

-ABSTRACT-

The disease "Damping-off" and soil sterilization in general, with sterilization by steam, formalin, Shell D-D, chloropicrin and Cheshunt Compound in particular, are briefly reviewed.

A series of experiments are described in which the above five sterilants are tested and compared for their effects on the "damping-off" and growth of tobacco seedlings sown in seed boxes at different intervals after treatment. Tomato seedlings were used in one experiment with formalin only.

It was found that 100% control of damping-off was obtained until well beyond the pricking out stage with:-

- (a) Steam sterilization.
- (b) 80 mls. Formalin per cubic foot of soil, watered onto the boxed soil in solution.
- (c) 2% solution of Formalin watered onto the boxed soil to saturation.
- (d) 4 mls. Chloropicrin per cubic foot of soil, fumigated for 48 hours in airtight containers.

Significant reduction of the disease was obtained with 40 mls. & 60 mls. Formalin and 4 mls. & 6 mls. of D-D per cubic foot soil.

2 mls. D-D per cubic foot of soil gave no significant reduction of the disease.

Sowing was safe six to eight days after all treatments.

Growth of seedlings was significantly improved by sterilization with Formalin, closely followed by Steam.

These results are fully discussed and certain practical recommendations made.