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Fully Insured • Drug Free Employer

If You Thought They Were All Sleeping



Caterpillar

It can be very frustrating for clients to deal with insect pests this early in the season. Although the amount of insect activity and crop injury is usually minimal, particularly when the production temperatures are low, the population of these pests, if undetected, can gradually increase and lead to significant populations and plant injury later in the production cycle as the temperatures increase.

Insects and mites are essentially cold blooded and their metabolism and activity are greatly influenced by environmental temperatures. Up to a certain point, as the temperatures increase, so does their rate of development and activity. Conversely, as temperatures decrease, they develop slower and are much less active.

Many insect pests and mites are capable of surviving under low temperatures and others have 'dormant' immatures or eggs to survive during cold periods. In general, most insects and mites do not become active until the temperatures reach approximately 50° F. The temperature where development begins for several of the top greenhouse and nursery pests is listed below:

- | | |
|---------------------------------------|----------------------------------|
| Aphids 39° F | Caterpillars* 40 to 50° F |
| Two-spotted Spider Mites 50° F | Slugs and Snails 41° F |
| Western Flower Thrips 50° F | Whiteflies 47° F |

* Varies by species



Slug



Whitefly



Sri Lanka Weevil

Although insect and mite activity will occur at the temperatures listed above, the rate of development is relatively slow. As the temperatures warm up, insects and mites are more active and eventually become reproductive. Aphids are the exception and are capable of reproducing at cool temperatures (less than 50° F).

When considering if control measures are necessary under cool production temperatures, keep in mind that many insecticides and miticides are only effective when they come into direct contact with the pest. Additionally, systemic pesticides only move up the plant while the plants are actively growing (plant growth is also greatly reduced with low temperatures). In many instances, control strategies are relatively ineffective under cool growing conditions because the temperatures are too cool to promote uptake of systemic products and contact pesticides often fail since the pests are not very active, limiting the likelihood of them coming into contact with these products.

Under normal growing temperatures, contact insecticides and miticides are most effective when they are applied during the coolest parts of the day (mornings and evenings) as this is when insects and mites are generally most active and have the greatest chance of coming into direct contact with the pest control products. However, under cool growing conditions, it is best to apply insecticides and miticides during the warmest time of the day when the pests are most active; increasing the likelihood they will come into direct contact with the active ingredients.



Large or Small ... we handle it all. 772-546-2861