



PLENTY OF OPTIONS for pest control

The newer products are 100 to 1,000 times less toxic than traditional pesticides.

by Geraldine Warner



Jay Brunner

The new products are more expensive but offer value in terms of safety for farmworkers, farm families, and worker management, Brunner said. There's also an opportunity for sound resistance management. "We need to be good stewards of these products. Think strategically and plan with your consultant." ●

Growers have plenty of insecticides to choose from for controlling the key apple pests codling moth and leafrollers. Including two new pesticides that will be registered next year, there are nine alternatives to organophosphates for controlling codling moth and eight for controlling leafrollers. Five of those products control both pests, reports Dr. Jay Brunner, director of Washington State University's Tree Fruit Research and Extension Center in Wenatchee.

The new pesticides that will be registered for use in 2008 are Altacor (rynaxypyr) and Delegate (spinetoram). Rynaxypyr is from a new chemical class that affects the muscles of the pest. It is highly selective and is very safe for mammals, Brunner reported at the Lake Chelan Horticultural Day in January. Altacor will be available this season under a nondestructive Experimental Use Permit and will be tested by researchers and distributors. Delegate is from the same chemical class as Success (spinosad) but is more photo stable and has a longer residual life. It will not be approved for organic use.

Less toxic

The new organophosphate alternatives are 100 to 1,000 times less toxic than

Guthion (azinphos-methyl) and the re-entry interval is four to ten hours, compared with fourteen days for Guthion, Brunner said. The key in using them successfully is understanding the pest and the life stages that the products control, and knowing how to use them to avoid disrupting biological control.

The new pesticides come from several different chemical classes. Esteem (pyriproxifen), Rimon (novaluron), and Intrepid (methoxyfenozide) are insect growth regulators that disrupt the insect's normal development and eventually kill it. They are comparatively slow acting.

The neonicotinyls Assail (acetamiprid), Calypso (thiacloprid), and Actara (thiamethoxam); the spinosyns Success and Delegate; the avermectin Proclaim (emamectin benzoate); and the oxadiazine Avaunt (indoxacarb) are all nerve toxins.

Unlike Guthion or Lorsban (chlorpyrifos), which kill on contact, most of these products need to be ingested by the pest, so good spray coverage is critical, Brunner said. "You don't have the luxury you used to have of having poor timing or poor coverage."

Growers need to think about how they will use the products—what are their key pests, what products best fit the situation, and when they should be applied.

Types of insecticides

Products in the same color category are from the same class of pesticides. However, products within a color group that are of different shades have different modes of action and can be considered as different types of products with regard to resistance management.

INSECTICIDE	CLASS	ACTIVITY
Assail (acetamiprid)	neonicotinyl	disrupt nerve transmission
Calypso (thiacloprid)		
Rimon (novaluron)		
Intrepid (methoxyfenozide)	insect growth regulator	disrupt normal development
Esteem (pyriproxifen)		
Delegate* (spinetoram)	spinosyn	disrupt nerve transmission
Success (spinosad)		
Proclaim (emamectin benzoate)	avermectin	disrupt nerve transmission
Altacor* (rynaxypyr)	anthranilimide	disrupt muscle action
Horticultural oil	biologicals	lethal infection or suffocation
Virus		
Bt (<i>Bacillus thuringiensis</i>)		

*Not yet registered for commercial use.

SOURCE: Dr. Jay Brunner, Washington State University

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