## Study: Ammonium sulfate fertilizer fights summer patch

A new study shows that ammonium sulfate fertilizer (21-0-0-24S) suppresses summer patch, a fungal disease attacking the roots of grasses, according to Dr. Joseph Heckman of Rutgers University.

Heckman said the intensity of this turf disease increases during hot, humid summers. Summer patch affects Kentucky bluegrass, annual bluegrass and fine fescues.

Heckman has been working with Rutgersplant pathologists David Thompson and Bruce Clarke. Thompson said it appears ammonium sulfate's effects on summer patch are linked to the lower soil pH achieved when using this fertilizer.

"Ammonium sulfate reduces soil Ph almost

immediately and that has been shown to suppress summer patch in our test on Kentucky bluegrass," Thompson said. "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, according to Thompson.

Tests in 1991 showed a 60-to 80-percent reduction in summer patch when ammonium sulfate was applied and a 35-to 45-percent reduction when sulfur-coated urea was applied compared to urea or nitrate.

Thompson also said 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.

Kentucky bluegrass is grown in pH levels between 6 and 7, but Thompson's research shows that this grass also grows well at pH levels in the mid-fives. It is in the fives that Thompson said summer patch is best suppressed. That's also the preferred pH level for bentgrass.

Thompson said it is often hard to foresee if the weather will be conducive to summer patch problems, and fungicides must be applied as preventive treatments at high rates due to the soil-borne nature of the disease.





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## GCSAA's lineup loaded for int'l show

ANAHEIM, Calif. - From sunup to sundown, educational opportunities will abound at the 64th International Golf Course Conference and Show Jan. 23-30 here.

About 600 exhibitors, many introducing new product lines, will provide a first-hand look in design, construction, management, maintenance, renovation and restoration of golf courses.

It's timely opportunity to examine merchandise and network with other professionals about the latest technologies directly related to the golf course management industry.

The trade show aspect opens at 9 a.m. Thursday, Jan. 28, and closes at 1 p.m. Jan. 30.

Preconference education seminars, embracing 54 one or twoday sessions Jan. 23-26, will highlight environmental concerns confronting golf course superintendents

Concurrent educational sessions will span course management techniques, and forums and sessions will deal with such topics as the innovative superintendent, employee issues, financial planning, computer use, pest management technology, course officials, reclaimed water and equipment management.

Members of the American Society of Golf Course Architects will be spotlighted Jan. 29, and the USGA's Green Section Program takes center stage Jan. 30.

James T. Snow, USGA Green Section national director, will chair the program labeled, "Fitting The Pieces in the Golf Course Management Puzzle.'

Gary Bennett of Crickentree Country Club, Columbia, S. C. is expected to attempt defense of his course superintendent title in the 36-hole medal play tournament Jan. 23-24 at San Diego.

Johnny Bench, Baseball Hall of Famer and considered the game's greatest catcher, will keynote the opening session and reception Tuesday evening, Jan. 26. He's as proficient at the dinner-speaking plate as he was behind home plate.

Bench will gladly yield the entertainment spotlight to Dinah Shore. "Synonymous with the great names in golf, like Crosby and Hope," notes William R. Roberts, president of the event-sponsoring Golf Course Superintendents Association of America, Dinah will receive the prestigious Old Tom Morris Award.

"Her contributions to the LPGA and golf in general make her a perfect addition to the illustrious group of Old Tom honorees," added Roberts.

Golf legend Patty Berg will make the presentation.

The Beach Boys will perform at the annual banquet and show the closing evening.