

## Ammonium sulfate reduces summer patch

■ Ammonium sulfate fertilizer (21-0-0-24S) suppresses summer patch, a fungal disease attacking the roots of turfgrasses, says Dr. Joseph Heckman of Rutgers University.

Heckman says the intensity of this turf disease increases during hot, humid summers. While summer patch can cause problems for homeowners, the turf market—especially golf course managers—must deal with it on a larger scale. Summer patch affects Kentucky bluegrass, annual bluegrass and fine fescues.

"Ammonium sulfate reduces soil pH almost immediately, and that has been shown to suppress summer patch in our test on Kentucky bluegrass," says Rutgers pathologist David Thompson, who worked with Heckman and Bruce Clarke on the study. "Urea lowers the pH in the long term, but in the short term it actually increases the soil pH and urea does not suppress summer patch."

Neither calcium nitrate nor potassium nitrate offer the pH lowering effect found with ammonium sulfate, Thompson says.

Tests in 1991 showed a 60 to 80 percent reduction in summer patch when ammonium sulfate was applied, and a 35 to 45 percent when sulfur-coated urea was applied, compared to urea or nitrate. Thompson also says ammonium sulfate caused a delay of three to five weeks in the development of symptoms while sulfur-coated urea only showed a one- to two-week delay of symptoms compared to nitrate nitrogen.

## Plan ahead for Japanese beetles

■ Warm weather next spring will bring with it the arrival of Japanese beetles. These voracious insects begin their summer feeding frenzy in late June or early July in most cool-season areas, a practice they keep up through August. Some may even linger until late September.

Although adult Japanese beetles seem especially attracted to roses, annuals, vegetables and grapes, they can—and do—feed on more than 250 kinds of plants, according to Dr. Lee Hellman, an extension entomologist with the University of Maryland. Just one or two of the insects

can virtually destroy a flower in a matter of hours.

When it comes to control, there's good news and bad news. The good news is that control methods are available; the bad news is that none of them is completely effective, Hellman says.

Although insecticides will kill Japanese beetles that eat or walk on treated leaves, they remain effective for only a few days—a week at the most. You may need to spray

some ornamental plants several times during the summer to prevent serious damage caused by the beetles as they migrate from one yard to another.

The most common insecticides for use against Japanese beetles are malathion and carbaryl (Sevin).

Both are effective, if applied according to label directions. They may be used on fruit trees, but may involve a pre-harvest waiting period.



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