

New Turf Herbicides, Sessions for Applicators

On Varied Oregon Weed Program in Salem Nov. 5-6

"Good selective weed control should be an integral part of any turf management program," Norman Goetze, Extension Specialist, Corvallis, Oregon, asserted in his talk, "Weeds and Turf," at the Oregon Weed Conference, November 5-6. "Cultural management alone leaves much to be desired just as weed control alone does," he added.

The Oregon Weed Conference drew delegates from all Northwest states to the Marion Motor Hotel in Salem for the 13th annual 2-day get-together.

Specialist Goetze went on to list some of the newer turf chemicals and told how to use them to take advantage of selectivity factors. Some of these factors are: weed species, age, grass vigor, atmospheric conditions, soil composition, and moisture.

"Weeds must be treated in the proper growth stage, and turf should be adequately prepared," Goetze continued. He explained that knotweed is extremely susceptible to 2,4-D when it is young and emerging, but virtually resistant at flowering time.

"One day before treating young knotweed with 2,4-D, wet turf thoroughly. For most effective use of broadleaved killers, wind velocity should be low, preferred temperature is below 70 degrees, and the higher the humidity the better," Goetze explained.

The specialist from Oregon State University told the delegates that selectivity of soil-applied herbicides comes from the different rates at which young weed seedlings absorb the chemicals. Young weeds near the surface absorb massive doses of herbicide. Mature deeper grass roots absorb none.

Preemergence crabgrass materials are soil applied. "Applications to crabgrass-infested areas are most effective if made in late spring. For preemergence annual bluegrass control, apply herbicide in early fall," Goetze prescribed.

Goetze recommended dicamba (Banvel D) at 1/2 to 1 lb. per acre for control of 2,4-D-resistant broadleaves such as chickweed, red sorrel, English daisy, and clover. "This material is more hazardous around shrubs and ornamental trees than phenoxy compounds (2,4-D etc.). Applicators should avoid putting dicamba where it may be absorbed by woody plant roots," he continued.

To control speedwell, Goetze suggested 1 lb. of endothall per acre as the present recommendation. Endothall usually requires two applications. Speedwell is not controlled by 2,4-D or dicamba.

Tests show that annual bluegrass, a serious turf weed, can germinate any time of the year,

Goetze related. Western Oregon's temperature range permits year around germinating, but germination rate is fastest in the fall.

"Betasan is presently recommended for annual bluegrass control; it has a long residual and is not affected by variances in soil types," the extension expert explained. In tests, the only damage noted occurred when turf plots were subjected to prolonged flooding. This damage is unexplained.

Operators Talk Tools and PR

Commercial applicators had their turn on the program to explain to the nonindustry experts in attendance what their problems are.

One problem is a dearth of information on equipment use and maintenance. Earle Parker, Jr., Chem Spray Co., Dayton, Oregon, told listeners the problems of a ground commercial operator.

Parker feels that equipment should be constructed so it can be used to apply several different chemicals subsequently. With a single rig to apply his three most popular chemicals, Parker could save changeover time; his cost factor would be spread.

"We need better protective material for tank interiors," Parker continued. Chemicals vary in corrosiveness, but some



An Industry Symposium at the Oregon conference presented technical details of new chemicals from suppliers. Left to right are representatives: Richard Fossie (Amchem Products, Inc.); Kent Beckman (Upjohn Co.); Dewey Sheperd (Morton Chemical Co.); Donald Burgoyne (E.I. duPont de Nemours and Co.); Charles Storker (Elanco Products Co.); C. H. Palmer (Reichhold Chemicals, Inc.); and Clay Shelton (Stauffer Chemical Co.).

spray tank manufacturers apparently do not consider chemical corrosion when they make a tank.

"I need spray equipment that will withstand the rigors of continuous application," the commercial operator asserted. "To do a better job, I need ways to measure customer areas quickly and accurately. Specifications to govern pump speed, nozzle flow, and pressure variations would be helpful also."

Another operator concerned with residential jobs said that his problems are mainly homeowner attitudes about his service. Charles Seibold, Major Spray Service, Portland, Oregon, listed his three prime experiences.

"1. Homeowner asks for a crabgrass control estimate and has a chickweed infestation instead.

"2. Customer expects one-shot control of both broadleaf and grassy weeds.

"3. And, of course, the customer wants the results at the wrong time of the year, when his problem is at its worst. Our present chemical tools may or may not do the job on mature infestations.

