
IR-4 and Cranberry Entomologists Fight Insecticide-Resistant Weevils

Dr. Anne Averill, Cranberry Entomologist from University of Massachusetts-Amherst, Marty Sylvania, Entomology Technician at the UMass Cranberry Station and IR-4 were key players in a group of industry and regulatory interests that secured a new insecticide for use by Massachusetts cranberry growers in the fight against chlorpyrifos-resistant cranberry weevil. This insect, feeding on floral buds and laying its eggs in unopen flowers of the cranberry plant, accounted for instances of total crop loss for some cranberry farmers. In 2001, the resistant population affected approximately 1,500 acres of cranberry production. By 2002, resistance had spread to the vast majority of Massachusetts cranberry acreage.

After Massachusetts denied a Section 18 request for thiamethoxam, another effective insecticide had to be identified. Averill and Sylvania consulted with IR-4 to identify candidates that could possibly be effective against the weevil. With no time to lose, they worked tirelessly to establish a screening program. Averill and Sylvania identified indoxacarb, a relatively new insecticide with low toxicity to

humans but tremendous efficacy against cranberry weevil. In the first demonstrated use of this material through chemigation, they showed virtually complete control of the weevil.

With this information in hand, IR-4 established a GLP residue program for indoxacarb on cranberry. Two trials were quickly conducted in Massachusetts during early 2002 and the samples were analyzed by the IR-4 analytical facility at the University of California, Davis. The IR-4 data supported an indoxacarb crisis exemption for Massachusetts cranberry growers in 2002. Amazingly, this was all accomplished within the same growing season! IR-4 is currently conducting field trials in NJ, WI, and OR to provide the data needed for a full national registration.

Through the efforts of the cranberry entomologists, IR-4, and DuPont (the registrant for indoxacarb), MA growers were spared the potential of, at minimum, \$6,000,000 in crop losses in 2002.

Article by Keith Dorschner
and Marty Sylvania

EPA/IR-4 Technical Working Group Meeting

The EPA/IR-4 Technical Working Group (TWG) has convened for a series of meetings between the IR-4 Headquarters staff and key scientists from the Environmental Protection Agency (EPA), intended to produce a more efficient system of IR-4 data submission and EPA review. These meetings have been held at approximately quarterly intervals, generally at the offices of one or the other organization. A TWG meeting was held on January 30, 2003, in Crystal City, Virginia. Participants included representatives of EPA, IR-4, USDA, California Dept. of Pesticide Regulations (CDPR), and PMRA Canada.

Highlights of this meeting included a proposal by Hong Chen to revise the sampling requirements for residue trials on papaya to more accurately reflect the manner in which fruits reach maturity on that tropical plant. Keith Dorschner initiated a discussion of a recent decision by some EPA reviewers to require that the minimum spray volume on proposed pesticide labels be no lower than the lowest volume used in the submitted residue trials. (IR-4 protocols have not been written to meet this requirement. A label restriction on spray volume on a new use may make the pesticide impractical to use for some growers, depending on their spray equipment.)

Ken Samoil questioned the requirement by another reviewer for more residue data for bifenthrin on celery. Four trials had been conducted in 1991 with the WP formulation and four more trials had been conducted at different locations in 1997/98 using the EC formulation (eight trials are required for this crop). Both formulations of this insecticide

had been labeled on other crops with supporting data with just one formulation. The Agency chose not to relax its requirement in this case, so four more trials (with both formulations in each) will have to be conducted before the use is approved.

Dave Thompson proposed a reduced data requirement for iodomethane uses on various crops as a methyl bromide alternative. The registrant has submitted strawberry and tomato data; IR-4 would develop data on a short season crop such as radish. As long as no residues were detected, then a tolerance would be proposed on all crops for which this use is needed. A more formal proposal will be presented to ChemSAC at EPA. Hoyt Jamerson and Jeff Herndon of EPA tentatively approved a proposal by Jerry Baron that important ChemSAC decisions be published in the IR-4 Newsletter.

Dan Kunkel reported that in 2002 IR-4 submitted 150 petitions to the Agency and that IR-4 petitions resulted in 538 new uses established (including 59 Section 18 clearances). Debbie Edwards of EPA-Registration Division noted that the Agency registered twelve new active ingredients in 2002 including four Reduced Risk, one OP alternative, and several compounds that were reviewed in conjunction with the regulatory agencies in Canada or Germany. Paul Dehar was introduced (via an audio-visual conference call) as the new Work Share Coordinator at California-DPR, succeeding Roberta Firoved. Doug Rothwell and Shirley Archambault commented on the new minor use program underway in Canada.

Article by Ken Samoil