

Fusarium blight, a serious disease of turfgrasses, plagued Michigan lawns this year. Joseph Vargus, MSU turf pathologist, comments on the condition of a plot at MSU's first sod producers' field day.

## Michigan State Reports On First Sod Field Day

Michigan State University's first Sod Production Research Field Day attracted producers from five states and Canada to the MSU Muck Experimental Farm near Laingsburg, Sept. 10.

Scientists reported on recent research conducted on all phases of cultural practices involved in commercial sod production. These were

some of the findings reported:

— Merion Kentucky bluegrass cut each week at a height of 2.5 inches had greater sod strength than the same grass cut closer or more frequently.

Sod strength was determined by the amount of force needed to tear the sod. A special experimental apparatus has been developed by

Michigan State University scientists to measure this force.

John Kaufmann and Robert Shearman, MSU turfgrass researchers, reported that an average of 161 pounds was needed to tear sod that had been cut at a height of 2.5 inches once a week.

— The turfgrass varieties with the greatest sod strength in MSU tests were Nuggett, Pennstar, Fylking and Merion — all Kentucky bluegrasses. Jamestown and Pennlawn were the strongest red fescues.

Dr. James Beard, MSU turfgrass researcher, found significant differences in sod strengths among the 22 bluegrass varieties and three red fescue varieties he compared. Varieties having a low growth habit and a slower vertical growth rate possessed greater sod strength, he noted.

— Blends of Kentucky bluegrass provide a sod that has greater disease resistance, tolerance to bad weather, and adaptability to shade than sod grown from a single variety of grass. Most blends evaluated in the study possessed adequate sod strength. Blends containing Fylking tended to rank slightly higher in sod strength, said Dr. Beard.

David Martin reported that red fescue is the preferred turfgrass species for use under shady conditions, but the Kentucky bluegrasses produced a stronger, higher quality sod more easily. He found that red fescue mixtures containing as little as 10% Merion Kentucky bluegrass

Soil mixtures and water infiltration rates on putting greens were explained by Ray Kunzee, MSU soil scientist.





A sod strength-testing device, developed at MSU, is examined by Dr. James Beard, MSU turfgrass researcher.

had adequate sod strength but were of poorer quality. Red fescue mixtures containing 20% to 30% Merion gave good sod strength for handling and had acceptable quality.

— Merion bluegrass sod growth on organic soil under Michigan conditions should receive about 30 pounds of nitrogen per acre or less in the summer and no more than 60 pounds at any other time of the year to maintain sod strength.

MSU soil scientist Paul Rieke recommended applying 90 to 100 pounds per acre per year of nitrogen on organic soils growing Merion, 60 to 100 pounds for common Kentucky bluegrasses and 40 to 75 pounds for fescues. The wide range allows for variations in the age and condition of the grass, and the soil, drainage and irrigation conditions.

— *Fusarium blight* is becoming a widespread problem on Michigan lawns, and no chemical is yet available to correct the problem.

Dr. Joseph Vargas, of MSU's Department of Botany and Plant Pathology, said ever since the disease first appeared in Michigan about six years ago, the number of home lawns affected and the severity of the disease has steadily increased. The disease occurs during hot, dry weather when the lawn is under stress from drought. The disease can cause widespread losses in sod fields, and Vargas is looking for ways to correct this potentially serious problem.

— Sod heating, which can cause

severe damage to sod during shipment, can be reduced by cutting close and removing the clippings.

MSU turfgrass specialist John King said close cutting prior to harvest reduced the temperature build-up and respiration rate of the sod.

He also showed that high nitrogen rates applied five days before harvest were detrimental to the sod. The respiration rate and death of the grass were significantly increased.

— Harvesting sod takes some topsoil from the land, but not as much as some producers might think.

Dr. Robert Lucas, MSU soil specialist, said only about one-half inch of topsoil was removed when each sod crop was harvested from the Muck Experimental Farm. Topsoil depth at the farm ranges from 3 to 25 feet.

A typical organic sod piece is 1 square yard, weighs 33 pounds, contains 22 pounds of water, 6.6 pounds of soil, 3.8 pounds of roots and rhizomes and 0.4 pounds of dry grass.

### King Ranch Grants \$5,000 For Lawngrass Research

Texas A&M research on a lawn-grass killer known as St. Augustine Decline has received a \$5,000 boost from King Ranch, Inc. of Kingsville, Texas.

King Ranch, Inc., provided the grant for fundamental and applied research on St. Augustine Decline and for developing adaptable resistant varieties, which will ultimately be distributed to growers of St. Augustine grass.

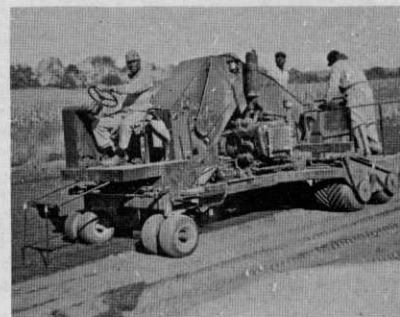
Dr. R. W. Toler, associate plant science professor at Texas A&M, is project leader for SAD research, as well as for all cereal and grass virus studies. Norman L. McCoy, Extension plant pathologist, is working with Toler and will complete his Ph.D. dissertation from SAD investigations.

Homeowners from Orange to Brownsville and as far north as Ft. Worth will benefit from this research since St. Augustine Decline has been found throughout that area. About 96% of lawns in the Coastal Bend area of Texas are seeded to St. Augustine grass, Toler reported.

Since discovery of St. Augustine Decline, Texas A&M has named the disease, identified it as a virus, and worked toward development of plant resistance. Possible resistant varieties are now being tested, Toler added.

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