Chemical Control/New Products

Introduction of Two New Products for Use in Pome Fruit: CLUTCH™ Insecticide and KANEMITE™ Miticide

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Abstract: Arvesta plans to introduce a new insecticide and a new miticide in 2004. CLUTCH is the trade name of a new neonicotinoid insecticide, and KANEMITE is the trade name of a new, unique mode of action miticide for use on pome fruit. Both products have very favorable toxicological and ecological profiles. EPA has granted CLUTCH an OP replacement status and KANEMITE has been approved as a reduced risk compound.

Materials

CLUTCH (the active ingredient is Clothianidin) is a new neonicotinoid insecticide which inhibits binding to the acetylcholine receptors and shows rapid and residual activity by contact and through ingestion. CLUTCH has been found to be a very effective tool for the control of a broad range of insects such as Hemiptera, Diptera, Coleoptera, Thysanoptera and other families of pests. In pome fruit, CLUTCH can be applied as a foliar treatment to control aphids, leafhoppers, codling moth, plum curculio, apple maggot, leafminers, leafrollers, oriental fruit moth and pear psylla. CLUTCH also has a very favorable mammalian and ecological toxic profile which means that, if used in accordance with labeled directions, CLUTCH is unlikely to present any acute hazards to the user or environment, making it an excellent candidate for IPM programs. Figure 1 illustrates the efficacy of CLUTCH on apple.

KANEMITE (the active ingredient is Acequinocyl), a Naphthoquinone derivative, is a novel and unique chemical class of acaricide. KANEMITE provides excellent control of all life stages of various species of agricultural mite pests such as Panonychus species and Tetranychus species. Because of its unique mode of action, KANEMITE is very effective against mite species resistant to other products with no cross-resistance to other acaricides. We believe KANEMITE can make a significant contribution to mite management in many different agriculturally important crops due to its excellent performance against target mites, its good residual performance, its very low mammalian toxicity as well as very low environmental impact. In pome fruit, KANEMITE will be used to control European red mite and twospotted spider mite. Figure 2 illustrates the efficacy of KANEMITE on apple.
CM: Codling moth (number of fruits infested/5 trees)
PC: Plum curculio (% infested fruit)
OBLR: Obliquebanded leafroller (number of fruits damaged/5 trees)
AM: Apple maggot (% damaged fruit)

Fig. 1. CLUTCH efficacy data on apple (NY, 2001).

Fig. 2. KANEMITE efficacy data on apple (MI, 2000).