"Solutions to these headaches will come when we are able to educate the public to our industry, the services we render, and the limitations of our services," Seibold predicted. "We have to keep on our toes and tactfully never accept a homeowner's diagnosis because it is seldom the basic answer."

Suppliers Describe Products

A feature of the Oregon Weed Conference called the Industry Symposium gave suppliers a chance to describe new chemicals and uses that applicators may take advantage of. The following discusses those which feature nonagricultural vegetation maintenance registrations.

"Grass seed growers in Oregon can use the recently registered Paraquat to control undesirable grasses and weeds when they establish new fields for commercial grass seed production," T. H. Schultz, the California Chemical

Company, Ortho Division, representative in Portland, told the Conference.

According to Schultz, nonvolatile Paraquat kills weeds by contact and local systemic action. Further, it is inactivated by soil contact and seed may be planted immediately after Paraquat application.

L. E. Warren, Dow Chemical Company agent from Davis, California, described Tordon herbicide. Tordon is designed for woody plant control on rights-of-way. Also, both water-sprayable and granular forms will control perennial broadleaf weeds, he said.

Warren told how Tordon works. "The herbicide is absorbed by both plant leaves and roots. It's translocated to plant growth points. Action is exhibited by cupped leaves, rolled leaf margins, and twisted new shoots. Tordon symptoms are slow to appear despite quick movement inside plants, but it is quite residual in the soil, lasting from a few months to over a year."

Treflan is a preemergence herbicide, which, according to Charles H. Starker, Elanco Products Company, Portland, provides residual weed control against annual grasses and broadleaved weeds. Treflan kills them as they germinate; it is not effective on mature plants.

Treflan is chemically called trifluralin. Starker said Treflan is useful for weed control in lining out ornamental nursery stock. "The chemical must be incorporated into the soil, but once in the soil, it is adsorbed by soil particles and is resistant to leaching," the Elanco rep stated. Single-season control is provided because microbial soil organisms eventually break Treflan down.

Geigy Agricultural Chemicals' Portland man, Vern Neilson, described Prometryne 80 W, recently registered in Oregon only for preplant weed control on bluegrass seed farms. Neilson said Prometryne 80 W controls such grassy weeds as cheatgrass and rattail fescue. This herbicide is designed for use after harvest and burning of old crop residues.

Neilson advised users to apply it after the first post-harvest irrigation when weeds begin to sprout. The company then prescribes tillage for proper herbicide penetration into the soil.

Wide-Spectrum Chemicals Aired

D. L. Shepherd, Los Altos, Calif., agent for Morton Chemical Company, explained the mode of action of Mecopex, Morton's potassium salt formulation of MCPP.

"Mecopex, as such, is a weak herbicide," Shepherd began. "Once absorbed through leaves and translocated to roots, enzymes convert the MCPP to MCPA, an effective herbicide. Since grasses cannot make this conversion to MCPA, they are not generally harmed."

Shepherd explained that Mecopex has a narrow spectrum of action which selectively controls formerly hard-to-kill species like clover, chickweed, knotweed, ground sorrel, narrow-leaf plantain, and spotted spurge, among others.

To overcome this narrow selectivity, Shepherd revealed that Morton plans to market early in 1965 a special combination of MCPP and 2,4-D to give control of common broadleaf weeds, too.

Portland's Pittsburgh Plate Glass Company office sent W. Ed Albeke to the Conference in Salem to tell about his company's new registration on PPG's carbamate herbicide, IPC. Researchers have combined IPC with 2,4-D and designed it to control both grassy and broadleaf weeds in fall-prepared specialty grass seedbeds. Albeke said application of this combination to seedbeds in late November will kill fall- and winter-germinating weeds. Specialty seeds are planted early in spring. Albeke indicated that IPC plus 2,4-D is especially useful the first year of specialty seed field planting. "Phenoxy-carbamate combinations show promise for weed control around ornamentals, among other uses," he added.

Clay Shelton introduced Betasan, Stauffer Chemical Company's new selective turf crabgrass and annual bluegrass control herbicide. Shelton repre-

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sents Stauffer's Portland office.

Betasan is applied at 12½ lbs. per acre. Established lawn grasses, including broadleaved dichondra, are tolerant of Betasan at rates as high as 30 to 50 pounds per acre, Shelton disclosed. Betasan is said to have a 5-month residual effect. Some ornamentals, listed on the label, are also tolerant to Betasan.

"Betasan is not a very toxic material. Oral and dermal toxicities are low; it is not regarded as a poisonous substance under current USDA regulations," Shelton stated.

