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VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: Why do local dry spots develop in a lawn?

A: Local dry spots can be caused by excessive thatch, buried debris, elevated soil, and fairy rings or other fungal activity. Not all factors which cause local dry soils are understood, however. Local dry spots have reportedly developed in soils which had been removed to depth of several feet and uniformly mixed before being replaced.

Q: What was responsible for the widespread outbreak of crabgrass this season? Are the pre-emergent herbicides losing their effectiveness?

A: We had a crabgrass infestation in the Northeast and Midwest two years ago and the same question was asked then. To my knowledge, crabgrass has not demonstrated resistance to any of the pre-emergent herbicides. The environment plays a major role in the amount of crabgrass seeds that germinate and the ability of the plants to compete with desirable turgrasses. At our research headquarters in northeast Ohio, an early drought which stressed the turfgrasses, followed by excessive rains, provided ideal conditions for crabgrass.

Q: Can white clover be used for a playground instead of seeding with turfgrasses?

A: I would not recommend it. White clover does have good drought tolerance and survives under low maintenance. However, it has poor wear tolerance and stains clothing. Also, white clover is sensitive to 2,4-D, MCPP, and Dicamba, which would prevent the control of broadleaf weeds.

Q: What can be done to prevent dog urine spots on lawns?

A: Maintaining a good cultural program will help minimize the injury as well as promote more rapid recovery. The best solution is to have home owners restrict the movement of their own pets and encourage leash laws that prevent dogs from roaming the neighborhood.

Q: Is the soil conditioner called Krillium still available? Also, what is calcined clay and how does it improve soils?

A: Krillium produced by Monsanto is no longer available. Calcined clays are produced by crushing montmorellonite-type clays and heating to 1800° F. Heating stabilizes the flexible lattice producing porous, hard granules which help soils resist compaction. In addition, the pores increase water percolation and improve the gaseous exchange between the atmosphere and soil.

Q: At what height should turf be mowed on a large sloped area which receives very little fertilizer and is not watered? Our crew foreman says it should be mowed high, but I think we could mow less often if we lowered the cutting height.

A: In general, the mowing height should be raised as the intensity of cultural practices, such as fertilization, irrigation, and mechanical maintenance is reduced. Utility turfs are usually mowed at a height of three to six inches, depending upon the grass species and mowing frequency.

Q: Can superphosphate be used when specifications call for triple superphosphate?

A: There should be no difference in plant response if the proper amount is applied since triple superphosphate may be regarded as a concentrated form of superphosphate from which most of the gypsum (CaS0₄) has been removed. The analysis of superphosphate is usually 0-20-0, whereas triple superphosphate is $2^{1/4}$ times more concentrated with an analysis of about 0-45-0.

In sulfur deficient soils, plants will also benefit from the 12% sulfur as gypsum in superphosphate.

Q: I read an article in the local paper entitled "New bacterium may halt the spread of Dutch elm disease." Is the bacterium on the market?

A: At the present time the project is experimental. The bacterium, Pseudomonos syringae, does give promising results in the laboratory, but when field tests were run protection was not as great as anticipated. Further testing is planned over the next two years to determine if the bacterium will provide satisfactory protection to elms.

Send your questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 757 Third Avenue, New York, NY 10017. Leave at least two months for Roger Funk's response in this column.

Land Reclamation Report

Trees are total topic at reclamation meeting

About 140 people interested in reclaiming surface mines met in Lexington, Kentucky, to discuss the importance of trees in this process.

Three-member panels consisting of state forestry officials, state reclamation experts, and mining industry representatives from 15 eastern states reviewed efforts from the '30's to the present on how to establish trees on surface mined lands. The "Trees for Reclamation" meeting, sponsored by the Interstate Mining Compact Commission and the U.S. Department of Agriculture, Forest Service, was the first to stress strictly the use of trees in reclamation.

Speakers presented thirty-minute papers on topics such as reforestation

for wildlife, for aesthetics, and through direct seeding. Participants came from the Office of Surface Mining, the Tennessee Valley Authority, various universities, and several mining companies.

"There was a tremendous interest in what was going on," said Willie Curtis, project leader of the surface mined area reclamation research project for the USDA Forest Service. Much discussion continued long after the formal presentations ended.

Missouri gob piles to be reclaimed soon

Large gob piles causing stream pollution and danger to nearby residents at an abandoned coal refuse site east of Huntsville, MO, will be reclaimed at a



cost of \$1.5 million.

Surface water runoff from the site has polluted Sugar Creek, and the refuse site poses dangers to nearby residents.

The project will be financed from the Abandoned Mined Land Fund, administered by the Department of Interior's Office of Surface Mining under the Surface Mining Control and Reclamation Act of 1977. The work will be done under a cooperative agreement with the State of Missouri's Department of Natural Resources.

Andrus consents on 12 Pennsylvania projects

Secretary of the Interior Cecil Andrus has approved 12 abandoned coal mine land reclamation projects in Pennsylvania at an estimated cost of more than \$6.5 million.

