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THE SWEET POTATO ROOT WEEVIL IN FLORIDA*

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The sweet potato root weevil (*Cylas formicarius*) is a little blue and brown beetle about a quarter of an inch in length and closely resembling an ant. The abdomen is of a bright shiny blue color, the thorax and legs are reddish brown, and the head and snout are black.

This insect infests sweet potatoes and similar plants, such as the morning glory. It seems to be particularly fond of the wild morning glory plants which grow along the Florida coast and are commonly known as "sea beans." The eggs are laid on the stems or crowns of the plants. White grubs shortly emerge from these and bore up into the stems or down into the roots or potatoes. After a certain length of time the grubs assume the pupal stage (still white or slightly tinged with yellow) and subsequently become adult beetles with their striking colors.

Since the entire life cycle is passed within the host, and the adult emerges only after complete maturity, it can be readily seen that there is no method of applying remedies in the field that will reach the insect; and that, when it is once well established, the crop is at its mercy. As this weevil has no mercy, and also has a tendency to raise a large family, it often happens that fifty per cent or more of the potatoes are ruined by the time the farmer is ready to dig them.

However, being an industrious individual, Mr. Weevil is not content with having accomplished this much. The farmer may carefully sort out what appear to be the sound potatoes for his winter's store, but all in vain. It is practically impossible to detect his presence in every potato, and a number that are infested are almost sure to be stored with the sound ones. When

*A revision of a paper read before the May meeting of the Society.

he finds himself surrounded with an unlimited supply of food that has escaped his ravages in the field this prolific insect immediately sets to work to finish the job. When the good housewife opens the bank or storehouse she finds that Mr. Weevil and his large family have been enjoying the fine pile of provisions so conveniently stacked up for him, and she is exceedingly fortunate if she can find any of the vegetables that are fit for consumption. Should she happen to place an infested potato in the pot or oven by mistake, the one who attempts to eat it will immediately decide that he doesn't want any dinner anyway, and will probably leave the table in a frame of mind similar to the taste in his mouth.

Unfortunately this insect has already been found in eight counties of Florida—Baker, Brevard, St. Lucie, Palm Beach, Broward, Dade, Monroe, and Sanibel and Captiva Islands in Lee. Years ago it was reported in Manatee County, but recent investigations have failed to find any traces of it there. It also infests other Gulf States and the West Indies. In this country it seems to confine its major activities to a belt of about 70 miles from salt water, which would include all of Florida, but outbreaks may occur considerably beyond this belt. Infested shipments of sweet potatoes have been intercepted at Key West and Tampa, coming from Cuba.

In sections where the sweet potato root weevil has become well established, particularly in Florida, it is practically impossible to produce sweet potatoes commercially; and one may consider himself fortunate if he can produce enough for table use.

When we consider the fact that everything in the nature of food is now at a premium, and that the sweet potato is one of the staple food products of this state (particularly for the man of moderate means) we can readily understand how very serious the general dissemination of this pest may become. It is of extreme importance that the further distribution of this insect be stopped NOW, and that some method of exterminating it in the sections already infested be adopted.

Fortunately, the insect does not travel very far of its own volition. It can, however, be sent any distance in infested potatoes, draws or slips. Infested areas should be placed under a strict quarantine; no vines or slips should be moved from these areas under any circumstances; and potatoes which are stored or sold should be fumigated with carbon bisulphide. Care should be taken to store potatoes at some distance from any

infested fields, and no potatoes, roots or vines should be left in the fields but should be cleaned up and destroyed. If the growing of sweet potatoes could be entirely abandoned within infested areas for a year or two it is probable that the weevil could be starved out unless morning glory plants were present.

Extreme care should be taken by everyone who contemplates selling or purchasing sweet potato vines for planting. The purchasers should find out from the state authorities (The State Plant Board, Gainesville, Fla.) if the sections from which they expect to make purchases are known to be infested, and should insist that plants be accompanied by certificates of the State Plant Board. Sellers should have their premises inspected by competent inspectors before offering plants for sale. This is a patriotic duty on their part, since they are not only likely to ruin the crops of their customers, but may be the means of materially reducing the food supply of the state and nation in this time of great need.

Recent rulings of the State Plant Board have prohibited the importation from other states and countries of sweet potatoes or vines, and have established quarantines on certain areas within the state known to be infested. Everyone dealing in sweet potatoes should inform themselves of these rulings before making shipments.

Whoever discovers an insect that resembles the description given should immediately send it to the proper authorities *after killing it* in alcohol, gasoline, kerosene, or other similar substance. Complete data as to when and where found should accompany the specimens.

A survey of the State has already been inaugurated by the State authorities, and the Federal government has already decided to take active steps looking towards its control or eradication.

HUMBLE-BEE

Burly, dosing humble-bee,
Where thou art is clime for me.
Let them sail for Porto Rique
Far-off heats through seas to seek
I will follow thee alone,
Thou animated torrid-zone!

(Emerson—*The Humble-Bee.*)