapidly causing the cuticle to be continually fractured. Applications of Parka can fill in fractures and enable the cuticle to better expand with fruit growth. A fractured cuticle makes the fruit vulnerable to pathogens and yeast all of which can negatively impact fruit finish. Parka reduces the impact of heat stress and improves color development by elevating anthocyanin levels in apples. Parka treated fruit have also demonstrated less post harvest disorders such as stem end splitting and bitterpit.

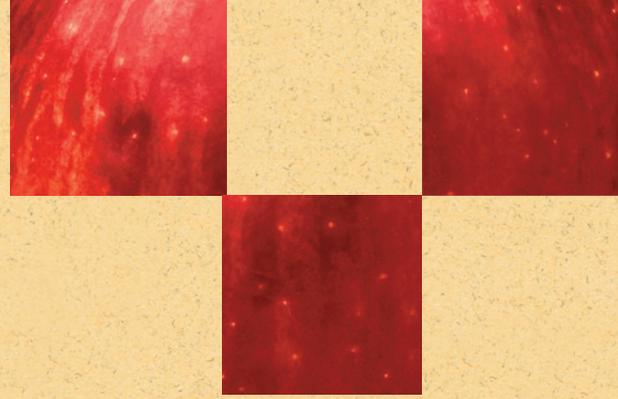
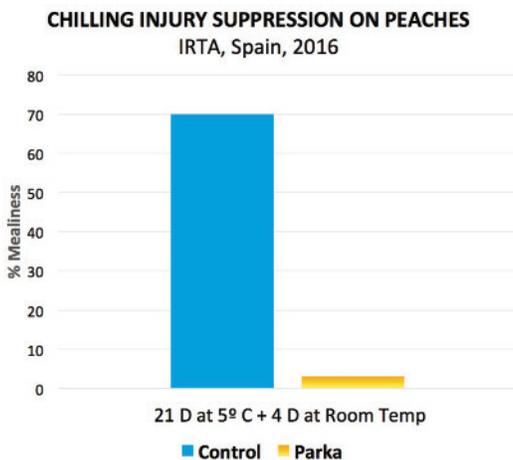
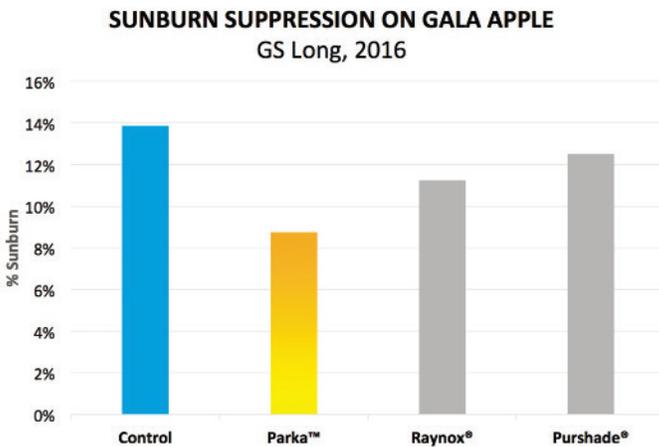
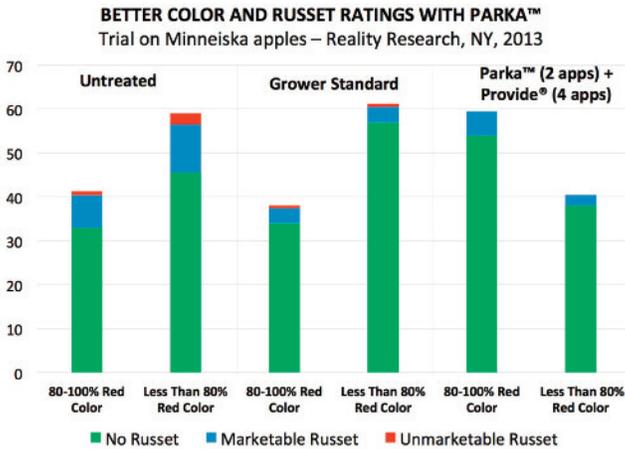


**CRACKING SUPPRESSION MAINTAINED POST-HARVEST**  
Trial on Skeena cherries, IRTA, Calatayud, Spain, 2015



## Parka™ for Peaches and Nectarines

Applications of Parka on nectarines and peaches increases the hydrophobic tendency of the cuticle leading to higher fruit quality by reducing rain induced issues such as inking and black staining. A healthier cuticle also increases the fruit integrity during cold storage resulting in less chilling injury.



