

Texas A&M Conference Covers the Question:

What Kind of Weed Control?



Industrial weed control isn't a question of "whether" but of "what kind, how much, and what cost?"

Answering the latter three questions often becomes the responsibility—and the opportunity—of weed control specialists, for industry management isn't always certain of what kind of control is needed.

That's a summation of the Fourth Annual Industrial Weed Control Conference sponsored by Texas A & M University, College Station. About 150 persons representing the various aspects of the weed control industry met to contribute toward the conference's three-fold objective of the kind, degree and cost of weed control.

Before the nuts and bolts sessions got under way, a U.S. Department of Interior official stated his agency's policy on pollution, a watchword for the entire chemical industry during the 70s.

Victor W. Lambou, of the Interior's water pollution section, said the policy is this:

—Restrict pesticide use to situations where there is no suitable alternative;

—Use the safest pesticide at the lowest effective rate;

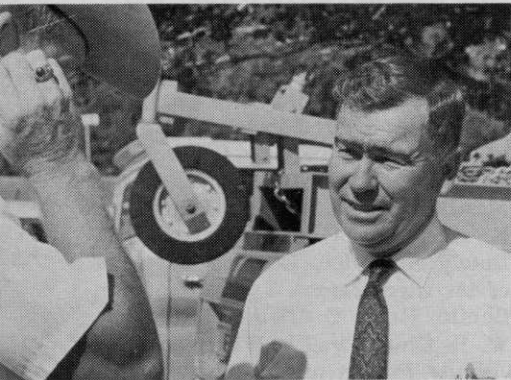
—Phase out the more persistent pesticides, such as DDT, when effective substitutes are developed; and

—Eliminate immediately those persistent pesticides considered most hazardous to fish and wildlife.

Lambou reminded that pesticides used in interstate commerce must be



Field demonstrations of both mechanical and chemical control of weeds and brush wound up the Texas A&M conference. Buddy Wolfe, using a John Bean sprayer and Stull Chemical Company's invert emulsion, manipulated the foam-like solution from fogging to a concentrated stream reaching out more than 100 feet. Cliff Ennis of Engler Manufacturing, demonstrated a slope mower for problem areas.



Dr. Wayne G. McCully of Texas A&M was conference chairman.

registered. He also reviewed the re-registration of chemicals that is now going on.

Chemical manufacturers must prove by Dec. 31, 1970, that their pesticides at certain residue levels meet the safe-use criteria established by the government. Failure to meet the new standards means the product will not be re-registered and in effect be banned from use.

Herbicides that are intended for use in and around water, he said, must be backed up with toxicity data and residue data for irrigated crops, meat, poultry, eggs, fish, shellfish, and potable water.

Some companies, Lambou said, "may find it not economically feasible to get the data, so some labels may be withdrawn."

Panelists covered about every method of weed control, but generally concluded that the most effective and least-cost approach was to establish a continuing program.

An example came from R. L. Robinson of the Texas Electric Service Company. Robinson's program beneath high-line towers and inside sub-station yards is to apply 20 lbs./acre of diuron the first year, 15 lbs. the second year, and 10 lbs. every year thereafter.

An experiment of cutting down to 8 lbs./acre "to really save some money," Robinson said, has meant instead that he must begin again with first-year rates. He set the cost of the continuing program at about \$100 per acre.

Some comparative costs for maintaining a pipeline right-of-way were reported by Howard S. Bell of Shell Pipeline Company of Houston.

Cost of pipeline maintenance as related to weed control, he said, is tied to the access needed, visibility required, and the degree of protection necessary to avoid fire and erosion damage.

Bell presented these per-mile costs for maintaining a 60-ft. right-of-way: \$50 for mowing ground cover; \$200 to \$300 for chemical spraying of ground cover; \$200 to \$300 for aerial control of canopy; \$410 to \$600 for ground spray of canopy and side trim; \$570 for mechanical canopy and side trim.

Aerial application presents both unique disadvantages and advantages, he said. Among disadvantages, he cited:

—aircraft use restrictions because of varying county regulations;

—application rates that must insure three to five times longer control, enabling the spreading of application cost over several years to make it pay out; and

—added danger of damaging adjacent field crops.

Among decided advantages:

—Since timing of application is critical, aerial application can complete the job quickly enough to achieve maximum efficiency.

—Aerial application can bring control to otherwise inaccessible areas.

Boosts for aerial application, Bell added, have been invert emulsions to minimize drift, refined application equipment such as the micro-foil boom, and chemicals with broader control spectrums.

Concurrent panel sessions dealt with weed control methods around plant sites and parks, roads and streets, railroads, water and ditchbanks, and so on.

Methods ranged from spraying and mowing separately, or spraying in conjunction with mowing, searing then reburning with either fuel oil or propane, one-time burning, herbiciding and burning, dredging, to designing facilities at the outset to ease maintenance costs or eliminate the need for weed control entirely.

