EXPERIENCES IN USING ALLYL ALCOHOL FOR WEED CONTROL

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(Editor's note; The following paragraphs are from a letter sent us by Mr. Steavenson.)

We treated a few acres both seasons using 15 gallons of alcohol and 5, 000 gallons water per acre. The alcohol is diluted with 4 parts of water and metered into the suction side of our portable sprinkler-type irrigation system.

A decrease in weed population was secured both seasons, although most effective results were had this spring. I attribute greater effectiveness in the spring to the fact that our beds were worked repeatedly during the early winter and spring until May when the alcohol was applied. Thus we believe that many of the more resistant seeds had germinated and were destroyed by cultivation prior to the alcohol application.

The grass-type weeds were more effectively controlled than certain broadleaf weeds. For example, population of smartweed and sedge was about as great in the control plots as in the treated area and these two weeds have been particularly troublesome in the fall-treated area. Smartweed, as you know, has a hard, horny seed coat, apparently resistant to alcohol. Whether the heavy population of sedge came from rootstalks or whether the seed of the species is resistant I do not know.

I would say that allyl alcohol as we applied it is by no means as effective as the standard methyl bromide treatment, but of course the former is much more economical.

The danger in using allyl alcohol cannot be over-emphasized. In spite of the fact that our application was almost automatic and the operators were protected with gas masks and rubber gloves, they nevertheless became ill from time to time from the alcohol fumes. The fumes are extremely irritating to the eyes, nasal passages, and throat. This difficulty is not a serious problem in small plot applications but in large scale applications it seems almost impossible to avoid some exposure to the gas.

Because of the toxicity of this substance, I believe the Shell Company, manufacturers of allyl alcohol, have withdrawn the product from the market for soil-treating purposes, although it may be available through other sources. Incidentally, I note the excellent article on the use of allyl alcohol in the June 1 52 issue of Journal of Forestry, and will say that the observations in the article seem to be borne out very closely by our experience.