Casoron, Thompson-Hayward's recently discovered herbicide, was described for the annual Conference by James H. Hughes of T-H's Kansas City office.

Among many new registrations, Casoron may be used to control perennial, annual broadleaved, and grassy weeds in nursery stock (ornamental and fruit). Other recent approvals include weed control around nonbearing fruit trees, in shelterbelts, and forest plantings. Hughes says that Casoron will control "tough" weeds such as horsetail, nutgrass, sorrel, and quackgrass.

Representatives N. H. Shorey, V. W. Woestemeyer, and R. F. Crawford of the U. S. Borax and Chemical Corp. office in Portland introduced three herbicides for nonselective weed control.

Monobor-Chlorate Granular D is a combination product containing sodium metaborate, sodium chlorate, and diuron. It is designed to be applied dry for full season control of "tough" noncrop weeds, the representatives stated. This formulation has sufficient water solubility to be applied in a spray solution also. Monobor-Chlorate Granular D combines rapid initial action and stand reduction with residual activity, the Borax agents claim.

A second Borax product presented was Borocil, a combination of borate compounds and bromacil. This granular formulation is said to be useful for nonselective perennial grass control on noncrop land.

A nonselective emulsifiable
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Meeting Dates



New York State Arborists Assn. Winter Meeting, Statler Hotel, Ithaca, Jan. 17-19.

Kentucky Nurserymen's Assn. Meeting, Kentucky Hotel, Louisville, Jan. 17-20.

Oregon Association of Nurserymen, 32nd Annual Meeting, Marion Motor Hotel, Salem, Jan. 19-21.

17th Annual California Weed Conference, Hacienda Motel, Fresno, Jan. 19-21.

Southern Weed Conference, Annual Meeting, Hotel Adolphus, Dallas, Tex., Jan. 19-21.

Associated Landscape Contractors of America, Annual Convention, International Inn, Tampa, Fla., Jan. 20-23.

Kansas Arborists Assn. Annual Dinner and Meeting, Warehouse Hotel, Manhattan, Jan. 21.

Kansas State Shade Tree Conference, Umberger Hall, K.S.U., Manhattan, Jan. 21-22.

New Jersey Association of Nurserymen, Annual Winter Meeting, Princeton Inn, Princeton, Jan. 21-22.

Washington State Nurserymen's Assn. Winter Meeting, Hilton Inn, Seattle, Jan. 25-26.

Ohio Nurserymen's Assn. Annual Meeting, Columbus Plaza, Columbus, Jan. 25-28.

Oregon State University Ornamentals Short Course, Corvallis, Feb. 1-3.

New England Nurserymen's Assn. Annual Meeting, Hotel Kenmore, Boston, Mass., Feb. 2-4.

International Shade Tree Conference, Midwest Chapter, Annual Convention, Pick-Congress Hotel, Chicago, Feb. 3-5.

35th International Turf-Grass Conference and Show, Sheraton-Cleveland Hotel, Cleveland, O., Feb. 7-12.

Michigan Association of Nurserymen, Annual Meeting, Pantlind Hotel, Grand Rapids, Feb. 9-11.

Aquatic Weed Control Society Annual Meeting, LaSalle Hotel, Chicago, Ill., Feb. 11-12.

National Arborists Association Winter Meeting, Guy Lombardo's Port-O-Call Inn, Tierra Verde, Florida, Feb. 14-16.

International Shade Tree Conference, Canadian Chapter, 16th Annual Meeting, Chateau Frontenac Hotel, Quebec City, Feb. 18-19.

International Shade Tree Conference, Southern Chapter, Meeting, Francis Scott Key Hotel, Frederick, Md., Feb. 21-23.

Bowie Booklet Tells of New Grass Growing Technique

In a new booklet titled, "Facts About Hydro-Mulching," Bowie Machine Works, Inc., describes its method of establishing grass along highways, in parks and other areas, faster, better, and more economically.

The fully illustrated booklet, the first published by the company, describes application of seed, fertilizer, and mulch in one operation with the use of its equipment.

A free copy of the booklet can be obtained from the company, by writing to P. O. Box 630, Bowie, Texas.

