

**I**T'S no secret to managers of weed control services that heightened environmental demands from the public are complicating the job of keeping up with a barrage of new chemicals, equipment and techniques. Weed control services now have to provide effective control programs and at the same time use methods which satisfy the public.

Recently, nearly 125 representatives from the commercial weed control industry sharpened the focus on environmental training and effective vegetation management at Texas A&M University's Seventh Annual Industrial Weed Control Conference.

"The conference was directed toward nonagricultural interests in vegetation management, including the ecological aspects," according to Dr. Wayne McCully, general chairman for the conference. McCully is a professor of grassland management in the Texas A&M Range Science Department.

The conference, held Oct. 16-18, was jointly sponsored by the Texas Agricultural Extension Service and the Texas Transportation Institute as part of the continuing education program of Texas A&M.

"People are becoming afraid and consequently more concerned," said R. L. Robinson, Texas, Electric Service Co. and chairman of the conference steering committee. "These people need to be educated in the ecological aspects involved in industrial weed control."

Robinson added that while ex-

# Vegetation Management

## *It Makes Dollars And Sense In Texas*

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tension has done an excellent job in orientating some of its programs to needs of industrial weed controllers, more work is needed in this area.

Dr. William Upholt of the Environmental Protection Agency (EPA) boosted the conference's emphasis on ecological impact of weed control by describing the recently passed Federal Environmental Pesticide Control Act of 1972.

He pointed out that one of the biggest advantages of the new law is that it allows regulatory agencies and users of chemicals "to legally talk" about insect and weed control materials. Under previous regulations these materials were called "ecological poisons" and many users, both commercial and private, were confused about when, where and how to apply the chemicals.

The new act requires EPA to classify all pesticides as to use. Up-

holt described this as *the most significant portion* of the new act. *Certain chemicals will be used for specific purposes, and some materials will be restricted to trained applicators.*

Upholt, senior science advisor to the assistant administrator for EPA's Categorical Programs, listed other main provisions of the act:

—It brings all pesticides under EPA control regardless of whether or not they are an item of interstate commerce.

—It makes use of a pesticide without regard to label instructions a federal offense.

—It makes possible inspections of plants manufacturing pesticides. Data from inspections will remain confidential.

Under the act, states are authorized to train and certify commercial applicators within standards developed by the federal government.

"We aren't intending to handle this certification federally," the EPA official emphasized. "It would be highly unrealistic for us to set uniform standards because problems vary so much from state to state."

All provisions of the act become effective four years after its enactment.

Talk about the environment was only one phase of the conference. The industrial weed controllers heard authorities speak on vegetation management for rights-of-ways, control techniques for roadsides and ditches, and methods of eliminating aquatic vegetation problems.

"A soil sterilant can be the backbone of an industrial weed control program," contended Dr. A. L. Wiese of the Texas Agricultural Experiment Station. He divided bare-ground chemicals into two groups—those with little soil residual and those with long soil residuals.

"The shorter residuals remain persistent from one to three weeks and are toxic to all living matter in-



Caldwell Equipment Co.'s version of a flail mower also catches the attention of industrial weed controllers as it is demonstrated and explained. Note the hydraulically controlled wings which can be lifted independently of each other.

cluding seeds, plants and even insects," he added.

"The longer residual chemicals used for broadleaf control are sometimes subject to leaching up to depths of six feet, but they have to move downward far enough to be absorbed by the plant roots. Examples of these chemicals are 236 TBA, Picloram and Tordon.

"Long residual grass killers such as TCA leach readily and remain persistent for three to six months."

Wiese reviewed research done at Texas A&M in which an application of 200 pounds of TCA per acre along roadsides provided effective control of annuals and Johnsongrass. It also gave excellent control of broadleaf perennials.

Wiese suggested that applicators consider pretreatment with bare-ground chemicals on an area before surfaces such as blacktop are put down.

He reminded applicators that one of the biggest dangers in using soil active herbicides is lack of control and that it is especially easy to get herbicide drift on steep slopes.

"Along fences, roads and around industrial sites combinations of a soil sterilant and a contact herbicide should be considered for quick knockdown or rank growth and residual action to prevent regrowth," suggested Dr. E. F. Eastin of the Soil and Crop Sciences Department at Texas A&M.

He recommended that applicators using non-selective contact herbicides on perennials make their treatments during dormant stages of plant growth.

Eastin pointed out that a new foliar applied, systemic chemical called Roundup (Monsanto) was showing good results in control of rhizome Johnsongrass. However, the chemical is still in developmental stages.

In another part of the conference authorities on aquatic weed control told participants to be sure of the ultimate use of the water before devising a control program.

"There is no one-shot program in aquatic weed control," commented Dr. A. J. Foret of the University of Southwestern Louisiana. "A program has to be thoroughly planned and repeated. The biggest asset in aquatic weed control is our ability to manipulate the level of the water itself."

He mentioned cases in Louisiana where manipulation of water levels aided in control of water lillies, duckweed and even some woody species such as willow.

Foret presented some general cost



Several industry representatives inspect the cutting job done by this Mott flail mower. Complete hydraulic control makes the mower and tractor easy to operate. This unit has a wing on each side and one in the rear.

figures on different methods of aquatic vegetation control. Vegetation control costs with mechanical equipment can run as high as \$300-\$900 per acre. The Army Corps of Engineers has a one man saw-boat that shreds vegetation at a cost of \$20-\$30 per acre. Chemical control costs about \$20 per acre for duckweed and about \$30-\$40 per acre for water hyacinth.