The projects will be funded from the Federal share of fees collected from active coal mining operations by the Interior's Office of Surface Mining (OSM). The work will be supervised by Interior's Bureau of Mines under the cooperative arrangement with OSM.

OSM Director Walter Heine said that the projects include the control of underground coal mine fires, sealing of openings to underground mines, and major projects to control subsidence.

USDA dedicates soil, water research facility

The U.S. Department of Agriculture has dedicated a new Appalachian Soil and Water Conservation Research Laboratory, located in Beckley, WV.

Scientists at the laboratory, which will be administered by USDA's Science and Education Administration, will conduct research on a variety of problems associated with reclamation of strip-mined and other disturbed land and hill-land agriculture.

The new facilities include office space for 20 scientists, eight main laboratories and three special laboratories, nine greenhouse units, several environmental growth chambers, and a shop-storage complex.

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Sec. Andrus approves LA. mining program

Secretary of the Interior Cecil D. Andrus has fully approved the Louisiana permanent regulatory program for surface coal mining and reclamation which will allow the state to assume primary responsibility on its nonfederal lands.

In congratulating Louisiana Governor David Treen and state regulatory officials, Andrus said, "I appreciate Louisiana's expeditious and very responsive resubmission. I partially approved the Louisiana program on August 28, and the state resubmitted its revised program immediately."

Bureau prints summary of environmental data

The Bureau of Mines has released the first project-by-project summary of environmental research underway from work on ways to reclaim stripmined land to evaluations of the hazards of oil shale mining.

The Bureau has funded \$21 million



in 1980 for research on identifying and controlling the environmental problems associated with mining and mineral processing. The new publication, which briefly describes all 216 of the Bureau's current environmental projects, is intended to provide those interested with general information about the Bureau's environmental research efforts.

The projects are organized in the publication under two broad subprograms—"environmental assessment," aimed at identifying and measuring present and future environmental hazards in the mining industry; and "control technology," aimed at developing methods and equipment to prevent, control, or repair environmental damage.

A copy of Information Circular 8827 (specify title and number) can be obtained without charge from: Publications Distribution, Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, PA 15213, 412/621-4500, ext. 342.



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1 ar

chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course nanagement, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.

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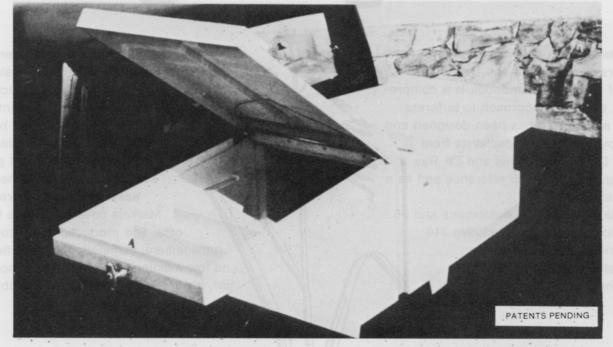


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New Mexico study reveals turfgrass large part of economy

The production and management of turfgrass in New Mexico "has added a new spoke to New Mexico's economic wheel," according to a survey commissioned by the Southwest Turfgrass Association and the New Mexico Department of Agriculture.

The survey measured three things: total areas of turf in the State, area of turfgrass by species, and manpower requirements for commercial operations. Turfgrass was defined as that "land area covered by a maintained species of grass used for sports, recreation, general landscape, and commercial sod production."

Total areas of turfgrass, including highway right-ofway, golf courses, airports, schools, sod farms, parks, cemeteries, and other commercial facilities, totaled 359,000 acres. Commercial sod producers accounted for 750 acres. Common bermudagrass is the most common species of turfgrass grown, totaling 16,770 acres. Average man-hours for maintenance during May 1 through Nov. 1 totaled 44,270; between Nov. 1 and May 1, the total was 12,270 hours. Dr. William Stephens, director of the New Mexico Dept. of Agriculture, said the survey "opened a lot of eyes to this industry in the state." He expects that it will attract dollars in increased sales of equipment, pesticides, and fertilizers.

For a copy of the survey, write Dr. Stephens at: New Mexico Dept. of Agriculture, New Mexico State University, P.O. Box 3189, Las Cruces, NM 88003.

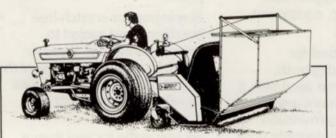
Sod growers remain active when turf becomes dormant

December brings cold weather and frigid ground to all but the southern tips of the U.S., but work does not totally slack off for the sod grower.

Ralph White, vice president and director of Southern Turf Nurseries in Tifton, GA, is still selling turf to Florida golf courses in late November, but it is a rare load that ships out in December, January, or February. His crew rebuilds, repairs, and paints equipment; it also takes this time for vacations.

Continues on page 51

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