

South Florida Pesticide Report

By BRAD KOCHER

As members of the turfgrass industry, specifically golf course superintendents, each of us has a responsibility to our employers, and our members to present the best possible playing conditions on our golf courses. Due to the vast variety of pests which attempt to inhibit our efforts, we find it necessary to use pesticides to control these undesirables.

Through the use of these different pesticides we are put in the midst of a multitude of additional responsibilities. First and foremost is the responsibility to our environment. None of us wish to use a pesticide that will have a long lasting detrimental effect on our surroundings. We must use the correct target pesticide, at the proper time, at the proper rate, under suitable weather conditions, with the proper equipment, and using adequate safety measures.

In respect to the environment and proper timing, a pesticide management practice begun in the early 1970's is termed Integrated Pest Management (I.P.M.) The concept, in part, is concerned with attempting to get away from "time treatments" of pesticides. For example, treating golf course greens every three weeks for armyworm or sodwebworm control on a preventative basis would be considered "time treatment". I.P.M. dictates constant monitoring of turf activity, followed by evaluation and treatment if necessary with as narrow a target pest control as possible.

I.P.M. also looks to natural predators for control. The citrus blackfly has been controlled in South Florida largely with the introduction of the *Ametis hesperidum* wasp. Certain virus are instrumental in the control of some pests, and in the Northeast nematodes have controlled the overpopulation of crop damaging grasshoppers. Another variety of wasp has proven somewhat effective in controlling mole crickets. I.P.M. has a great future both from an ecological and financial aspect and should be a valuable tool to us as turf managers.

Certain other responsibilities require us to be as knowledgeable as possible in areas of pesticides. We should know what pesticides are targeted for certain pests and at what rates they should be applied. The most valuable text each superintendent should have is the *Florida Insect Control Guide*. There are sections on insecticides and miticides; ornamental and turf (of particular interest); livestock; forest and shade trees; field crops and pastures; fruits and nuts; household insects; poultry insect control; stored products; vegetables; and miscellaneous. "The *Insect Control Guide* is a compilation of the official insect control recommendations of the Institute of Food and Agricultural Services (I.F.A.S.), University of Florida," and is updated periodically.

Another important publication is the *Farm Chemical Handbook*. It contains sections on the plant food dictionary; applicators guide; pesticide dictionary; buyers guide, and addresses of chemical manufacturers. I have found this publication extremely valuable, and use it quite frequently. The Golf Course Superintendent's Association of America publishes a *Pesticide Usage Reference Manual*. Its text discusses safety, equipment and its uses, and application. All of these publications and others are invaluable in assisting us become more educated pesticide applicators. A list of these publications and how to obtain them will be found at the end of this article.

Having talked with numerous superintendents in the South Florida area I have found a great variety of pesticides used, differing rates, and opinions on the effect of certain pesticides. Most notable are comments from a few superintendents concerning Sencor. We have had a season or two to judge this product and comments range from "excellent" to "I won't use it again". Most everyone is using recommended rates; however, there is a certain degree of unpredictability that has some individuals reverting back to strictly MSMA. I believe, however, that Sencor has found a place in many herbicide programs and with proper

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precautions and application methods it will become a valuable herbicide.

Most broadleaf control in fairway and rough areas is done with 2-4-D or Trimec. Reduced rates of 2-4-D are used on greens for broadleaf weed control.

Approximately half of the superintendents surveyed have used Basagran. The ones who have, have found it to be excellent for controlling yellow nutsedge at the recommended (sp) rates. We have used Basagran to eradicate sedge on 328 greens, and on greens overseeded with rye or bentgrass at 1 oz. to 1 gallon of water in a pump-up hand sprayer with no discoloration of turf grass.

Control of sodwebworms and armyworms has been accomplished primarily with alternate applications of several insecticides. The most popular pesticides are Diazinon, Toxaphene, Sevin, Proxol, Dursban and a newer pesticide Primicid. All work well for control of armyworms and sodwebworms.

Although fungicides do not play a major role in Florida turfgrass, they are used more extensively during winter months, particularly on overseeded greens. Manzate 200 or fore in combination with Tersan 1991 is a widely used treatment as is Daconil 2787. Each product provides excellent control for dollar spot or brown patch. Manzate 200 or fore is also effective for algae control on greens.

Mole crickets have become an ever increasing problem in Florida and are being controlled with Mocap 5G or 10G, Diazinon or Baygon 70 W.P. There are also numerous baits with either Dursban, Toxaphen, Baygon or Malathion as the active ingredient. The effected areas should be watered prior to and after application when using the liquid or wettable powder applications. Granular baits should have no water after application. Late afternoon is an excellent time to apply baits and preferably on a night when there is no chance of rain. The treated areas should not be irrigated the evening following application. Any rain or irrigation on baits washes out the active ingredient making them ineffective. Excellent success is also evident with high pressure injections of insecticides for mole crickets. The injection units are sizable initial investment; however, the extra penetration of insecticides into areas where mole cricket activity occurs makes the insecticides much more effective.

Nemacur is the most widely used nematicide with most superintendents treating greens at least once a year just following aerification. Nemacur granules are applied at 3 lbs/1000 sq. ft. with excellent results.

Safety of our applicators is another prime consideration. Applicators should be highly educated in areas of pesticides and know the proper storage, handling and methods of application. They should be familiar with such terms as toxicity, LD 50, caution, warning, danger, oral and dermal dosages, signs of overdoses, danger to environment. They should be given physical exams at least twice a year and should be kept abreast of new and better safety procedures. They should be provided with the proper safety equipment and sprayers that are in excellent working condition. They should be made to feel a sense of pride and accomplishment as well as a strong sense of responsibility. Our sprayers will only be as responsible and knowledgeable as we help to make them and as we are ourselves.

Knowledge and communication are two of the most valuable tools we possess and through effective use of these we will become more proficient in the use of pesticides. Through research, proper labeling of chemicals, and periodic checks on environmental reactions, we will become more effective. We should all be kept abreast of new regulations, new products and application methods and rates. There are state sponsored educational sessions, classes offered at local and state universities, the Florida Turfgrass Association, local, state and national superintendents' associations and vast amounts of literature available to help us to increase our overall knowledge.

Insect Control Guide (\$10.00); *Nematode Control Guide* (\$10); *Plant Disease Guide* (\$15); and *Weed Control Guide* (\$15) can be obtained from Mr. Chick Hinton, Bldg. 664, University of Florida, Gainesville, FL 32611

Farm Chemical Handbook (\$29 + \$2 shipping before January 31; \$35 + \$2.00 shipping after January 31). Meister Publishing, 37841 Euclid Avenue, Willoughby, OH 44094, ATT: Circulation Dept.

Pesticide Usage Reference Manual (\$6.50 to GCSAA members, non-members \$9.75) GCSAA Information Central, 1617 St. Andrews Drive, Lawrence, Kansas 66044

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