What's Best in Northwest Reported at Weed Meeting

WE DON'T KNOW as much about injury to humans as is desired for making policy decisions on pesticide use, a presidential representative told Washington state weed control experts during their annual meeting at Yakima, Nov. 4-6.

But a weed scientist suggested that the federal government was not improving a complicated situation when it used irrelevant data as a basis for granting or denying registrations.

Edward J. Burger, Jr., M.D., of the President's Office of Science and Technology, said, "We live with incomplete information . . . on the safety of pesticides." He told some 300 representatives of industry, government and the academic world at the Washington State Weed Conference that research into the possible hazards of pesticides will need to be on a continuing basis, and will need to be increased.

But Dr. Dean Swan, Washington State University agronomist and weed specialist, noted: "I would hope they would confine their recommendations to what is based on laboratory results that are relevant." The weed specialist charged that in some cases chemicals had been injected into laboratory test animals and results used as a basis for government recommendations. The results of oral and dermal contact with pesticides may well be investigated "but let's not use injections in laboratory tests because that doesn't occur in the commercial use of pesticides."

Weed control is considered in the original landscaping design by the Washington State Highway Department, reported horticulturist Richard D. Austin. Weed control during the construction period is done under contract by licensed applicators, then the state highway maintenance crews take over.

Visibility on the highway takes precedence over aesthetics. Shoulders are laid bare with sterilants—diuron, monuron and simazine—even if this causes browning of shrubbery farther back. After sterilization, shoulders may be covered with asphalt.

Though chemicals are most economical in many instances, there still is considerable use of other control. Hand weeding to avoid unsightly brownout is still relied on in the vicinity of Seattle (35 inches precipitation) where hard core unemployed and summer college students are hired. Hand weeding is still used also around the state's largest city in the eastern section, near the Idaho border, with perhaps half the annual precipitation of Seattle.

Casoron has been the most satisfactory material for controlling horsetail invasions of heath and heather.

Chemical control of all Scotch broom has not been economically feasible, so the state has been experimenting with planting douglas-fir and hemlock, which in 10-15 years may provide a sufficient canopy to shade out the broom.

Mowing is the basic control method in turf, said Austin, plus the use of fertilizer to encourage dense growth of the grass after initial use of chemical weed killers.

A large scale problem in Western Washington is the seedling trees starting between stands of native timber and the highway shoulder. These very soon cut down visibility from the highway, and the department is experimenting to see if grass or shrubbery will be more effective at discouraging the growth of the seedling trees.

Highlights on turfgrass weed control by Washington State University agronomist Roy L. Goss included:

Annual maintenance costs of the Washington state turfgrass industry are about $72 million.

1967 figures show that weed control cost golf courses $2.14/acre, schools $3.25/acre, and cemeteries $5.75/acre, while homeowners using weed control on 96,000 acres of turf spent about $13.10/acre.

Goss suggests that results may not have been good with homeowners, and says that most members of the general public do not know a few simple herbicides for a broad spectrum of weeds.

After reviewing current WSU recommendations for chemical control of broadleaf and grassy weeds in turf, Goss said:

"Phenoxy herbicides are only partially effective (for controlling creeping Veronica) and timing and weather conditions are critical. DCPA (Dacthal) has proved most effective in research tests, although its action is slower than what we would like. Search is continuing for even more effective materials."

On the use of arsenic to control *Poa annua,* he said "up to 18 lbs. of calcium arsenate per 1,000 sq. ft. applied the first year have been recommended in the Midwest, with additional follow-up annual applications to maintain toxic conditions. "This may be a good practice, so long as we don't raise the toxicity level so high that we inhibit all germination should we desire to overseed."

Pre-emergence herbicides such as Bensulide, DCPA and Benefin will definitely kill germinating seedlings of *Poa annua,* but the chemicals do not kill the mature plants. "Although surface toxicity may be present disturbance of the soil surface will permit germination and development of new plants . . . There velopment of new plants.

In general, it is good management that pays: "Good nutritional programs are good weed control programs. Research plots at Puyallup (in western Washington state) with optimal nutrition (6 lb. N, 2 lb. P_2O_5, and 4 lb. K_2O) are practically weed free after ten years of maintenance without weed control programs. Check plots, on the other hand, are almost solid weeds.