

Extension service program to educate homeowners about proper lawn care is a winner in Va.

■ Bio Green Lawn Care cooperates with the Prince William (Va.) Cooperative Extension Service's Water Quality Program.

Program specialist Marc Aveni says the program is educating homeowners about the impact of fertilizers and pesticides on the environment, specifically the Chesapeake Bay and its tributaries.

"We want homeowners to know what they're doing before they use fertilizers and pesticides," says Aveni. "We're really looking at non-point source pollution."

The extension service conducts three two-hour field days in the fall and four two-hour field days in the spring on vari-

ous lawn/landscape care topics.

It's also enlisted 60 volunteer lawns. The homeowners have agreed to follow all program recommendations. Information on the amount and type of materials they use is being recorded, along with their results.

After a season, some of these homeowners will allow their lawns to be used as "demonstration lawns." Aveni says there are about 10 now.

This effort is jointly funded by the USDA and extension.

"As our name implies, we design our programs using as few chemicals as possible," says Bio Green's David Schrader. "But we're not extremists so we do make judicious use of pesticides when necessary. After all, there are a lot of environmental benefits to having a healthy lawn."

Partner Mark Stoeckel says lawn care professionals can help themselves immeasurably by keeping in touch with their local extension personnel.

"We've always come to them as a



source of information whenever we run into problems. They've helped us tremendously in our business," says Stoeckel.

Aveni, for his part, thinks the professional lawn care industry—and he singled out Bio Green—has been supportive of the Water Quality Program.

"They know that what's good for the environment is also good for business," says Aveni.

—Ron Hall

Enhanced microbial degradation—it's real!

Soil micro-organisms are 'hungry, relatively immobile and ready to reproduce,' says Purdue educator.

■ Soil microbes are hidden, but they're real. You should know about them.

Indeed, there may be as many as 500 million micro-organisms (7,000 to 10,000 different species) in one gram of soil, typically clustered in small clumps or micro-colonies on/near food sources, says Purdue University microbiologist Dr. Ron Turco.

Turco describes them as "the powerhouse in the soil, the driving force controlling what really goes on in the soil system."

No wonder then that the chemical industry has a term for what they do to pesticides: enhanced biodegradation.

Soil micro-organisms, through their amazing reproductive abilities, can develop populations capable of rapidly breaking

down some chemical compounds.

The more a particular compound is used, the more likely microbes are to adapt to it. As the populations of these "adapted" microbes increase, the compound's survival in the soil decreases.

The problem arises when the chemical compound is degraded before it controls the pest it was applied for.

"When you apply some pesticide to the soil, bacteria view that pesticide as a free lunch," says Turco. "They're very happy to see the arrival of the chemicals. It's a much more readily available material than what they're normally living on which is the slow decomposition of organic matter in the soil."

Turco says to reduce incidences of enhanced biodegradation:

- rotate different chemicals in different classes, and
- limit the use of soil-active prophylactic chemicals.

In other words, when

chemicals are used to treat problems as they occur, rather than making blanket preventive applications, they stand a much smaller chance of accelerating the biodegradation process.

Turco presented much of the above information at the Golf Course Superintendents Association America Conference in Anaheim, Calif., this past January.

In answer to a question from the floor, he said the potential for enhanced biodegradation is just as significant in thatch as it is in soil.

—Ron Hall

