

clumps of Johnsongrass were visible. After the application, very little action was visible for the first seven days. Then a slow and gradual dying of the foliage was noticed. This dying continued from five to seven weeks after the spray treatment. A second treatment at the end of this period gave the outstanding results at three months, Chandler claims.

A trial in 1962 has confirmed some of the results. An irrigation ditch was selected that had one bank next to an alfalfa field where the grower cut the weeds on this bank regularly; the opposite bank was next to a fence so that the Johnsongrass had not been disturbed and was about 6 ft. tall in full seed head. The bank that had been cut was 12 to 18 inches tall at the time of treatment. This afforded two stages of Johnsongrass growth. The ditch banks were sprayed on August 15.

In evaluating the results of the spray, it was agreed that the tall grass had suffered 60 to 75% mortality from the first spraying. Seven weeks later the bank that had the tall growth was spot-treated for regrowth and the other bank was sprayed solid. Ten days after the second application and until December 9th, the day of the first frost, no regrowth was visible and most of the rhizomes were in stages of complete collapse or in severe distress. The young, vigorous-growing Johnsongrass was not as susceptible to treatment as those plants that were full grown and in seed stage. The same result was not obtained on dry-land areas as was achieved where ground moisture was present.

#### What's New in Weed Control

One of the most interesting sessions was the evening session on "What's New in Weed Control." A panel was formed by having a chemical company's representative discuss the new chemicals from his firm. Some reported on coded chemicals that are about to be released, while others discussed new uses of older chemicals. Fifteen companies were represented on the panel.

California Chemical Company, Ortho Division, was represented by H. C. Fisher, Whittier, California. Their new products are Diquat and Paraquat. Diquat is available now. Paraquat will be available soon. Both give rapid knockdown of weed growth, Fisher said, and both are odorless and nonflammable and leave no soil

residue. Diquat can also be used as an aquatic weed treatment and as an additive for a knockdown treatment with sterilants.

Lyall F. Taylor of E. I. duPont de Nemours of Palo Alto, California, reported Hyvar isocil was available now and Hyvar bromosil will be soon. Both are sterilants for use on industrial and noncrop land. Hyvar isocil has a wider range of weed control at about one-third the rate of Karmex, Taylor said, and is less selective and less sensitive to breakdown from sunlight than Karmex. Suggested rates for the control of annual weeds is up to 4 lbs. per acre.

"Cull" was introduced by Richard Fosse, Amchem Products, Inc., of Niles, California. Cull is a tree-killing chemical in a pressurized can for use in the cut-surface method. With the press of a button, the can releases a measured amount of chemical for each ax cut. One can should treat about 60 trees of six-inch diameter.

Pennsalt Chemicals, represented by Edward J. Bowles of Fresno, Calif., discussed TD-307, a contact herbicide with very short residue. It is intended for use in fallowing programs, along roadsides including landscape plantings. Possible selectivity in crops will be investigated in 1963.

Betasan was discussed by Joe Antognini of Stauffer Chemical Company of Mountain View, California. Betasan is a weed control chemical for turf. It will control crabgrass, annual grasses, and some broadleaved plants. It is of special importance in California for weed control in dichondra and can be used pre-plant, pre-emergence and post-emergence to the dichondra, Antognini said. It also is effective in established grass turfs.

Diamond Alkali Company's new product is Dacthal, reported by Robert Orlik, Jr. of Fresno, Calif. Dacthal is being used in turf grasses as a pre-emergence treatment for crabgrass control.

Banvel D, a product of Velsicol Chemical Corporation, was introduced by the company's Joe O'Brien of Fresno, Calif. It is a 4-pound-per-gallon formulation, and is being used in trials for perennial broadleaved weeds of morning glory, Russian knapweed, and in noncrop land areas and on roadsides.

Diphenamid and trifluralin were introduced by Robert Ascherman of Eli Lilly and Company of Greenfield, Indiana, as their new

chemicals. Trifluralin is registered as Treflan for selective pre-emergence weed control in turf and ornamentals. Treflan, Ascherman said, is produced as a 4-pound-per-gallon emulsifiable concentrate and a 2 and 5% granular.

U.S. Borax's V.W. Woestemeyer of Anaheim, Calif., discussed Monobor-Chlorate as a soil sterilant for noncrop land, with emphasis for use under asphalt and for perennial weed control. Annual weeds require  $\frac{1}{2}$  lb./100 sq. ft. and perennial weeds up to 4 lbs./100 sq. ft. Tritac, a second chemical, is a soil sterilant for use in noncrop land for perennial broadleaved weeds. Tritac leaves a long soil residue, Woestemeyer concluded.

Thompson-Hayward Chemical Company, through their representative James H. Hughes of Fresno, Calif., reported on Casoron. Applied pre-emergence to the weeds, Casoron has shown activity against a broad spectrum of annual and perennial pest plants. Special uses would include control of nutgrass, dodder, bracken fern, and quackgrass. Casoron, which is selective in ornamentals, is formulated as a 50% wettable powder and a 4% granule, Hughes concluded.

Next year the California Weed Conference will be held in Sacramento, Jan. 21-23, *Weeds and Turf* was told.

#### UK Herbicide Firm Acquires Control of Doggett-Pfeil Co.

Fisons Horticulture Ltd., leading United Kingdom herbicide manufacturer, has purchased a majority interest in the Doggett-Pfeil Co., American producer of soluble and liquid fertilizers, selective weedkillers, turf fungicides, and grass colorants.

"This acquisition provides a base for the establishment of Fisons products in the U.S. horticultural market, and also enables an extension of Doggett-Pfeil's present activities," G. V. K. Burton, chairman of Fisons Horticultural Ltd., announced after the purchase.

Fisons is already well established in Canada, where it is a major distributor of simazine, atrazine, and other herbicides, Burton mentioned.

Firm will be renamed the "Doggett Fison Co.," with S. H. Doggett continuing as president.