

THE TOMATO.

CULTIVATION AND DISEASE-CONTROL EXPERIMENTS.

T. W. KIRK, F.L.S.

THE outbreak of disease amongst tomatoes in the Christchurch district had become so serious and had caused such heavy monetary losses that growers were almost in despair. They therefore appealed to the Department for assistance. The Government arranged to conduct co-operative experiments in two glasshouses in the district in order to ascertain the various causes of the outbreak, but the owners of the houses asked for such high terms that the Department could not accept them. The Canterbury Fruitgrowers' Association then very kindly agreed to co-operate and endeavour to secure houses on more favourable conditions. This they did, with the result that a house was obtained at Redcliffs from Mr. Maffey, and one at Spreydon from Mr. Odering.

It was felt that some of the growers were proceeding upon wrong lines, inasmuch as they set out their plants in very heavily manured soil, and kept up what was regarded as an excessive degree of humidity in the houses. These conditions were specially encouraging to fungus disease. It was therefore decided to take Mr. Maffey's house and treat it as a whole on lines approved by the officers of this Department, whilst Mr. Odering's should be divided into a number of plots and a series of experiments be conducted therein.

The conditions under which the houses were taken were as follows: The grower to place his house at the disposal of the Department for experimental purposes, he undertaking to perform the work required by the Department in conducting the experiments. The Government to pay for the plants and fertilizers, soil-fumigants, &c., and for the use of the house. In each case the owner to have the crop.

The following instructions in regard to the treatment of the two houses above referred to were given to Mr. Reid, Orchard Instructor, the local officer in charge of the experiments:—

Please arrange to have both houses sprayed as soon as possible with a 2½-per-cent. solution of formalin for disinfection purposes.

As arranged with you verbally, Mr. Maffey's house will receive what we consider to be the best possible treatment in manuring, spraying, watering, cultivation, &c.

Mr. Odering's house will be used for experiments, for which purpose it will be necessary to subdivide into eight plots: Plot 1 to be treated with Apterite according to the directions on the package; 2 to be treated with Vaporite according to directions on