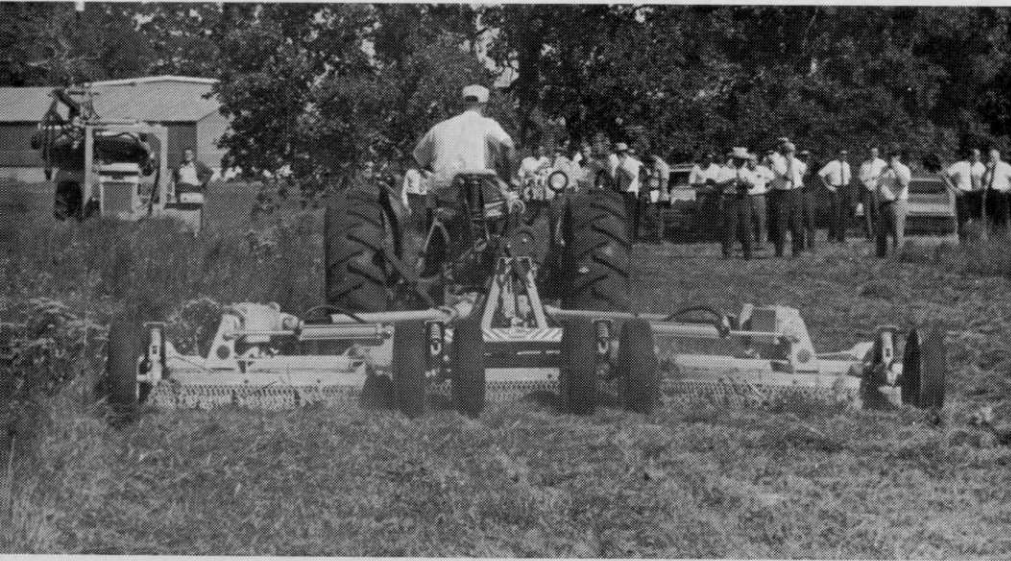
Use of mulches, selective herbicides, or just plain concrete around such obstructions as utility poles, trees, mailboxes, traffic signs, fences, etc., can reduce mowing costs significantly.

Using the right chemical is critical, warned several speakers, or else you can produce a bigger problem. For example, a water-soluble soil sterilant used on a highway right-of-way could bring on roadbed erosion.

"Weed control has become a sci-



The talking point for this 1,000-gal. spray tank is its baffle construction. The two halves are molded separately then sealed together in tongue-and-groove fashion, adding strength, say Red Ewald, Inc., representatives. The spray rig comes with 100 feet of hose. The company is headquartered at Karnes City, Tex.



Grass and some weeds up to three feet high enabled mower companies to demonstrate the maximum effectiveness of their machines. The top picture shows a Servis rotary mower; the bottom, a Caldwell flail mower.

ence of prescription," pointed out Turney Hernandez of duPont. You must define your objective, he explained, in terms of whether you want bare ground, abatement, selective weeding, chemical trimming, or weedy plant control.

If the work is to be done through contract, it is important, said one applicator, that bids are asked for and evaluated on similar specifications.

Concerning vegetation management through mowing, as with chemicals, there is a "best-suited" and "most economical" machine for a particular need, said Cecil Willis of the Houston Parks Department.

"I personally prefer the flail-type mower because of the safety factor," he said. "But regardless of type of mower used or money and equipment available, if you cannot main-

tain what you have created, you have defeated your goal in vegetation management.

"Let quality control and ease of maintenance be your guides."

Safety will become a stronger factor in mower selection in Texas when a liability law goes into effect at the beginning of the year. The law makes the state vulnerable to suit over personal injury or property damage caused by mowers.

Conference sessions closed with a panel of industry representatives reporting on the latest chemicals and equipment in use for vegetation control. Some of these products were demonstrated the final afternoon of the three-day conference.

Dr. Wayne G. McCully of Texas A & M was conference chairman. His program committee consisted of Robert Haas, Garlyn O. Hoffman,

B. J. Ragsdale, E. D. Robison, Allen F. Wiese, and Lambert Wilkes.

The new advisory committee is: Gene Bockholt of Houston, Otha Birkner of Bay City, Tom Mobley of Kilgore, Dave Yazell of Albuquerque, N. M., Henry Steiner of McAllen, J. D. Maples of Houston, R. L. Robinson of Ft. Worth, J. C. Bouvy of Tyler, Clifford E. Cross of McAllen, James D. Grant of San Benito, Huett C. Cloud of Houston, W. R. Churchwell of Plainview and Johnny Pustka of Rosenberg.

Hercules Says Toxaphene Is Not a 'Hard' Pesticide

Toxaphene is a different kind of chlorinated hydrocarbon pesticide, claims its manufacturer, Hercules, Inc., Wilmington, Del.

Recent publicity about the so-called "hard" pesticides has resulted in a rash of inquiries about toxaphene, said a company spokesman. To clear the air, a news release has been distributed to explain how toxaphene is different.

To begin with, toxaphene is made from the gum of southern pine trees; other chlorinated hydrocarbons are petroleum-based, the company stated.

Toxaphene is not persistent, listing 10th in residue occurrence of the ten most widely used pesticides, according to Food and Drug Administration surveys.

The Hercules release says that USDA tests have shown that toxaphene actually de-magnifies in the food chain. And since it does not magnify biologically, it cannot become toxic through increasing levels of magnification, the statement concludes.

"Most chlorinated hydrocarbons are, to varying degrees, toxic chronically," the company release stated, "however toxaphene is not. It produces, for example, no toxic effects in chronic feeding studies at 25 ppm, compared with 1 ppm for DDT and 0.5 ppm for dieldrin.

"In fact, when toxaphene-organo-phosphate combinations have been used to replace organo-phosphates alone, acute toxicity hazards to the applicator and wildlife have been reduced."

A half-dozen institutions were listed as having done research on toxaphene. The product has been in commercial use for more than 20 years, the company spokesman said.