

What height? When should I first fertilize?

3. Mowing Instructions. How can mowing practices affect the health of my lawn? When should I mow? What height? How often? What do I do if I scalp a spot?

4. Fertilization. Give me a year-around program to follow.

5. Disease. Tell me what disease my sod is most susceptible to, when disease is most likely to occur, what the symptoms are, what curative measures I can take.

6. Weeds. What weeds are most likely to crop up? When? What weed killers are available to correct the problem? How do I apply the weed killers and at what rates?

7. Watering. How can watering practices affect the health of my lawn? When should I water? How much?

Instructions of this nature can be as detailed as the producer of the turf wishes. He could provide specific maintenance instructions for each variety he sells. The format might be simply an instructional leaflet, or a more complete, polished booklet that could double as a merchandising tool.

Dr. Henry Indyk, executive secretary of the American Sod Producers Association, predicts that the sod industry will continue to expand, but that demand may have to be cultivated. A grower will stay in the business only if he keeps up to date, he believes.

Success of some of the newer sod varieties may very well be determined by how well informed the buyer is concerning its maintenance. If not for this reason, then competition alone may produce a turf owner's manual.



"You've got weeds in your turf, Harry."

Try These Tips on Using Dicamba and Mecoprop

Broadleaf weeds in turf ought to be as archaic as the Model T Ford, exclaimed Dr. Edward W. Stroube at the recent Ohio Turfgrass Conference.

Good turf management practices should all but eliminate weeds, said the Ohio State agronomist, but should some appear, there's a herbicide to quickly take care of the culprit. Uniform and timely applications are necessary, however.

"Most weeds are more susceptible when there is good soil moisture and when the weeds are growing rapidly," he said. "They become more resistant when they become semi-dormant due to dry soil or as they approach maturity."

Herbicides recommended for broadleaf weed control are intended for turf areas only, Dr. Stroube reminded. Indiscriminate use can bring injury to flowers, trees, ornamentals and gardens. He advised that, if sprayed, the compounds should be applied at low pressure and during periods of little or no wind.

"Dicamba (Banvel) should not be used under desirable plantings, as root absorption by these plants may result in injury," he warned.

Herbicides should not be used on newly seeded turf unless weeds pose a greater danger, Dr. Stroube said. It has been reported, he added, that the relatively new herbicide, bromoxynil, is safe to use on seedling broadleaf weeds in newly established turf.

For states with climate similar to Ohio's, Dr. Stroube offers his recommendations in Table 1 for controlling some of the more common weeds that appear in turf.

Lee Record, agronomist for the United States Golf Association offered advice on using the systemic herbicides, Dicamba and Mecoprop (MCP).

The two will effectively control knotweed, clover, common chickweed and mouse ear chickweed. Formulated with 2,4-D, they will control dandelion, plantain and pigweed.

Systemic herbicides make use of

physiological differences of plants for selectivity, Record explained. Dicamba and Mecoprop applied to leaves penetrate the cuticle and stomata, translocating to the food or water conducting tissue and then to other parts of the plant.

Pattern of translocation is influenced by the kind and stage and growth of the plant, Record said.

"Sometimes, the herbicide is absorbed and inactivated by cells in the leaf," he said, "and sometimes it may remain on the leaf surface and never enter the plant."

Soil relationships to the herbicide, temperature and moisture have been

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recognized as important factors in the effectiveness of weed control programs, he said.

"Optimum conditions for weed control when using Dicamba and Mecoprop would be to have adequate soil moisture and temperatures between 70 and 75 degrees.

"We have seen on numerous occasions the importance of having adequate water as a carrier for Dicamba or Mecoprop. One-half to three-quarters pound of actual material

applied in 40 to 50 gallons of water per acre will give excellent results.

"The same rate of actual material in 20 gallons of water per acre will give very poor results.

"We have found that Dicamba and Mecoprop have a wide margin of safety when used intelligently. Repeated applications from year to year, on the other hand, have shown thinning of bentgrass and bluegrass. Complete kill has been noted on turf when herbicides were misused."

TABLE I. HERBICIDE RECOMMENDATIONS

Weed	Annual or Perennial	to Use Chemical	Time of Application	Degree of Control
Black medic	annual	silvex or dicamba	early spring	good
Chickweed, common	annual	silvex, MCPP or dicamba	spring or fall	good
Chickweed, mouse ear	perennial	silvex, MCPP or dicamba	spring or fall	good
Chicory	perennial	2,4-D or silvex	spring	good
Dandelion	perennial	2,4-D or MCPP	spring or fall	good
Dock, curly	perennial	2,4-D or dicamba	spring or fall	good
Garlic or onion	perennial	2,4-D ester or dicamba	early spring late fall	fair
Ground Ivy	perennial	silvex or MCPP	spring, summer or fall	fair to good
Heal-all	perennial	2,4-D	spring	good
Henbit	annual	silvex	spring	good
Knotweed	annual	2,4-D or MCPP	spring	fair
Mallow, roundleaf	annual	silvex	spring	fair
Plantain, buckhorn	perennial	2,4-D or MCPP	spring or fall	good
Plantain, common	perennial	2,4-D or MCPP	spring or fall	good
Poison ivy	perennial	2,4,5-T or silvex	spring or summer	good
Red sorrel	perennial	dicamba	spring, summer or fall	good
Speedwell, thyme-leaved	perennial	dicamba or endothall	spring or fall	fair
Speedwell, annual	annual	dicamba or endothall	spring or fall	fair to good
Spurge, spotted	annual	silvex or dicamba	spring	good
Thistle	perennial or biennial	2,4-D or dicamba	spring or fall	fair to good
White clover	perennial	silvex, MCPP	spring, summer or fall	good
Wood sorrel	annual	silvex or dicamba	spring	fair to good
Yarrow	perennial	dicamba	spring or fall	fair to good

World Pesticide Symposium Set at MSU for Feb. 25-27

Six hundred of the world's top researchers will convene for a pesticide symposium and the dedication of Michigan State University's Pesticide Research Center, Feb. 25-27, at East Lansing.

Speakers and topics have been confirmed for the "Symposium on Pesticides in Soil: Ecology, Degradation and Movement," according to Dr. Gordon E. Guyer, chairman of MSU's entomology department and director of the Pesticide Research Center.

The symposium will be keynoted by J. Van der Drift, soil biologist from the Netherlands and summarized by Dr. L. J. Audus of the University of London.

Presenting research papers during the meeting will be scientists from Germany, Canada, England and the United States.

A tour of MSU's new Pesticide Research Center will be conducted Thursday afternoon, Feb. 26, and the center will be officially dedicated that evening.

"The symposium is built around this interdisciplinary approach to research," said Dr. Guyer. "Scientists will report on the effects of pesticides on our environment and the latest efforts to reduce pesticide residues."

Central Chemical Forms Turf Products Division

Central Chemical Corporation, Hagerstown, Md., has formed a turf products division.

President Franklin M. Thomas, Jr., said the new division's purpose will be to serve the turfgrass industry with selected fertilizers, chemicals and specialties.

George Cassel has been named division manager. Headquarters will be at Central Chemical's Everett, Pa., offices. Cassel, a Penn State graduate, is a 19-year employee in the company's agricultural group.

James M. Edgar, who has been associated with the golf industry, has been hired as the division's first sales specialist.

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