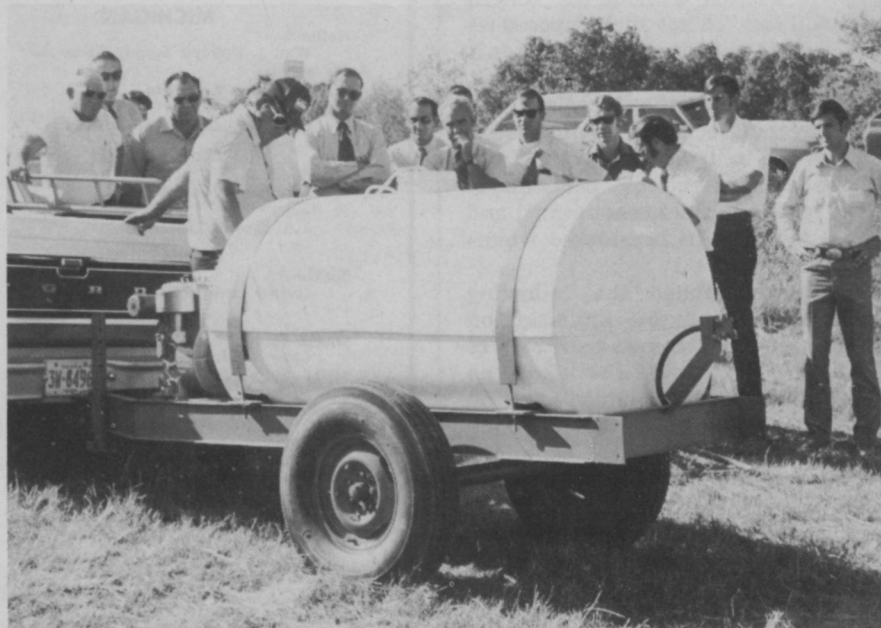
Two of the newer ideas being used

in aquatic weed control are spray application from V-shaped booms that reduce chances of snagging vegetation and application by heavy hoses that drag the bottom.

"Unfortunately we can't control the water level and hope to get rid of algae," said Jim Davis, a Texas extension fisheries specialist.

He also revealed that there has been little success in attempting to  
*(continued on page 85)*

Part of the 125 industrial weed controllers at the conference's field demonstration observe a movable 250 gallon fiberglass spray tank which has its own engine mounted on the frame. Either a fixed nozzle or a hand-held wand can be used with the tank.



control algae by biological means or in development of microwave equipment for use on water algae.

Another facet of vegetation management related to aquatics is control of weeds along ditchbanks.

"The ultimate aim in control of weeds along ditchbanks is to prevent erosion by carrying out management practices which will stabilize slopes," Dr. Rupert Palmer, a Texas extension agronomist reasoned. He recommended that applications of selective herbicides be made early and that a sod of perennial grass be established on the slopes.

Since industry became concerned with vegetation management years ago, many companies have had to decide whether to carry on their own programs or hire a weed control service.

At one time, Houston Lighting and Power Co. was spending about \$200,000 a year for ground maintenance that was virtually all done by manual labor. Their vegetation management program began with cutting grass, planting trees and picking up trash; but they weren't able to keep up with vegetation problems around substations, right of ways and railway sidings.

Dusty Wolfe, a representative of HL and P, outlined his company's approach in selecting a vegetation control service:

"First we put down on paper exactly what we wanted. Then we knew that our company had to have a responsible person managing the program because he would be serving as an extension of us, and the public might be judging us by his actions. So we looked for a service which was knowledgeable about regulations and one that had reliable equipment."

"The buyer is only interested in buying results," Bill Held of Houston Spraying and Supply Co. said. "Let the buyer completely understand what he is investing in. Build relations for the future and don't oversell. Overselling is only a lowering of the industry's standards."

He told conference participants that one of the major obstacles in accurately determining costs and materials is a lack of definite specifications.

"Specifications should be realistic," he noted. "They should at least include a clear designation of the area to be treated, degree of control desired, rates of applications and schedules for applications and mowings."

Held suggested that a standardized specifications form approved by

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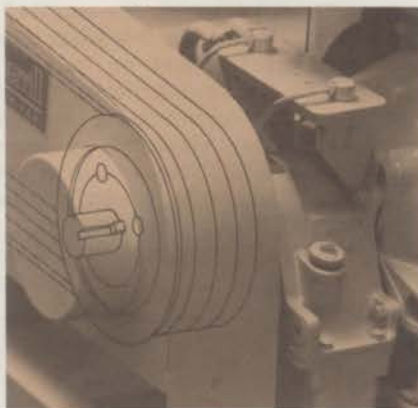


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members of weed control organizations could reduce the number of misunderstandings arising from vague and incomplete specifications.

During other sessions of the conference selective vegetation management was discussed. George Richter of the Houston Department of Parks and Recreation talked about management with mowing. Dr. Dudley Smith, Texas Agricultural Experiment Station, spoke on control of herbaceous plants. Dr. R. W. Bovey of the USDA's Agricultural Research

Service presented a program on chemical control of woody plants.

The final segment of the conference dealt with technology of application. James Shaw, ROWCO Co. of San Antonio, explained aerial distribution. Use of thickened sprays was discussed by Jack Thompson of Amchem Products, Jackson, Mississippi. Homer McCall of Texas A&M discussed current uses of foam and Dr. Marvin L. Beasley of the R. H. Bogle Co. of Alexandria, Virginia, spoke on polymers.