

NE Weed Scientists Told to

Broadcast Good Side

"One goal for the 70s must be to communicate the importance, safety and potential of herbicides."

—Outgoing President
Dr. Homer LeBaron



"We need a pulling together of all weed scientists to present a unified approach concerning pesticides."

—Incoming President
Dr. John Ahrens

RESPONSIBLE weed scientists can no longer afford to remain silent when some of the "popular ecologists and environmental opportunists" issue "exaggerated or politically motivated claims" about pesticides.

Homer LeBaron of Geigy Agricultural Chemicals Corporation issued this warning and challenge as he opened the 24th annual meeting of the Northeastern Weed Control Conference, Jan. 7-9 in New York City.

Considering how the decisions were made banning the uses of DDT and cyclamates, "politics and emotion, rather than scientific evaluation of data, could control the destiny of a pesticide," he told some 600 weed scientists.

In the more recent attack on 2,4,5-T, he continued, it is impossible to tell which attackers are concerned with environmental quality and which are against the Vietnam war.

Elimination of environmental pollution is one of the announced major commitments of the government for the next decade, LeBaron reminded.

"Most of us in weed science have been motivated by the potential in this field to benefit mankind, to alleviate hunger, to improve the environment. One of our great challenges for the 1970s will be to use herbicides more in the prevention or reduction of environmental pollution, in environmental beautification,

and in conservation of crops, land, labor, and natural resources.

"We are entitled to be proud of our accomplishments."

Recent developments indicate, however, that a credibility gap has opened and that our activities are grossly misunderstood by the general public, LeBaron said.

We have always been aware of the hazards from the misuse of chemicals, he continued. "We have always been in favor of proper balance of the three Rs, 'Research, Reason and Regulations.'

"It is clear that we will be more preoccupied in the next decade with four Ps: Pesticides, Pollution, Politics and Public Relations.

"One of our major goals for the 70s must be to more effectively communicate the importance, safety, and potential of herbicides to mankind."

Delaney Clause Ought to Go

LeBaron, the outgoing president of the northeastern group, called for an end of the "Delaney clause" in government pesticide regulations, which, he said, had become as impossible to live with as the "no residue" tolerance clause just recently changed.

The Delaney clause states that no food additive shall be deemed safe if it is found to induce cancer when ingested by man or animal.

A more workable safeguard is needed, said LeBaron, because "so many relatively safe compounds can



of Herbicide Story



Above and below, a few of the more than 600 persons attending the Northeastern Weed Science Society meeting.

cause cancer, genetic or other effects, when injected at very high rates in completely artificial conditions of exposure."

Herbicide 'Breakthrough'

Among the 90 research papers delivered before the conference, one from Cornell University is especially timely in the wake of the emotional attachment of pesticides to pollution.

Findings of researchers Robert D. Sweet and Mark R. Lynch are hailed as a breakthrough in harnessing what scientists call "synergistic response" from chemical combinations.

Sweet and Lynch have found that the effect of certain combinations of weed killers becomes 10 to 20 times greater than when such chemicals are applied individually, yet the required dosage in the mixture is many times smaller.

Sweet's formula consists of four ounces of atrazine and one or two ounces of another chemical in a gallon of fruit spray oil. The combination worked on a wide range of weed pests in corn.

Chemicals successfully tested in such combinations included Lasso, diphenamid, nitralin, 2,4-D, trifluralin and some new herbicides yet to be approved for commercial use.

"Results are almost unbelievably good," Sweet said. "What's really sensational is that these combinations greatly reduce the amount of chemicals required and yet they

wield far greater weed-killing power.

"The finding is a nice answer to the danger of soil pollution and chemical residues resulting from heavy uses of herbicides."

Sweet and Lynch are credited as the first researchers to succeed in triggering "synergistic response."

Name Changed

Conference delegates approved a name change for their organization. It's now called the Northeastern Weed Science Society.

Outgoing president LeBaron said the board felt the new name was in keeping with objectives but was more appropriate in signifying what the organization does.

Charles W. Middleton of Asplundh Tree Expert Company, membership chairman, reported that fees had exceeded the \$3,000-mark for the first time.

New Officers

Delegates elected Dr. John F. Ahrens of the Connecticut Agricultural Experiment Station, Windsor, as president. Dr. George Bayer of Agway, Inc., Syracuse, N. Y., was elected vice-president; Dr. Arthur Bing, Cornell Ornamentals Research Laboratory, Farmingdale, N. Y., secretary-treasurer; and Dr. H. P. Wilson, Virginia Truck Experiment State, Painter, as secretary-treasurer-elect.

Dr. Ahrens pledged continued em-

phasis on publication of weed science information, and renewed emphasis on public relations. He called for a "pulling together" of all weed scientists to present a unified approach to deal with the pesticide controversy." He urged membership in the Weed Science Society of America.

