

STERILIZING THE SOIL.

Many growers of vegetables under glass and florists also have at one time or another been troubled with nematodes or eelworms in their greenhouses. These cause gull-like masses or swelling on the roots of the plants, and the root system is so injured by them that the crop of vegetables or flowers is almost or quite a failure. They are particularly injurious to the tomato. Sometimes by changing the soil frequently they may be got rid of but they are a constant source of worry to those who have had experience with them unless the soil is sterilized.



One of the simplest methods of sterilizing is the "Inverted Pan" method. Galvanized iron pans are made eight inches in depth and whatever size is most convenient to use, the length and width depending on the width of the beds or benches. These used at the Central Experimental Farm are ten feet long by three feet ten inches wide. They are used crosswise in wide beds and lengthwise in the narrow ones. In order to strengthen them, they are braced with iron straps inside and have two handles at each end so that they can be easily lifted. The pan is turned upside down over the bed and pressed down a little into the soil, and steam is introduced through a half-inch pipe, but in order that the steam may spread rapidly through the soil a half-inch pipe is fastened to the bottom of the pan or top when it is inverted. In this pipe are three half-inch openings about 12 inches apart. In the Farm Greenhouses two of these pans are operated at once by connecting them with half-inch pipe, the couplings being three-quarter inch. In large greenhouses steam could be obtained from the greenhouse boilers, but in this case the greenhouses are heated with hot water, so that a steam engine outside furnishes the steam at a pressure of from one hundred to one hundred and twenty pounds. It is connected with the pans by means of steam hose. The soil is subjected to this steam for one hour. To show how thoroughly the soil is penetrated by the steam, it may be said that a potato is cooked within twenty minutes eight inches deep in the soil. After one hour the pans are moved along to a part of the bed not yet sterilized.