

\$5 Billion Weed

"Weeds are the bad guys in an age-old drama in which the farmer and maintenance engineer are constantly facing the forces of nature. Weeds are a \$5 billion challenge and touch on the lives of every man, woman and child in this country . . ."

These and other statements brought a deeper realization of the role of weed science in the 20th century as more than 800 persons

met for the 26th annual meeting of the Southern Weed Science Society in New Orleans in January. In a word, the meeting could best be described as enlightening.

The Southern Weed Science Society is unique in the fact that at perhaps no other meeting do industry, university, government and press personnel work together in support of one goal. Weeds and weed science has a magnetic attraction

among these people. One exposure to a SWSS meeting and you're hooked.

This year's meeting, like those before, had more papers presented on a variety of subjects than most delegates could digest in three days. Like the cat in a room full of rocking chairs, conferees scurried from one session to another hoping time schedules were not broken so as to hear a favorite speaker or an interesting topic. Thank goodness for programs and name tags.

Keynote speaker for the meeting was Dr. Donald A. Spencer, ecologist, National Agricultural Chemical Association, Washington, D. C. Spencer, who has spent most of his career as a wildlife biologist, spoke on "The Niche Of Weed Science In The Environmental Picture." He said that "herbicides are designed to manipulate the plant cover." The change that takes place results in changes in the biosphere that affect wildlife and other plants. Recently "there has been a growing movement to resist change and return to unregulated natural processes."

But Spencer cited numerous instances in which changes take place in nature that have far disastrous effects. Without management, nature would vacillate from one untenable situation to another. Herbicides as a tool of management have helped environmental managers effectively select, eliminate and suppress undesired species from those favored.

The ecologist pointed out that from the beginning herbicides were screened to minimize adverse environmental effects. When unanticipated adverse effects of some compounds come to light, correctional measures have been rather promptly taken, he said. Herbicide manufacturers now test new candidates with full knowledge of contamination, residue build up biodegradation.

Theme for the SWSS meeting was "Weed Science—For Everyone" and in his presidential address Turney J. Hernandez challenged weed specialists to strive for professionalism both on the job and off the job. Weed scientists are battling a world weed problem. In agriculture, "chemical control adds so much more to food production over any



Outgoing president, Turney J. Hernandez (l) is presented a plaque and gavel by incoming president, Allen F. Wiese. Dates of next year's meeting are Jan. 22-24.



Graduate Contest winners in the Soil Aspects division are: (l-r) Bill Maksymowicz, University of Kentucky, honorable mention; Charles Slack, University of Kentucky, second place; Glenn Davis, University of Tennessee, first place. Charles Rieck, University of Kentucky and chairman of the SWSS student interest committee, presents \$50 award to Davis.

Challenge

other method that a nation can hardly afford to be without it," he said.

"Off the farm, weeds create other problems, as so many of us know. On highway shoulders, on railroad rights-of-way, in storage areas, in drainage ditches, on industrial sites, in vacant lots, in parking areas and along utility lines and fences, weeds are a maintenance headache, a fire menace, a flood potential, or an environmental eyesore.

"For the urban citizen, weeds may not be an obvious problem, yet millions suffer from hay fever, caused by weed pollen, or other allergies; for there are more than 700 plant species that are known to cause inconvenience, illness or even death," the SWSS president said.

Hernandez spoke about the dependence on herbicides that has taken place during the past 25 years. In industrial weed control, applicators have honed their profession to a prescription science. As those in the Green Industry know, individual programs are developed that solve the needs of the customer. All this has taken place because of high costs and increasing scarcity of available labor. Thus, herbicides have had a direct relationship between industrial growth and environmental concern.

Yet, Hernandez pointed out that there still is a continuing need for better weed science education. Few college graduates have had training in modern weed science. "Public misunderstanding about herbicides is almost entirely due to lack of exposure," he said. "We must all become better teachers and perform like professionals."

