

# PROTECT ORGANIC CROPS FROM INSECTS



**Surround®**  
Agricultural Crop Protectant

## Protect a Wide Variety of Organic Crops with Surround® WP Agricultural Crop Protectant

According to the 2008 Organic Production Survey conducted by the National Agricultural Statistics Service, California leads the nation with the highest number of organic farms, land in organic crop production and organic sales.

Now Novasource, a Phoenix, Arizona-based global leader in particle film technology, offers organic producers an effective way to optimize yields by using Surround® WP Agricultural Crop Protectant to protect crops from sunburn, heat stress and insect pests. SURROUND is listed for use in organic production systems by the Organic Materials Review Institute (OMRI) and by the National Organic Program (NOP) operated by the U.S. Department of Agriculture (USDA).

SURROUND is an EPA-registered insecticide, specially formulated with calcined kaolin to suppress insect activity. It can help reduce damage from key pests in a wide variety of crops including citrus, tree nuts, grapes, leafy vegetables, field vegetables, root and tuber vegetables, cucurbits and others.

### Optimize Application Effectiveness

Rigorous scouting is critically important in order to time product application for the most effective results. For optimum effectiveness, SURROUND should be used in a preventive program and sprayed before the insect appears, to establish good coverage before the infestation. Other application tips include:

- Apply to near-drip, not to run-off. For 20-foot trees, it is best to use 100-200 gallons of water per acre. Large trees such as walnut or pecan trees can require up to 300 gallons of water per acre.
- Depending upon the crop, SURROUND can be applied at rates ranging from 25-100 lbs. per acre. See the product label at [www.novasource.com](http://www.novasource.com) for crop-specific application instructions.
- Change the direction of travel on alternate applications for best crop coverage and product performance.
- When tank-mixing, always add SURROUND to the tank first. A pre-mix tank is suggested for sprayers without mechanical agitation.
- Aerial application of SURROUND is not recommended for effective insect suppression, because adequate coverage on all sides of plant surfaces, such as on the undersides of leaves, is difficult to achieve via aerial application.

### Suppress Insects With SURROUND

SURROUND keeps the tree canopy cooler under extreme temperature and sunlight conditions. This results in more efficient photosynthesis and a more productive tree. SURROUND is also proven to reduce insect damage from key pests such as:

- Aphids (such as pecan, black and yellow aphids), stink bug and navel orangeworm in pistachios
- Olive fruit fly and thrips in olives
- Walnut husk fly and codling moth in walnuts



### Nine Ways SURROUND May Suppress Insects

1. Repellency
2. Impedes egg laying
3. Reduces feeding
4. Impedes grasping
5. Restricts movement
6. Camouflages the host — prevents host recognition
7. Alters behavior
8. Induces paralysis
9. Causes mortality



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**CUSTOMER SERVICE:**  
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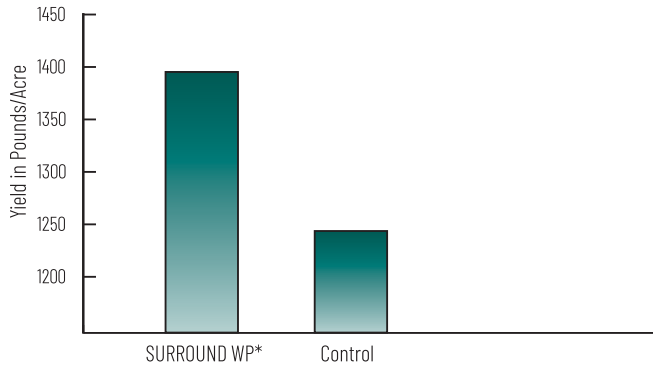
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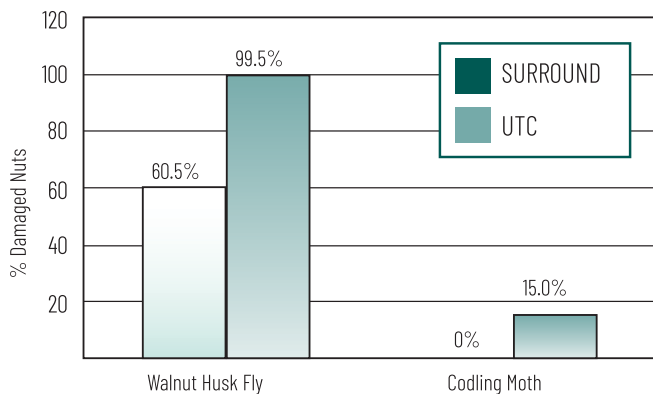
## SURROUND Increased Pistachio Yield 12% Versus Untreated Control



In this Madera, California-based study, SURROUND was applied three times (May 22, June 3, June 26) at a rate of 50 lb/A in 133 gallons/A (gpa) of water via an airblast sprayer. The protection provided by SURROUND resulted in yields that were 12 percent higher than in untreated areas.

## SURROUND Effects in Walnuts

D. Hicks, D. Hulst, California 2004



In this California-based study, SURROUND was applied four times (June 15, June 29, July 13 and July 27) at a rate of 35 lbs./A in 100 gallons/A (gpa) of water using a handgun-style applicator. Using SURROUND decreased insect damage by both the Codling Moth and Walnut Husk Fly significantly, improving yields and profitability.



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**Important: Always read the label before buying and follow label instructions when using this product.**

The use of Surround® in agricultural crop protection may be covered by patents held by Tessenlerlo Kerley, Inc. For more information, visit [novasource.com](http://novasource.com).

### WARRANTY AND LIMITATION OF DAMAGES

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