CONTROLLING PERENNIAL WEEDS WITH CHLORATES

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Considerable attention has been directed during recent years toward the control of perennial weeds through the use of chemical herbicides. The herbicide sought is one which is non-poisonous to animals, of greatest ease of application, and most effective in the control of the various species at minimum expense, without permanent injury to the soil.

Latshaw and Zahnley (1) reviewed the efforts directed toward the control of field bindweed (Convolvulus arvensis) by means of various chemicals. Sodium chlorate applied as a spray following the full bloom period gave most promising results. In a subsequent report, they (2) suggested the use of magnesium and calcium chlorates as substitutes for sodium chlorate since these do not present the fire hazard encountered through the use of the latter.

Hansen (3) reported that heavy applications of sodium chlorate produced satisfactory results when sprinkled in water solution over mowed areas of quack grass. A plat which received the chemical at the rate of 13.6 pounds per square rod showed some recovery the following year. Two plats which received 27.2 pounds and 54.4 pounds per square rod, respectively, were completely free from the weed. In a subsequent publication, he (4) reported sodium chlorate effective on perennial weeds in Indiana when three successive applications of \( \frac{1}{2} \) pounds each per square rod were made.

Sodium chlorate as an herbicide first received attention in Idaho during the season of 1927. Numerous applications were made to determine its value for weed control purposes. The results of these preliminary applications were gratifying, and in consequence, more elaborate investigations were conducted during 1928. Cooperating with county agents, experimental plats were located in different sections of the state in order to cover the various conditions under which the more serious weed pests are found. Treatments were made at intervals during the season to determine the stage of growth at which the plant was more susceptible to the action of the herbicide.

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2 Agronomist, Extension Agronomist, and Assistant Extension Agronomist, respectively.

3 Reference by number is to "Literature Cited," p. 433.