

by Balakrishna Rao, Ph.D.

Controlling pine needle scale

Problem: Can pine needle scale be controlled using dormant oil? (Michigan)

Solution: Pine needle scale is an armored scale. This group of scale insects is difficult to manage. General recommendations for scale management usually include a dormant oil spray followed by one or two sprays when crawlers are present.

Some extension publications recommend Ethion combined with horticultural oil for armored scale control. Douglas Caldwell, Ph.D., our staff entomologist and manager of research and development at Davey, says, "Dormant oil could be interpreted as either a dormant oil product or the season when the application is made (or both). I assume you are referring to the dormant season. Applications of a 'horticultural' grade oil would probably not give adequate control if the application was made sometime between October and April (dormant time). This is because this scale species overwinters under the old female cover (scale) in the egg stage.

"The theory is that the oil will not penetrate enough to come in contact with all of the eggs, as the eggs are sometimes stacked on top of one another. A few armored scale species (euonymus scale and white peach scale) overwinter as females. Results (control) with oil are better since there is only one individual under the scale cover.

"The most opportune time to use oil (at 2 gal. per 100 gal.), based on work done in several states (New York, Pennsylvania, Colorado), is shortly after the second generation crawler period, which would place the application time in early to mid-August in your area."

The oil will kill settled crawlers and second instars.

"For some reason, control with oils during the first generation crawler period (middle to late May) is not as effective. However, you could try using Dursban, Sevin, Orthene or Diazinon during the first generation crawler period. A third application (2% oil) could be made in middle to late August to control mature females before eggs are deposited.

Effective Oftanol applications

Problem: Oftanol has usually been my "right-hand material" for season-long grub control, but for the past two seasons it has not been all that effective. Application was accurately and carefully done. What other factors could have contributed to reducing the effectiveness of this pesticide? (Maryland)

Solution: The poor performance of Oftanol for grub control that you are explaining has also been reported by other professionals in the industry. Though Oftanol is still considered to be one of the better products with longer residual effect for grub control, in recent years it failed to perform as expected in a number of cases.

Consider the following factors if Oftanol isn't meeting your expectations:

1. Improper timing, either too early or too late. Ideally insecticide applications should be made to control larvae in the fall. Mature grubs in the spring are more difficult to control.

2. Pre- and post-watering. The most commonly used materials (including Oftanol) are organophosphate insecticides which have a relatively short residual effect in soil and have a tendency to bind to thatch. Therefore, watering is recommended to improve their effectiveness. Unless surface-applied material are thoroughly watered in, grubs can continue to cause damage.

3. Dry soil conditions, improper movement and inactivity of materials.

4. Possible bacterial degradation of Oftanol in some specific soil types.

Reports suggest that some soil types may contain certain Oftanol decomposing bacteria that can affect its results. This will result in enhanced degradation of Oftanol and possibly other organophosphates or carbamates such as Sevin.

Some of these factors individually or cumulatively may have contributed to the lack of results with your grub problem.

Identify the causal factors and try to correct them before using the products again. Read and follow label specifications for best results.

Hard-to-control weeds

Problem: In Hawaii, we have a problem getting rid of prostate spurge and woodsorrel. I have tried many ways with varying results, most not good. What would you recommend? (Hawaii)

Solution: Prostate spurge and woodsorrel weeds are considered to be difficult-to-control weeds. Generally, Trimec (containing 2,4-D, MCPP and dicamba) herbicide is not very effective against these weeds. Mixtures of 2,4-D with 2,4-DP or triclopyr can give better results. Either amine or ester formulations of these products should be able to provide good results.

Target the spray applications when the weeds are actively growing. If you are planning to use an ester formulation, be careful around non-target desirable broadleaf plants. Ester formulations are volatile and can cause injury to nearby plants under certain conditions. Read and follow label specifications for better results. **LM**



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Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.