Dr. Ahrens announced these committee chairmen for the coming year:



Dr. T. R. Flanagan, University of Vermont; Research Coordinating, Dr. Joseph Cialone, Rutgers University; Sustaining Membership, Dr. R. Hansen, Hercules, Inc., Wilmington, Del. Public Relations, Dr. R. W. Feeny, American Cyanamid Co., Princeton, N. J.; Awards, Dr. Homer LeBaron, Geigy Agricultural Chemicals Corporation, Ardsley, N. Y.; Education, Dr. W. A. Genter, Agricultural Research Service, USDA, Beltsville, Md.; Weed Science Society of America representative, Dr. C. T. Dickerson, Jr., Monsanto, Allentown, Pa.

Dr. William B. Duke of Cornell University received the award for the outstanding paper of the conference. It covered his research on the control of quackgrass in established alfalfa.

Capsule Conclusions

A heavy portion of the papers presented were directed toward the agricultural field, but about two dozen were related to the non-crop vegetation industry.

Following are some capsule conclusions:

—Under mulch, dichlobenil at 2 lbs./acre showed the most promise for perennial weed control in highway plantings of trees and shrubs. Dr. Arthur Bing, Cornell University.

—A three-year study showed that total vegetation control results for one season were good to excellent with these combinations: atrazine-amitrole-fenac; bromacil-amitrole-fenac; borate-chlorate. Single herbicide treatments giving good kill included Nia 11092, bromacil and AP

920. Rate was critical in determining the degree of control, specie selectivity and percent bare ground. Doubling the base rate greatly increased control during the first season, but affected residual control to a far lesser extent. Dr. George Bayer, Agway, Inc., Syracuse, N. Y.

Utility Rights-of-Way

—Use of picloram plus 2,4,5-T applied as a basal or dormant stem spray offers a method of adequately controlling most brush species found on utility rights-of-way. Particularly noteworthy is the virtually complete control obtained with 1 lb. picloram plus 4 lbs. of 2,4,5-T aehg on the principal species which tend to resprout after treatment (aspen, locust, maple, oak, sassafras, sumac). C. S. Williams, B. C. Byrd, W. G. Wright, Dow Chemical Company, Midland, Mich.

—Five years of field data indicate the new herbicidal compound, m-(3,3-dimethylureido) phenyl *tert*-butylcarbamate (NIA 11092, is (1) herbicidally active; (2) non-selective in crops and (3) persistent in its control. NIA is worthy of development and use as a soil sterilant. Edward E. Hagood, Niagara Chemical Division, FMC Corporation, Middleport, N. Y.

—Paraquat was found to be most successful in controlling early weed competition to establishing crown vetch, while damaging crown vetch the least of chemicals tested. D. L. Linscott, Cornell University.

—Use of aerial photography with black and white and color infrared



Further individual discussion of papers presented was frequent. John Reingold, left, listens to additional comments from Mike Watson of Potomac Edison Company concerning the use of a knapsack mistblower for chemical brush control along utility rights-of-way.

film is valuable in taking the guesswork out of evaluating the effectiveness of chemical spraying along utility rights-of-way. J. Baribeau and J. Rivest, Hydro-Quebec, Montreal, Canada.

—Bromacil, NIA 11092, atrazine, prometone and Geigy 14254 were found to be more effective on heavier soil whereas diuron and Daxtron were more effective on a lighter soil. On a medium loam soil, mixtures of herbicides generally had control ratings between the ratings of the two component herbicides used singly. Exceptions were mixtures containing picloram which tended to have lower control ratings than either of the two components. The value of some mixtures of herbicides may be their effectiveness in the control of a broader spectrum of weeds and grasses over a wider range of soil types and growing conditions. W. R. Effer, Ontario Hydro Research Division, Toronto, Canada.

Aquatic Weed Control

—Submersed application of diquat dibromide at 4 lbs. cation per acre was found to be effective in controlling *Potamogeton robbinsii* in Greenwood Lake in New Jersey. The submersed application technique appeared useful in applying liquid herbicides in deep water. The lake depth was a maximum of 35 feet and averaged 7 feet. Submersed nozzles released the treatment at an average of 18 to 24 inches from the lake bottom. C. E. Gilbert and J. M. Cortell, Allied Biological Control Corp., Chester, N. J.

—Safe and successful algae control and maintenance program involves a total approach, considering these factors: Water temperature and lake depths; amounts of dissolved oxygen; nutrient levels; light penetration, true and apparent color;



Leadership for the coming year includes, from the left: Dr. Homer LeBaron of Geigy Agricultural Chemicals Corp., past president and chairman of the awards committee; Dr. C. T. Dickerson, Jr., of Monsanto Co., representative to the Weed Science Society of America; Dr. George H. Bayer of Agway, Inc., vice-president; Dr. John F. Ahrens of Connecticut Agricultural Experiment Station, president; Dr. R. Hansen of Hercules, Inc., chairman of the sustaining membership committee; Dr. R. W. Feeny of American Cyanamid Co., chairman of public relations; Dr. Joseph Cialone of Rutgers University, chairman of the research coordinating committee; and Dr. Arthur Bing of Cornell Ornamentals Research Laboratory, secretary-treasurer. Not present for the picture were Dr. H. P. Wilson of Virginia Truck Experiment Station, secretary-treasurer elect; Dr. T. R. Flanagan of the University of Vermont, program chairman; and Dr. W. A. Genter of USDA's Agricultural Research Service, education chairman.

