

Weed Losses in Canadian Prairie Provinces Total \$255 Million

Chemicals and mechanized agriculture are bringing about a revolution in weed control

Aerial insecticide application for forests poses many problems

TORONTO.—Losses due to weeds in Canada's prairie provinces in 1953 amounted to \$255 million, equivalent to 20% of the farmer's returns from field crops. In Ontario the loss was \$40 million. The loss was broken down into several classifications by H. E. Wood, Manitoba Department of Agriculture, Winnipeg, at the first annual meeting and conference of the Canadian Agricultural Chemicals Association here Feb. 19.

Competition to the growing crop by weeds is reflected in wheat yield reductions of 7.5 bushels and flax reductions of 6.8 bushels per acre. Dockage losses were quite important. Added tillage, loss of moisture and plant foods, and the cost of applying chemicals are other factors. The wide use of chemicals and farm mechanization have brought about a revolution in weed control in recent years, said Mr. Wood. In the prairie provinces the provincial and municipal governments cooperate in programs to eradicate certain weeds by using soil sterilants. Mr. Wood looks forward to the "tailoring" of chemicals to meet specific weed species. These should be especially valuable against dormant seeds, or those just starting to germinate.

Seed Treatment. The simple operation of seed treatment is one of the most important practices in the preparation of seed grain. Coverage against both seed-borne, disease-producing microorganisms and soil-borne microorganisms which might cause seed decay is possible, according to A. W. A. Henry, University of Alberta, Edmonton.

In Canada organic mercurials are the most commonly used treating chemicals for small grains. Popularity of other chemicals is increasing. Combi-

nation fungicide and insecticide treatments are already useful, and improved seed pesticide combinations will probably be forthcoming.

Forest Insects. The fundamental concept of the aerial spraying of forests with insecticides is that it should be considered an emergency measure and not a "cure." During the past few years several million acres have been sprayed in Oregon, New Brunswick, New England, and elsewhere. Measurement of the spray effectiveness in forests involves analyzing droplets so small that it is difficult to use ordinary analytical methods. This is a major problem, said J. J. Fettes, Forest Biology Division. The biological assessment of formula-

tions sprayed in vast remote areas is another. Ascertaining correct meteorological conditions is also important. There should also be some more studies made on the long term ecological effects of forest spraying.

DDT has been used almost exclusively in these operations. Any insecticide used must be nonvolatile, have a residual effect, must be oil soluble, highly toxic to insects in minute amounts, and relatively nontoxic to mammals and fish. Research at present time is being carried out on the use of synergists and wetting agents.

Responsibility. A great responsibility both legally and morally rests on the manufacturer of agricultural chemicals, according to Paul Mayfield, president of the National Agricultural Chemicals Association. He told the Canadian group that this responsibility was not only the proper production and selling of a good pesticide but the education of the dealer, the user, government agricultural workers and the various technical groups interested in pest control. While each individual company uses these facilities to promote its individual products and interest, an over-all policy for the industry is essential, he said.

A. H. Carter, left, new president, and J. H. D. Ross, past president of the Canadian Agricultural Chemicals Association. Carter is general manager of Green Cross Products, Sherwin-Williams of Canada, and Ross is with Canadian Industries, Ltd.

