NOTE

CONTROL OF APHIDS ON SUGAR BEETS UNDER GREENHOUSE CONDITIONS

THE control measure here described was adopted after numerous trials of several others, such as weekly sprayings and fumigations with various nicotine sprays, nicotine powders, cyanide gas, and trials of chloropicrin.

The greenhouse was relatively new, in good repair, and tight. It contained 18,750 cubic feet of space. The temperature in the house ranged from 65° to 75° F and the relative humidity from 55 to 65%.

The following fumigation program proved to be satisfactory and completely eliminated aphids from sugar beets in the greenhouse without injury to the plants: Weekly fumigations were made using 180 cc of a 40% nicotine compound, or approximately 1 cc per 100 cubic feet of greenhouse space. Sixty cc of the liquid were placed in each of three shallow containers on 110-volt, 600-watt electric hot plates distributed along the center walk throughout the length of the greenhouse. The hot plates were connected to a circuit operated by an electric time clock which was set to turn on the current in the evening after sundown and heat was applied for 1 hour and 15 minutes. This was sufficient heat to vaporize all of the liquid completely. The house was tightly closed for the night and thoroughly aired out the following morning.

This procedure proved to be convenient and effective. Some 40% nicotine compounds leave considerable residue in the containers, whereas others evaporate almost completely; but all seem equally effective. Other types of heating devices may be used satisfactorily.—F. F. LYNES AND R. J. LITTLE, Beet Seed Breeding Department, Holly Sugar Corporation, Sheridan, Wyoming.