

Weeds, Diseases, Sod Industry, Grass Varieties, Play Major Role at Rocky Mountain Turfgrass Conference

Weeds, diseases, the sod industry, and grass varieties were pegged for special attention during the Rocky Mountain Regional Turfgrass Conference held at Colorado State University, Fort Collins, Jan. 26-27.

Leadoff speaker to address more than 150 persons interested in producing, selling, installing, and maintaining turf was P. Eugene Heikes, CSU extension weed specialist. He pointed out that major weed problems in the Rocky Mountain area are dandelion, broadleaf plantain, Japanese clover, ground ivy, hairy crabgrass, bentgrass, quackgrass, and a number of coarse-bladed grasses.

"Hairy crabgrass, although an annual weed, can take over a lawn due to the difference in growth habits between it and bluegrass," Heikes explained. "It grows most rapidly in the heat of summer when bluegrass is dormant and slow growing."

"Bentgrass is fine, if all the lawn is of the same variety. It can stand close mowing and hard usage. But bent, mixed in a bluegrass lawn, is undesirable. Its different color and growth habits give the lawn a patchy appearance," Heikes concluded.

Crabgrass research findings were reviewed by John W. May, plant pathologist at CSU. May

said that 63 materials were tested. These included new experimental materials as well as the old "standbys." Of the materials tested on common Kentucky bluegrass, May said, Zytron, Trifluralin, Dacthal, Bandane, Azak, 296-B, and Betasan produced best results last year under Colorado conditions.

May cautioned that Colorado had an unusually cool, wet, late spring which may have been responsible for poorer performance of some of the materials in the test.

Harebell Can Be Controlled

Hard-to-kill weeds in turfgrass was Homer Hepworth's topic. He revealed that Colorado's creeping harebell could be controlled with a 1½-lb.-per-acre application of Banvel-D. This treatment gave 95% top kill of harebell and 100% control of dandelion, knotweed, and kochia. At 2 lbs./A, the herbicide effected a 100% top kill of all three weeds.

Hepworth, who is plant pathologist with CSU, noted that bentgrass could be killed with excessive rates of nitrogen and the soil could be replanted with bluegrass soon after treatment. A 24% nitrogen aqueous ammonia solution or 20 lbs. of ammonium sulfate per 1,000 square feet was used to kill the bentgrass.

Colorado's booming sod industry, with a predicted 1966 sales potential of \$6,500,000, was thoroughly examined and discussed by a panel of experts. Dr. Jess Fults of the university's plant pathology department said, "The business is so new that most people don't know what quality is. There is a place for pasture or meadow sod in farm conservation work, but cultivated sod is a landscaping tool and deserves higher quality."

Use of good-quality seed, establishing the sod in areas relatively free of turf diseases and not heavily infested with deep-rooted perennial weeds, is preferred. The trend, Fults said, is for sod growers to use one species of grass and not a mixture.

J. Russell Wilkins of Green Valley Turf Co., Littleton, outlined production methods used by his company. This covered all phases from germination to sod harvest. He explained use of fertilizers, automatic sprinkling systems, and other tricks of the trade developed on his sod farm. He uses both liquid and dry fertilizers, and finds that best growth results from light seeding. He plants 50 lbs. of seed to the acre and finds that grass fills in and develops a better root system.

Charles Drage, extension hor-



With Colorado's sod industry booming to a predicted \$6,500,000 in 1966, this panel offered up-to-date information for better sod production. From the left, they are Charles Drage, Dr. Jess Fults, both of Colorado State University; J. Russell Wilkins, Green Valley Turf Co., Littleton; Melvin C. Rich, Richlawn Turf Farm, Littleton; and Frank C. Stewart, president of the Rocky Mountain Turfgrass Association.



Weeds in turf... seemingly endless problem with turfmen everywhere... was the topic of these three Colorado State University specialists during recent Rocky Mountain Regional Turfgrass Conference. From left: Homer H. Hepworth, plant pathologist; Eugene Heikes, extension weed specialist; and John W. May, experimental station plant pathologist. They reviewed current research and recommended weed control practices.

ticulturist with CSU, detailed recommended practices for soil preparation where sod is to be laid. Adding phosphate to the soil for root development and also a little nitrogen will give sod much aid in becoming established. Most of the nitrogen should be applied from the top.

"Also, this area needs modifications to the soil in addition to nutrients," Drage added. "If the soil is alkaline, use some agricultural sulphur and try to improve the physical properties of the soil as well, at this time."

Most panel members recommended a 1-inch cut to harvest sod. All agreed thin sod takes hold faster so that the nurseryman is selling sod not soil.

Frank C. Stewart, Littleton, president of the Rocky Mountain Turfgrass Assn., said selling sod by telling customers they will save water may be misleading. "You can save some water but not all of it. You have installed one inch of root system. Six to seven inches of the roots have been left behind. Advise the

customer to treat sod as he would new seed."

