



CONCERNING SWEET POTATO WEEVIL CONTROL—(Note.) Control of the sweet potato weevil, *Cylas formicarius elegantulus* (Summers), is a problem throughout the sweet potato growing areas of the Americas. It is at times so serious that it destroys crops, making life more difficult for those who are so dependent on sweet potatoes for food. Migration of the hundreds of thousands of Cubans to Florida (since Castro took over Cuba) brought about greatly increased production of sweet potatoes and of sweet potato weevils. Fortunately dieldrin was approved for use in control, the use of which gave measures of control.

The many hundreds of acres set with sweet potato plants helped increase the weevil abundances. Year around production further aided weevil abundance. *Ipomoea* sp., such as morning glory, are host plants which provide ample infestation sources; hence, sweet potato weevil populations are very high in Florida.

An effective, facile control method, without residue and environmental problems, is greatly needed for the protection of sweet potatoes. Such a method appeared available through the use of soil insecticides, those materials that might be applied to the soil surface and control the soil inhabiting weevils.

A field experiment was started using granular materials often used to control other soil inhabiting insects and at rates usually employed. Weevil punctures of roots were initially counted to measure treatment results, but later roots were put into containers and number of weevils emerging per unit weight of the roots was determined. Insignificant and erratic results were obtained in test after test. Other materials, increased amounts of materials, and increased frequency of application were tried. In one test endosulfan, for example, was most effective, in another parathion was the most effective. As much as 1.47 kg/ha per month were tried, which with 8 applications per season added to 11.76 kg/ha. After years of experimentation with the granular materials and generally unsatisfactory results it was concluded that they were not the materials to use. It is believed that the high alkalinity of the oolitic limestone soils having pH of 7.8 to 8.3 were degrading the insecticidal materials. Such degradations must have occurred with sufficient rapidity to have permitted weevil infestations to develop in the vines and roots.

Two final tests were conducted in which regularly used rates of materials were applied weekly with water. The results, although not tabulated here, suggested that experiments along this line were needed and might be effective. Residues may be lower from more frequent and lower rates of application, thus tending to reduce the environmental contamination.—D. O. Wolfenbarger, and S. D. Walker, Agricultural Research and Education Center, Homestead, Fla. 33030.