



Dear almond professional,

Recently, questions have arisen regarding whether diflubenzuron, an insect growth regulator, may have an adverse effect on bee brood health. The importance of pollinating insects to agricultural crops is undisputed, and pollinator health is a concern to everyone in agriculture. Chemtura AgroSolutions, the manufacturer of Dimilin® insect growth regulator, takes its responsibilities in this regard very seriously.

Diflubenzuron, the active ingredient in Dimilin 2L insect growth regulator, controls target insects through the inhibition of chitin synthesis in molting insects. In other words, when insects undergo metamorphosis and shed their exoskeleton, Dimilin prevents them from successfully molting and maturing from one life stage to another. Since adult insects are mature and do not molt or shed their exoskeleton, Dimilin has no effect on them. For this reason, Dimilin is inherently nontoxic to adult bees.

Because of its mode of action, method of delivery and use-rates, diflubenzuron is selective and effective for control of target insect species. The use instructions, approved by the U.S. Environmental Protection Agency, are designed to provide effective control of the target insect pests while mitigating risk to the workers, the environment, the crop, beneficial insect species and pollinators alike.

Dimilin insect growth regulator is not systemic in plants and does not translocate to pollen or nectar. Experimental results and field experience in the United States, Germany, the Netherlands, England and Canada have demonstrated that Dimilin insect growth regulator, when used at labeled rates and according to label directions, can be applied to orchards and fields with no adverse effects on pollinators. These real-world studies have been conducted on a wide range of crops since diflubenzuron's discovery in the 1970s. After years of use and extensive laboratory and field testing, results show that when applied according to label directions, there are no adverse effects on bee broods.

Chemtura AgroSolutions encourages growers to continue using best management practices during pesticide applications of all types to minimize potential effects to pollinators.

These practices include:

- Applying control products during nonforaging periods, such as late afternoon and evening.
- Choosing product formulations that tend to be less toxic.
- Avoiding direct contact with hives or pollinators during applications.
- Following ALL label directions, including use-rate and timing of applications.
- Keeping in mind ground applications have less impact than aerial applications.

If you have questions or wish to discuss this topic further, please contact your local Chemtura AgroSolutions technical sales representative.

Best regards,

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