Melvin C. Rich of Richlawn Turf Farm, Littleton, suggested "Keep instructions simple for the homeowner. Tell him to do twice as much watering—maybe he'll do half of it."

The intricate subject of installation and bidding sod jobs was the topic of Ben Warren, Warren Turf Farms, Chicago, Ill. He outlined three varying types of sod jobs: the fine turf area for putting, bowling or tennis greens; the home or small industrial lawn; and the large industrial or highway sodding contract.

"Specifications on fine turf may be provided by a golf course architect—but then, you may have to provide your own specs. In bidding these jobs, consider that you will have to give the utmost attention to soil preparation, grading, and laying. The job must be near perfect, and no matter how well it is done, it won't be good enough," he said.

Misunderstandings are main



Bidding and installation of sod is a serious business, particularly with highway projects and large industrial areas, Ben Warren, of Warren Turf Farms, Chicago, Ill., told the conference.

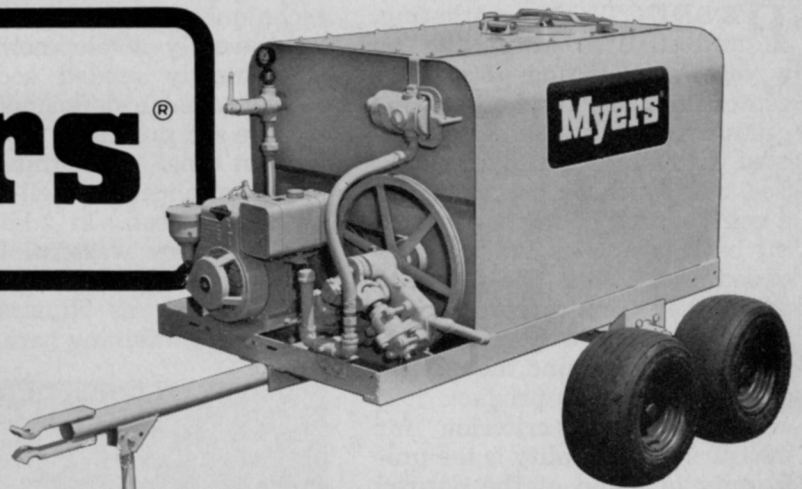
problems of fine turf jobs. Make it understood where your job ends. If maintenance is included, you'll have considerable work. Check water availability and test the existing irrigation or sprinkling system before sod is installed, Warren warned. Subsoil, thoroughly prepared, is just as successful for sod base as topsoil that must be hauled to the site.

Specifications cover all highway bidding, Warren said. Sometimes specifications are written

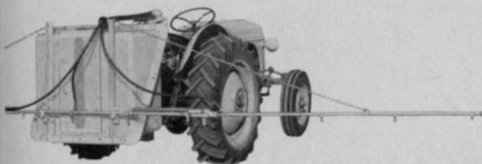
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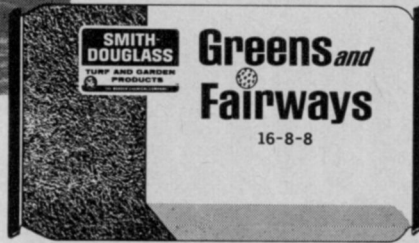
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Moist Soil Hastens Germination

Maintaining a moist soil condition helps reduce the time necessary for germination and obtain a more uniform stand. Any supplemental irrigation should be a constant program of light, frequent sprinkling with as fine a droplet as possible. Daily sprinkling would be desirable but prohibitive from the standpoint of portable irrigation systems.

Mulching with a weed-free, salt hay or grain straw can be very helpful by yielding quicker germination as well as a uniform stand. The need for watering becomes greatly reduced because the moisture retained by a mulch is held at the soil surface. From an economical standpoint, large scale mulching may not be economical.

Successful establishment of a turfgrass or mixture of turfgrasses does not, in itself, insure uniformity of stand. Once established, it must be developed and protected with a maintenance program. Close and constant attention must be devoted to fertilization, mowing, irrigation, and also weed, insect, and disease control. Each of these factors influences turfgrass stand uniformity which is a significant criterion in determination of sod quality.

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with no flexibility. This can be costly to the contractor. Establish a clear understanding on all phases of work, soil preparation, final grading, and other requirements. Highway sod is laid faster, depending on thickness which can be unreasonably thick. Water requirements are another concern; you may have to haul it. It is very important to consider every possible cost item when bidding on highway sod work.

