

Surround[®]

Agricultural Crop Protectant

Shield Almond Trees From Damaging Insects

Developed in conjunction with the United States Department of Agriculture (USDA), Surround is formulated to suppress insect activity and can be a valuable tool in almond IPM programs. Surround is an EPA-registered insecticide that, in particular, helps suppress damage caused by aphids, navel orangeworm and other insect pests such as stink bugs in almonds. In addition, Surround may be used to maximize the effectiveness of conventional insecticides by avoiding overuse, thus minimizing the likelihood of insect resistance.



Navel Orangeworm

Surround functions best when used as a preventive program, applied to the tree before the pest appears. Surround will reduce pest pressure and may eliminate the need for additional treatments. If pest pressure reaches an economic damage threshold, a knockdown insecticide should be used. Surround may be tank mixed with most crop protection products.

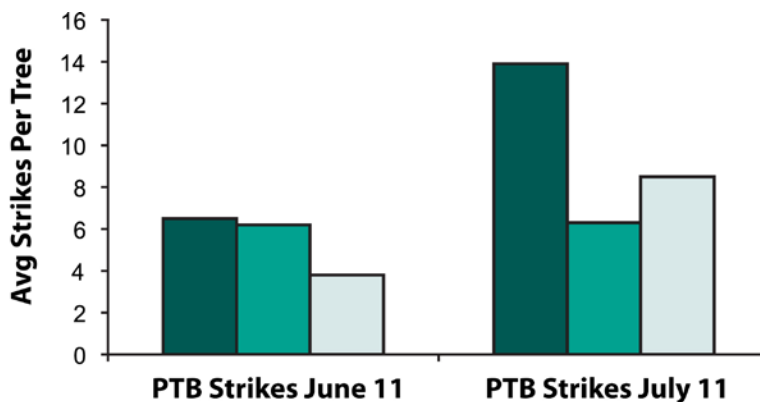
Surround will suppress beneficial insect activity. Closely monitor and employ a typical control program for scale and mite.

Nine Ways Surround May Suppress Insect Pests

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

Impact of Surround on Peach Twig Borer (PTB)* Shoot Strikes - Almonds

RL Kirkland, California 2002



Application Timing:
Surround - May 8, 17; June 4
Lorsban 4E - May 17

Rate:
Surround - 50 lb/A
Lorsban 4E - 4 pt/A

* Note: Surround is not currently registered for control of this pest

TESSENDERLO KERLEY, INC.
2255 North 44th Street
Suite 300
Phoenix, AZ 85008-3279

Customer Service:
1-800-525-2803
1-602-889-8300

www.novasource.com



RECOMMENDATION FOR NUT CROPS

Volume: For 20-foot trees use 200 gallons per acre. Large trees like walnut and pecan can require up to 300 gallons per acre.

Concentration: Use 25 to 50 lbs per 100 gallons of water.

For Tree Nuts, such as almond, beech nut, Brazil nut, butternut, chestnut, cashew, filbert, hickory nut, macadamia nut, pecan, walnut and pistachio.

Pest	Lbs/Acre	Application Instruction
Aphids such as pecan, black, and yellow aphid, codling moth, grasshoppers, husk fly, leafhoppers, navel orangeworm, stink bug	50-75*	Suppression only**. Start at biofix or as infestation occurs. Apply every 7-14 days throughout infestation. For codling moth, apply a minimum of 2 sprays per generation.
*50 lbs per 200 gallons per acre preferred. **If complete control is needed, consider using supplemental controls.		

Application Tips

- Avoid foliage run-off. Apply spray volume that will achieve near-drip coverage.
- Best results usually achieved at 25-50 lbs per 100 gallons.
- Surfactants may improve spreading.
- Consult the specimen label for instructions on aerial application.
- See Surround spray guide for more information on effective application techniques.

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

The use of Surround® WP in agricultural crop protection applications is covered by US Patents 6,027,740; 6,069,112; 6,110,867 and 6,156,327.

CONDITIONS OF SALE – LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Failure to strictly follow label directions may cause injury to crops, animals, man or the environment. Tessenderlo Kerley, Inc. (TKI) warrants that the product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use when properly applied in normal weather conditions. TKI makes no other warranty or representation of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose. The exclusive remedy against TKI for any cause of action relating to the handling or use of the product is a claim for actual out-of-pocket damages, and in no event shall TKI be liable for special, indirect, incidental or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of TKI, breach of warranty, strict liability in tort, or any other cause of action. TKI and the seller offer the product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

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