In the session on regulatory aspects of weed control, Robert E. Hamman, manager, government relations, agricultural division, Ciba-Geigy Corporation, reported on the "Effects of Recent Legislation on Pesticide Development." He reviewed portions of the new Federal Environmental Pesticide Control Act pertinent to weed specialists. He said that the Act prohibits the use of any pesticide inconsistent with its labeling. This means that a manufacturer of product X can not sell it nor can an applicator ap-



New Officers of SWSS for 1973 are: (l-r) Ron E. Talbert, Arkansas Agricultural Experiment Station, Fayetteville, Ark., secretary-treasurer; Turney J. Hernandez, Du Pont Company, past president; Paul W. Santelmann, Oklahoma State University, Stillwater, Okla., vice-president; Allen F. Wiese, Texas A&M University, USDA Southwestern Great Plains Research Center, Bushland, Tex., president; William G. Westmoreland, Ciba-Geigy Corporation, president elect; and, James F. Miller, extension agronomist, University of Georgia, Athens, Ga., editor.

ply it for a use for which it is not labeled.

Following this T. O. Evard, section head, Federal-State Activities, Environment Protection Agency, Atlanta, reviewed the cooperation in regulation of pesticide applicators in the southeast. He pointed out that EPA has ten regional offices and each office is engaged in three programs, water, air and categorical. Pesticides are administered by the last program. Evard said the pesticide branch is divided into two sections, inspectional activities and Federal-state activities.

He reported on two recent cooperative efforts between EPA and state

governments involving pesticides. One was a workshop to discuss minimum standards for applicator competency and minimum criteria for "restricted-use" pesticides and pesticide disposal. The other was Project Safeguard, a program aimed at small farmers. In neither case was mention made about training applicators.

Another EPA speaker, James C. Oberwetter, special assistant for public interest groups, Washington, D. C. underscored what other speakers had to say on the Federal Environmental Pesticide Control Act. Other than the fact that this is the
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Graduate contest winners in the Plant Aspects division are: (l-r) Ford Baldwin, Oklahoma State University, honorable mention; Richard Schumacher, University of Kentucky, honorable mention; Charles Rieck, student interest committee chairman; A. C. Edwards, Auburn University, first place; and, Russell Hahn, Texas A&M University, second place.

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WEED CHALLENGE

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first really new pesticide law since 1947 and that the guts of the law concerns the use of pesticides, few people, including EPA officials themselves, have anything to say about administration of the law at this time. It's just too big and too new. That will come in time. About the most anyone can say is a rehash of the law itself.

The SWSS meeting is the kind you can attend, stand outside the conference rooms and visit with friends, never go to a session, and still come home knowing more about new weed control techniques or a new chemical than before. This is not true with other conventions where more strict regulations prevail. Weed men are different, however. Like the weeds they control, each is independent and yet dependent.

Those who visited the industrial weed control session couldn't help but note the tremendous growth this session has enjoyed in past years. More and more interest in industrial weed control has prompted expanded programming at SWSS. This year's session lasted one and one-half days. Here's a quick rundown on some of the papers:

B. C. Byrd of Dow Chemical Company spoke on vegetation control from Tordon picloram and phenoxy herbicide combinations in invert emulsions. He said that while 2,4-D and 2,4,5-T esters in combination have good effect there has been a rapid resurgence of conifers. Retreatment has been necessary to control collar resprouting of cherry, maple, locust, sassafras and persimmon. But by adding Tordon to the invert emulsion control can be achieved. In addition, the combination controlled white oak.

The Kansas City Southern Railroad is a mighty good road, according to William Crabaugh, Servitron, Kansas City, but when Don Telge of Velsicol Chemical Corporation finished his presentation, the railway was even better. Telge reported on his investigation of the weed control program. Previously the problem was not getting the control desired for the number of dollars spent. Crabaugh and Telge evaluated the vegetation problems. They decided to use Hyvar X and MSMA to control grasses and Banvel and 2,4-D for weeds and vines. They further decreased application costs

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WEED CHALLENGE (from page 30)

with the Accutrol spray system.

An interesting sidelight to this success story was reported. The same chemical mix and one spray rig was used throughout the rail line. When the area called for higher rates, they slowed the equipment ground speed down — 15 mph on the mainline, 10 mph in the yards and 5 mph on the bridges. Standard rate was 25 gallons mix per acre with the Accutrol system versus 50 gallons

used in previous years. Results? They spent more money, but they feel that the initial control of vegetation is better. Next year they will be looking for a lower dollar cost per mile.