Oregon Weed Conference

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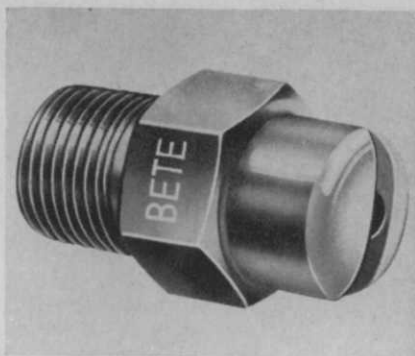
concentrate for extra strength against perennials in mixed vegetation is called Maintain by U. S. Borax. This sprayable compound calls upon the action of Tritac, a low volatile 2,4-D ester, and bromacil. The representatives listed quackgrass, wild carrot, and Canada thistle as three of several perennial weeds Maintain is claimed to control.

Ronald Collins, Hillsboro, Oregon, detailed Velsicol Chemical Corporation's Banvel-D (dicamba).

"Research has shown that combinations (dicamba plus 2,4-D) can increase the spectrum of weed control," Collins related. "Combinations often give better control of specific weeds than when either material is used alone." Collins presented tests results to show Conference delegates this was so.

Dicamba is presently registered to control such weeds as Canada thistle, field bindweed, and Russian knapweed, among others.

"For commercial turf use, Velsicol is marketing Banvel-D 4S," Collins continued. He disclosed that soon there will be a formulation of dicamba plus 2,4-D amine designed to increase the control spectrum to include red sorrel, chickweed, dock, and clovers.



This new NF Series nozzle will deliver a high-impact, flat spray pattern wherever a hard, driving spray is required, Betefog Nozzle, Inc., reports.

Bete Has New Spray Nozzle

A new line of narrow angle fan spray nozzles, claimed to deliver a high impact spray pattern, was recently introduced by Betefog Nozzle, Inc., Greenfield, Mass.

Called the NF Series, the nozzles are available in spray angles of 0°, 15°, 30°, 50° and 80°, and in 18 sizes from ½ to 75 gpm capacity. Stock materials are brass, teflon, 303 stainless steel, and other materials on special order.

A data sheet is available from the company at the address given above.

Biographics Has Data Service

Consolidated, uniform reports of new data on the basic toxicity or biological activity of older, widely used chemicals, are now available, according to Biographics, Inc., a Princeton, N. J., firm that compiles such data for subscribers to its service.

Called Biograms, these reports are said to be time-saving devices for the busy researcher and will constitute a valuable addition to the technical library as the volumes grow.

The company believes that much of the information on older chemicals was published prior to World War II, with little basis for making valid comparison with these and newer compounds now available. Biograms are designed to fill this need.

Complete details on this service are available by writing to Dr. R. W. Fogleman, President, Biographics, Inc., 3-288 Province Line Road, Princeton, N. J.

Trimmings

General Grant. Had a note recently from Grant's Lawn & Tree Culture, a company which, like many we write about in this column, offers a complete and general line of vegetation maintenance services, including insect, disease, and weed control in lawns, along with aeration and power raking, and tree services. Owners are Ulysses S. and Steven P. Grant, and the firm is relatively new in this endeavor. Judging from the sample mailing piece which we received, they should go a long way in Utah in the coming years when more and more homeowners and industrial installations are turning to the professional for weed, tree and turf work.

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This Place Is Bugged! The relentless advance of science becomes more electrifying every day, and now we learn that a group of scientists at the University of California's Davis campus have learned how to wire an aphid's back with a copper wire, place the insect on a leaf which contains a mild electric charge, and thereby learn when the aphid begins to feed on plant juices. So far, apparently, there have been no editorials in national journals about this intrusion on an aphid's privacy, although this type of complaint is not currently uncommon!

* * *

South of the Border. Just back from an exciting floral tour of Mexico City, Guatemala, Costa Rica, and Merida are nurseryman Ralph Pinkus and his wife Muriel, who run North Haven Gardens in Dallas, Texas. Ralph and Muriel escorted the tour, open to other industry men, because of his wide experience in that part of the world. We here in the frozen Midwest would be inclined to think that next time we'll have to go along to get firsthand news coverage!

* * *

Was It Him or Her? Lawn service firms which have customers who occasionally complain of any brown areas in the lawn can point out that even the lush terraces of the White House's south lawn are being attacked by the notorious fungus disease fusarium rosium. According to Irwin M. Williams, who's chief horticulturist for the National Park Service, there's not much that can be done for this disease. Mr. Williams has the awesome task of caring for the turf and trees about this national shrine, and must right now be a little nervous about Easter Sunday (fast approaching) and the annual egg hunt which delights the kids but probably turns the White House grounds maintenance men into mere shadows of their former selves. In any case, anybody who's traveled to Washington recently can say, regardless of his politics, that the men in charge of the White House (the lawn, that is) are doing a fine job!