## It All Goes Back to the Cuticle™

*In recent years, agricultural research has demonstrated that the plant cuticle plays a significant role in overall crop health and quality. It has become clear that the physiological role of the cuticle extends well beyond its primary function as a transpiration barrier, playing important roles in processes ranging from development to interaction with microbes (Trevor H. Yeats and Jocelyn K.C. Rose). In effect, a plant cuticle functions much like human skin, in that it protects the plant from losing too much water, as well as serving as a barrier against certain bacteria, fungi, and environmental stress. Its film covers both the top and bottom of the leaves of the plant, encapsulating the uppermost layer of plant tissue. A healthy cuticle is one of the foundations for a healthy plant and quality crop.*

***Parka™ is the one product, based on the SureSeal technology, that provides the ultimate cuticle care for a wide variety of crops.***



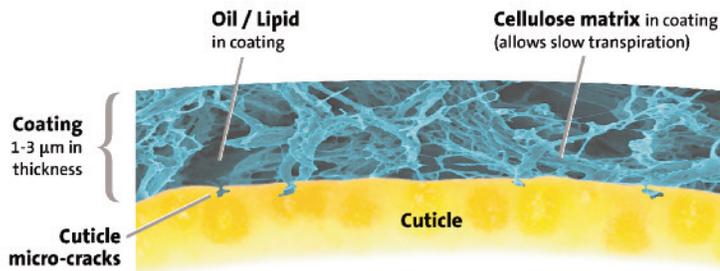
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# It All Goes Back to the Cuticle™

## SureSeal™ Technology

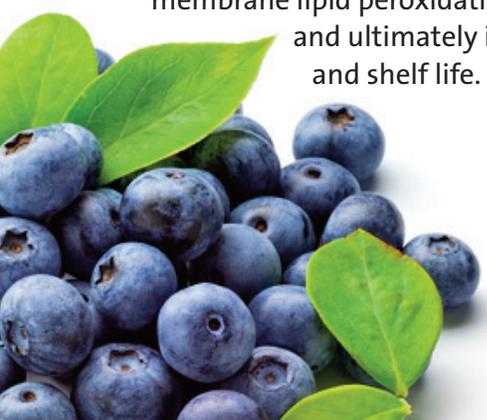
Cultiva™ has a proprietary technology called SureSeal™ designed to supplement the cuticle of fruit and foliage. Originally developed by researchers at Oregon State University, SureSeal is now used commercially on multiple crops to suppress rain cracking, improve fruit quality and finish, increase marketable yields and plants' tolerance to environmental stress. SureSeal-based products are exempt from tolerance and do not require registration at a state or federal level as they are non-pesticide products.



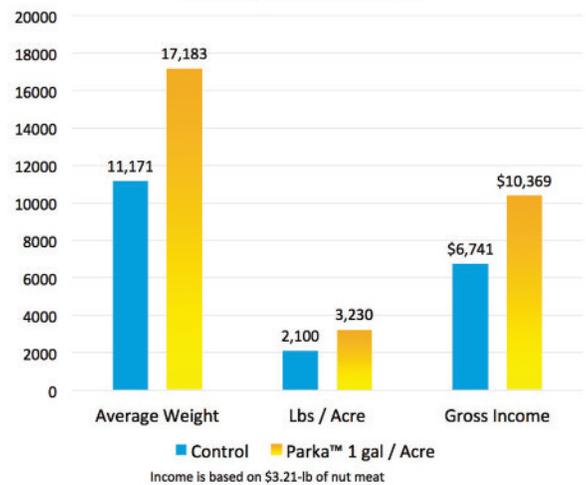
## SureSeal's unique blend of phospholipids acts in three different ways to supplement the cuticle of the plant:

- Enhances the fatty acid composition of the fruit and alters the ratio towards higher unsaturated vs saturated type of fatty acids
- \* Reduces the dioxygenation of polyunsaturated fatty acids, also known as LOX activity
- \* Increases the fruit antioxidant capacity and reduces hydrogen peroxide accumulation

In combination, the above actions result in lower membrane lipid peroxidation, better cell integrity, and ultimately increased crop quality and shelf life.



**Yield Increase on "Nonpareil" Almonds**  
Pacific Ag Research, 2015



## Parka application instructions vary by crop type.

**Please read label for complete application instructions prior to use.**

**Contact your local Cultiva representative for more information.**



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