

# NAVEL ORANGEWORM RANGE AND INTENSITY EXPAND



Navel orangeworm (NOW) is becoming a perennial problem and worsening economic threat for almond growers throughout California. Last year was a particularly bad year for the pest with damage reaching 20 percent in some orchards.



NOW can cost almond growers hundreds of dollars per acre in lost revenue. According to Blue Diamond Growers, 2 percent damage reduces revenue by \$436 per acre while 10 percent damage costs \$1,752 per acre.



**“HISTORICALLY, THE NAVEL ORANGEWORM HAS BEEN A PERSISTENT PEST IN SOUTHERN CALIFORNIA AND MORE SPORADIC IN NORTHERN CALIFORNIA, BUT THAT’S RECENTLY CHANGED,” SAYS JOEL SIEGEL, RESEARCH ENTOMOLOGIST WITH THE USDA AGRICULTURAL RESEARCH SERVICE AND COORDINATOR OF THE USDA NOW RESEARCH PROGRAM. “GROWERS IN THE SACRAMENTO VALLEY NEED TO CREATE A TREATMENT PLAN FOR NAVEL ORANGEWORM EVERY YEAR, JUST AS GROWERS IN THE SAN JOAQUIN VALLEY REGULARLY DO.”**



Siegel attributes rising NOW pressure to increasing tree nut acreage, which provides more host sites, and to higher summer temperatures, which increase the number of insect generations attacking the crop.

Franz Niederholzer, orchard systems farm advisor, Colusa County, agrees. “In the Sacramento Valley, we have traditionally had three generations of navel orangeworm in a season. The past two years, we’ve seen four strong generations. It’s important to have a plan in place. You can always adjust it.”

# What NOW? What's your plan to control it?



## Be ready with a plan

- The first line of defense against NOW is to remove and destroy mummy nuts in the fall and winter.
- A spring insecticide spray in mid- to late-April may be necessary to take out eggs and hatching larvae where growers weren't able to implement good orchard sanitation. Spring sprays can often address both NOW and peach twig borer populations. The University of California recommends using a reduced-risk, non-pyrethroid product to prevent secondary outbreaks of pests such as spider mites.
- The most effective single spray is at the initiation of hull split. Time it no later than 1 percent hull split.
- Orchards with moderate to high numbers of NOW require a second insecticide application approximately two weeks after the initiation of hull split.

## Control NOW without flaring mites

Altacor<sup>®</sup> insect control powered by Rynaxypyr<sup>®</sup> active provides contact and long lasting residual protection against navel orangeworm and peach twig borer and does not flare mites. Altacor insect control fits many spray timings including the May spray, early hull split, hull split and delayed dormant to early bloom periods.

## Two-shot approach for heavy NOW pressure

Siegel prefers using Altacor insect control (Group 28) at early hull split to take advantage of its long duration of control, its adult activity and the option of making back-to-back Altacor insect control sprays at the full 4.5 oz./acre rate.



**“OUR RECOMMENDATION IS TO USE ALTACOR INSECT CONTROL FOR THAT KEY EARLY HULL SPLIT APPLICATION. IT IS HIGHLY TOXIC TO LARVAE WHEN INGESTED, HAS GOOD ACTIVITY AGAINST NOW EGGS AND ALSO HAS ACTIVITY ON ADULTS. IN ADDITION, GROWERS CAN MAKE TWO ALTACOR INSECT CONTROL SPRAYS 10 TO 14 DAYS APART TO PROTECT NEWLY EXPOSED, VULNERABLE NUT TISSUE,” SIEGEL SAYS.**



If pressure continues to be high through the third generation of NOW, a non-Group 28 insecticide should be used to avoid treating successive generations of NOW with the same mode of action. Altacor insect control deploys a different mode of action than pyrethroids, organophosphates, insect growth regulators and spinosyns, making it an excellent rotation partner.

## Full rates matter

Seigel and Niederholzer recommend using full insecticide rates when treating NOW. “Altacor insect control is one of the most effective navel orangeworm materials available. The full rate is always preferable because it is such a challenging pest,” says Niederholzer.