

# Cornell investigates Milorganite's effectiveness vs. deer

Research has shown that the fertilizer Milorganite may be used to discourage deer browsing.

Milorganite may offer some relief from deer damage and applied research has been initiated to qualify the product's effectiveness in an urban area where deer predation is a problem.

A study at Cornell University's Cooperative Extension Service in Dutchess County, N.Y., is attempting to quantify the result of using Milorganite as an effective deer deterrent. Thus far, the study

indicates it is effective in deterring deer from browsing on valuable ornamental plants and shrubs.

Milwaukee has produced the 100-percent natural organic fertilizer product, a co-product of the city's wastewater treatment process.

Initial results of the Cornell deer study show Milorganite has deterred deer from browsing on Hosta and Taxus (yews) when the fertilizer is applied around the target shrubs' base. The rate of application is at five pounds per 100 square feet. Milorganite is broadcast on the soil



surface around the target plant material.

According to the study, Milorganite should be applied one to two times per month and after each snowfall in the winter months. The researchers feel the scent of the product may be the reason the deer choose to browse elsewhere.

Les Hulcoop, Cooperative Extension agent for Dutchess County, who is captaining the study, said, "The deer are definitely staying away from the Milorganite applications at this time. We feel some of the commercially labeled treatments on the

market do quite well in checking deer damage, but the plants grow out of the protection during spring and summer. Additionally, the users do not like the white film some of these treatments leave on the growing plant material."

Many of the deer repellent treatments lose their effectiveness in winter after temperatures fall below 10 degrees F.

The study will also assess predation control if Milorganite is hung in bags from the target plants throughout the winter.

## Flood

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to wash off and aerify through the fine silt and clay deposits. But there is no way to clean it all away and aerifying affects just 5 to 7 percent of a green's surface area, Moore said.

If this summer is wet, water will pool on the silt-laden greens. If it's a dry summer, the silt's effects could be masked. But the silt will remain in the soil profile, moving lower as continued top dressing adds an average quarter-inch per year to the green's height.

"In Kansas, for instance, a soil profile will show a dust storm that deposited large amounts of silt 20 years ago," Moore explained. "Eventually a wet summer will come along and a course will develop black layer problems from the silt, no matter how much the superintendent tries to wash off the silt and aerify his greens now."

Stripping off the top inch of greens material, fumigating and then replanting with sod, sprigs or seed is the only surefire solution, Moore said.

Unfortunately, it is expensive and means closing the course or using temporary greens for many weeks. That's a tough sell to members or owners.

Stripping in the spring would be best for Bermudagrass greens and would mean closing eight to 12 weeks, Moore said.

Waiting until fall, with frequent aerifying throughout spring and summer, would work best for bentgrass, the USGA specialist noted.

"A good superintendent could start a two-acre bentgrass nursery this spring and have sod ready to transplant come fall. It's a great opportunity to convert to a better variety of bentgrass and get rid of things like goosegrass, poa or whatever.

"A good sodding job could have the greens ready for play in six weeks. Seeding would mean waiting a lot longer, perhaps the next May. But seeding is better agronomically than sodding.

"Every course is different and there is no one solution. But members tend to react better to closing the course because of major problems, like floods, than they do for the routine stuff. The problems are so obvious, they can understand it."

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