

Anhauser Dwarf Looks "Outstanding" At Purdue's Midwest Turf Field Days



Chief agronomist Daniel explained experiments underway at Purdue's agronomy farm and in other test areas about the campus.

Of the close-cut bluegrasses inspected by some 200-plus at Purdue's agronomy farm, during the August 8-9 Midwest Turf Field Days, Anhauser dwarf has continued to be "outstanding" when maintained at $\frac{3}{4}$ " cut, without disease control, but with weed and insect control. For three years blocks of bluegrass, both commercial and experimental, have been grown by Field Days host Dr. William H. Daniel and his agronomy department staff at this Purdue University farm just north of Lafayette, Ind. Severe damage with leafspot occurred in April and May '66, but Anhauser dwarf seemed to successfully weather the obstacles. Prato was badly damaged with leafspot; of two other experimentals, 0217 has been one of the better performers, and K-5-47 continues to "look good," shirt-sleeved delegates were told as they stood on the 92°, sun-drenched farm examining experimental plots.

Graduate student Terry Riordan explained he is continuing his research on low-growing bluegrasses which have good rhizome development. Similar ef-

fort is being devoted to finding vigorous, aggressive, fast-spreading clones that will be suitable for highway use. Available varieties from this work are at least six years away, Riordan amplified through his portable squawkbox.

3 Years With 4 lb. N

Crowds moved next on the 400-acre farm, where the turf work began in 1950, to grass plots submitted to fertilizer testing. During 1966, nine sources of nitrogen, including five experimental fertilizer blends, are being compared at rates of 0, .5, 1, 2, and 4 lbs. actual nitrogen per 1,000 sq. ft. Ureaform 4 lb. actual N/100 sq. ft. per application is of "particular interest," Daniel reported, because where this has been repeated for three years, its release pattern is quite uniform compared to single applications of previous years.

Soil always appears to need nitrogen, the turf expert continued; it can't seem to be stored in the soil for more than a year. And, there is a related need for potash to balance the nitrogen; the more nitrogen applied, the more potash required. Dr. Daniel

said a ratio of about one-half as much potash as nitrogen should be applied to get continued healthy growth.

But, no matter which grass variety experts deal with, Daniel reminded the sun-parched outdoorsmen, it must be kept vigorous to protect it from disease, drought, and competition.

Crabgrass killers under test include CY-5702 (American Cyanamid); S-W-25 (Sherwin-Williams); Ortho CS-5331 (Chevron Chemical); Planavan (Shell); and Dow's Zytron 15# A/A. Of the newer chemicals, CY-5702 look especially promising.

Delegates trekked to the Purdue Stadium where continued use of bluegrass is now favored. Daniel admitted the zoysia which was originally planted (mixed with bluegrass) has completely died due to fall fertilization combined with wintertime temperatures (which sometimes fall to 10° below zero in this flat, windswept section of the Midwest).

Drains for Soggy Sod

Too much water is often as much of a problem to turf maintenance as too little, especially



Terry Riordan showed these results of seed plantings six months old.

on athletic fields where Big 10 varsity football roughs up the sod. Excess water, often a soggy headache during the peak fall pigskin season, is tackled by vertical slitting.

"Wherever disposal of surface water is a problem, vertical slitting may help," Daniel related. Vertical slitting, he described, is making narrow trenches into which porous materials, such as pea gravel or coarse sand, are placed and then capped with sand or calcined clay. Purdue's football field is slitted with a "Groundsaw" that trenches 20 to 24" deep. The technique is also said to be widely used in low areas on golf greens.

Another tip Daniel revealed for extending the durability of athletic fields is to broadcast light and frequent overseeding with a 5 to 10 lbs./A mixture of bluegrasses just before home games. This helps to make a better sod this season, and extends it into the next, Daniel explained.

An Idea from Sweden

Hopscotching across the Purdue campus to other test plots, turfmen looked at some utilizing an idea from Sweden involving the placement of small slitted plastic pipes under a layer of sand. This is dirtied at the top

with soil, peat, and calcined clay, and used as a thin rootzone. The storage of moisture and nutrients is limited, but that present is readily available to short roots, Daniel revealed. Rootzone depths of from 4 to 12" are being prepared by grad student David Bingaman in a new project being installed.

It's been found, after seven years, the durability of numerous calcined clays appears adequate. Exposure to wear, weather, and chemicals has not caused a rapid deterioration. If soil under calcined clay pulls much of the capillary water out of the calcined clay above it, the rootzone is too drouthy. Where there is a sand layer to reduce capillary pull, adequate moisture is retained.

On their enviable, velvet green experimental putting green, Purdue agronomists exhibited a new and different approach to sub-surface irrigation. Here they have large sheets of plastic and slitted plastic tile. Adjustable float valves maintain a reservoir of water in base sand; distribution pipe serves as drainage for excess rain. Laboratory determinations have shown a column of sand placed above a reservoir can be kept moist at the surface. Research of grad students, David Ralston and David Bingaman, is



Kathryn House, popular agronomy department secretary, registered over 200 Field Day participants, welcoming back oldtimers, some of whom have attended all held to date.

utilizing one-square-meter plots of this experimental green to determine reservoir depth, rootzone depth, exact rootzone texture needed, and possible mixes which can be used for this. Results of these experiments are being anticipated with keen interest.

Practical adaptability of much of what visitors saw on either of the two days, each of which was an exact carbon of the other, may be years away, but some of the findings may be available for use in 1967, such as the availability of seed for Anhauser dwarf bluegrass.

Next year, the Midwest Turf Field Days will be split, with one being held late in July and the other early in October.

Don't Cut Grass Too Short

Leave enough grass leaf surface each cutting to provide food to support the plant and develop a strong root system, reminds Colorado State University extension horticulturist, Charles M. Drage.

Extra fertilizer, more frequent watering, and more intense management will be required if grass is cut closer, the plant expert cautions.

"If grass is permitted to grow taller than the usual height, cut it back to its regular height gradually, not at one clipping. And keep your mower sharp," Drage suggests.



Merits of Anhauser Dwarf were closely examined in this plot at Purdue.