F. E. "Gene" Gonzalez of the Du Pont Company told professional weed men about Krovar I field test results. Krovar I is a 50-50 mix of bromacil and diuron. On the basis of small and large plots Gonzalez said

that Krovar offers these advantages over either of the herbicides alone: less lateral movement, more control of late germinating seedlings, safer to root system of trees and ornamentals, superior control of perennial grasses, and others. He said the interest in Krovar I is good among weed specialists on highways, utilities and railroads.

Why does the Navy need weed control? Don R. Estes, special assistant for applied biology, southern division, Naval Facilities Engineering Command, says he's often asked that question. However, you quickly can understand that the Navy has a great need for vegetation control. Just as the Air Force needs many ground support persons to keep planes in the air, so the Navy has many thousands of acres of naval bases to support ships at sea. A naval base is like a city and it has weed control problems, too. Estes described his job in weed control activities and noted that the man with the hoe and brushhook is being replaced by the man who is qualified to apply herbicides. He said that last year his office approved 2,570 gallons and 527,128 pounds of herbicide concentrates for application in the Sixth and Eighth Naval Districts.

Another area of special interest to the Southern Weed Science Society is aquatic weed control. Like the industrial section, this session has grown too. It is speculated that interest in this area will continue to grow as more and more people become aware that something can be done with the vegetation problems in southern waters. This year 10 papers were presented.

In Florida public waters, control efforts entail chemical, biological and mechanical measures, said J. Clarke Hudson, aquatic weed control specialist, Florida Department of Natural Resources. Currently, however, chemical control is our most efficient option. Yet it is the one under attack. This we have looked at new approaches to chemical weed control in the aquatic environment.

Hudson said that slow release pellets, inverts, foams and new techniques of application are being tested. He concluded that future aquatic weed control will involve integrated systems, but chemicals will continue to play a vital role.

Dr. B. David Perkins, entomologist, agricultural research service, USDA then reported on the release of the mottled water hyacinth weevil

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in 13 locations in Floriad last August. He said that the insects have successfully completed their life cycle on water hyacinth and careful examination of the leaves has revealed eggs and developing larvae produced by this generation.

Dr. Robert W. Geiger, 3M Company spoke on a new algicide for filamentous algae and chara. He said that promising results from early tests indicate effective control of these problem weeds.

New officers of SWSS for 1973 are: Dr. Allen F. Wiese, Texas A&M University, USDA Southwestern Great Plains Research Center, Bushland, Texas, president; Dr. William G. Westmoreland, Ciba-Geigy Corporation, president-elect.

Turfgrass Weed Control Studied In NE Universities

New compounds and techniques of weed control in turfgrass continue to be major areas of study in many

northeastern universities.

The evaluation of pre-emergence crabgrass herbicides goes on in an effort to discover effective materials which may be used more safely on a wider range of turfgrass species. The flexibility in time of application is also an important consideration.

In post-emergence applications made by John A. Jagschitz, assistant professor plant and soil science dept., University of Rhode Island, new compounds which can control the grass-like weed nutsedge are also being evaluated.

Chemicals which prevent seed head formation are also under test. This work is being done by T. L. Watschke, J. M. Duich and D. V. Waddington of the department of agronomy, Pennsylvania State University, University Park, Pa. These chemicals will prevent the spread of weeds which must reproduce by seed. Lawn grasses are perennial in nature and reproduce by the formation of underground or above-ground stems which produce new plants. Lawn grasses need not ever go to seed as must annual broad-leaf and grassy weeds.

This is another method of plant population control without the immediate elimination of the weedy plant pest. It is a program approach and may someday supply another useful tool to the turf grower.

Hale Pump Line Expanded

To meet the growing demand for increased volume and pressure ranges in irrigation pump requirements, Hale Pumps, Conshohocken, Pa., has recently broadened its lines of irrigation pumps. This expansion includes important additions to its PTO and skid and trailer lines.

In the PTO group, Hale now has a full range of pumps to match the power of every tractor size — from 15 hp to 150 hp. These pumps are designed to meet any irrigation volume requirement — from 200 gpm to 2000 gpm at operating pressures from 150 psi through 200 psi.

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