Weed Control in Turf

One of the big factors in chemical weed control failures is poor



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timing. An understanding of plant growth habits is essential, Eugene Heikes said when attention was directed to weed control. Keeping ahead of weeds is the key to success of a good lawn, and is the hardest job. Most weeds can be controlled with chemicals, except for coarse grasses, Heikes continued, but chemicals should be supplemented with good management practices.

It takes 4 to 6 years of testing after a new variety of grass is developed to determine its disease resistance, Dr. Jack Altman, plant pathologist, said in discussing turf diseases. Studies by the U. S. Department of Agriculture show that single strains of bluegrass, such as Newport and Merion, make a better appearing lawn in the first 3 to 4 years. However, after 4 years the common Kentucky bluegrass has the best appearance when disease problems develop in the single strain.

Merion bluegrass still appears to produce the best quality lawn in Colorado, Jack May reported. He reviewed findings of a study with 20 grass varieties at Fort Collins.

"But we may not have the whole story yet, in view of USDA findings," May cautioned. "The CSU plots have been established since 1962 to study effects of herbicides in different varieties." In describing favorable characteristics of several desirable

grasses, May reported Merion bluegrass to be the best quality turf which can stand shorter mowing, offers strong competition against weeds, and has a dark color. It is susceptible to rust, but rust is not a major problem in the Rocky Mountain region.

Ryan "Mole" Goes Underground

"Mole," a new, inexpensive tube-laying device, chews through ground as deep as 7 inches but does not disturb the surface turf as it installs flexible or semi-flexible tubes, pipes or cables, according to its manufacturer, Ryan Equipment Co. "Mole's" uses are said to include fast, one-man installation of underground sprinkling systems, gas lines for yard lights and other purposes and telephone and electrical cables.

"Mole" consists of a vertical cutter blade with a bullet-like terminal to which tubing, piping or cable up to 1 1/4 inches in diameter is chain-attached. The Sod Cutter then pulls the tubing beneath the surface and through the ground at speeds up to 100 feet per minute. A slit in the turf which soon disappears is the only visible evidence of the installation. Radii as tight as 2 feet are possible.

Complete information about "Mole" is available from Ryan Equipment Co., 2055 White Bear Ave., St. Paul, Minn. 55109.

"Mole" leaves only a narrow slit in the turf as proof of its work. The slit quickly disappears, though, and there is no trace that Ryan's "Mole" has installed underground pipes, cables or tubes.



Meeting Dates

- Western Weed Control Conference, Westward Ho Hotel, Phoenix, Ariz., Mar. 15-17.
- 36th Annual Michigan Turfgrass Conference, Kellogg Center, Michigan State University, East Lansing, Mar. 16-17.
- Conference on Community Development, on campus, University of Iowa, Ames, Mar. 18-19.
- Wisconsin Turfgrass Conference, Wisconsin Center, Madison, March 22-23.
- Wisconsin Park & Recreation Assn. Annual Meeting, Hotel Eau Claire, Eau Claire, March 23-25.
- West Virginia Weed Control Assn., First Annual Conference, Daniel Boone Hotel, Charleston, March 30-31.
- Northern California Turfgrass Council, 2nd Annual Turfgrass Exposition, Santa Clara County Fairgrounds, San Jose, March 31-April 1.
- New Jersey Society of Certified Tree Experts, Meeting, Andrew Wilson Co., Springfield, April 18.
- New Jersey Society of Certified Tree Experts, Annual Dinner, Rock Spring Corral Inn, West Orange, April 12.
- 5th Annual Florida Turf-Grass Trade Show, Plantation Field Research Laboratory, Ft. Lauderdale, April 28-29.
- Florida Nurserymen and Growers Assn., Convention, Sheraton's British Colonial Hotel, Nassau, May 12-14.
- 18th Annual Nurseryman's Refresher Course, Cal-Poly College, San Luis Obispo, Calif., June 7-8.
- International Shade Tree Conference, Western Chapter, Annual Meeting, Miramar Hotel, Santa Barbara, Calif., June 20-23.
- New Jersey Society of Certified Tree Experts, Meeting, Essex County Highway Dept., Verona, June 20.
- American Association of Nurserymen, 91st Annual Convention, Palmer House, Chicago, Ill., July 16-20.
- Midwest Turf Field Days, Purdue University, West Lafayette, Ind., Aug. 15-16.
- Texas Assn. of Nurserymen, Annual Convention, Nursery and Garden Supply Show, Dallas Memorial Auditorium, Dallas, Aug. 21-24.
- Penna. Grassland Council, Materials Handling Field Day, John Rodgers (Plum Bottom) Farm, Belleville, Aug. 26.
- Hawaiian Turfgrass Management Conference, University of Hawaii, Honolulu, Aug. 25-26.
- International Shade Tree Conference, 42nd Annual Convention, Sheraton-Cleveland Hotel, Cleveland, Ohio, Aug. 28-Sept. 2.