PROBLEM SOLVERS

by Balakrishna Rao, Ph.D.

Preventing beetle grubs

Problem: *Are preventative measures against beetle grubs effective? If yes, when, what and how much? (New Jersey)*

Solution: Preventative applications of insecticides might be beneficial in some situations where there was a history of a severe grub problem in the past and a severe problem is expected in the current season. The important thing to remember is the timing of the application.

Since most of the current grub control materials on the market vary in their length of residual, the applications should be timed close to the grub activity period. Preferably the materials should be in place when newly-hatched young grubs become active in the late summer or fall. The next best time would be in the early spring, as the mature overwintered grubs come up and begin feeding.

If the materials were applied too early (as a preventative measure), full benefit may not be obtained because of their short residual effect. Insecticides, such as Dursban, diazinon, Proxol, Turcam, Oftanol, Sevin and several others, are registered for grub control. The results may vary depending upon the turf environment and products used. Based on reports and experiences, it is difficult to predict the effectiveness of a product. Regarding the question concerning how much to use, use the rate recommended on the product label. Read and follow label specifications for best results.

Books to identify diseases

Problem: *What in your opinion is the ideal reference book and easiest to use to diagnose ornamental flower/tree/shrub diseases? (California)*

Solution: There are a number of books, publications and fact sheets which deal with ornamental plant disease problems. Among these, the following publications might be very useful as references for disease diagnosis and management. 1. Pirone, Pascal P. (1978), *Diseases and Pests of Ornamental Plants.* A. Wiley, Interscience Publication, John Wiley & Sons, New York, Fifth Edition: 566 pages. 2. Shurtleff, Malcome C. & Roscoe Randell (1975), *How to Control Tree Diseases and Pests.* Intertec Publishing Company, Kansas City, Mo., 106 pages. 3. Tatter, Terry A. (1978), *Diseases of Shade Trees.* Academic Press, New York, 361 pages. 4. Partyka, R.E.; J. W. Rimelspach, B. G. Joyner and S. A. Carver (1980), *Woody Ornamentals: Plants and Problems.* Hammer Graphics, Inc., 427 pages.

Storing chemicals

Problem: *How long can herbicides, pesticides, etc. be stored without losing their effectiveness? (Arkansas)*

Solution: If stored according to manufacturer's guidelines and label specifications, most pesticides we use today have a shelf life of two to three years. Shelf life or half life of the herbicides and pesticides can vary depending upon the storage conditions and the temperatures they are exposed to.

Most pesticides should remain effective as long as the containers are stored properly and are not opened. Pesticides which are two or more years old may not be as effective as the new ones, or they may even be phytotoxic as they get older. Check with your supplier or the manufacturer for further details.

Football fields and lime

Problem: *Regarding the question in the June 1986 issue on Football Fields and Lime, we have a limestone quarry and make many granular, sand and chip-size products. When I read your recommendation that sand be applied after coring, my thought was that a limestone sand would serve two purposes. Is there a double benefit in using a limestone sand after coring on an athletic field? (New York)*

Solution: I believe that the limestone sand product you are referring to is calcium carbonate and the sand is the size designation. The answer to your question would be no, because with the limestone sand you have, it would not serve to correct both problems of 1) dealing with raising the pH and 2) changing the physical properties of the soil.

This product would raise the pH in time; however, since the particles will break down, it would be difficult to obtain benefit in changing the physical properties of the soil. We have used sources of lime having larger particle size than a typical sand particle that will break down in a three-year period.

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Questions should be mailed to Problem Solvers, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.