

THE EXPERIMENTS.

The experiments were for the control of eelworm and fungus diseases. Tests regarding humidity and fertilization, and tests with selected plants for resistance to disease, were also carried out. Tomatoes had been grown in the house, in the same soil, for four seasons, and the soil was badly infested with eelworm, as a glance at photograph No. 9 will show.

OPERATIONS.

Operations were commenced on the 29th July, 1912. Section No. 1 was treated with 56 lb. of apterite. Section No. 2 was treated with 46 lb. of vaporite. These soil-fumigants were lightly dug in. Section No. 3 received a dressing of 2 oz. of kainit per square yard; section No. 4 received a dressing of 2 oz. of sulph. of iron per square yard; section No. 5 received a dressing of 1 oz. of kainit and 1 oz. sulph. of iron per square yard. All these dressings were lightly worked into the soil. Sections 6, 7, and 8 received no treatment, being reserved for a test of selected plants, and simply dug over.

On the 2nd September, 1912, the house was disinfected with 2½-per-cent. solution of formalin, applied as described in the experiments carried out in Mr. Maffey's house (see *Journal of Agriculture*, 1st March, 1913.)

Sections 1 and 2 were planted on the 9th September, 1912, there being a distance of 2½ ft. between the rows and 1 ft. between the plants. On the 16th September, 1912, sections 3 and 4 were planted, and on the 23rd September, 1912, sections 5, 6, 7, and 8. The plants for sections 7 and 8 were raised by Mr. Maffey from the same seed as Mr. Odering's plants. All plants were propagated and grown in sterilized soil, and, with the exception of section 6, all the plants were sturdy and well grown. The plants in section 6 were of the ordinary type, but were weaker in constitution than the plants in other sections.

On the 10th October the plants had hardened sufficiently for the first spraying with the Bordeaux mixture, which was applied at a strength of 3 lb. sulph. copper, 5 lb. lime, to 50 gallons of water.

On the 15th October, 1912, all sections received a dressing of 1 oz. superphosphate and ¾ oz. bonedust per square yard. This was lightly raked into the soil.

On the 31st October, 1912, the plants were sprayed with Bordeaux of the same strength as formerly.

On the 18th November, 1912, all sections were again dressed with fertilizers, in the same proportions as the former application, and lightly raked in.

On the 28th November, 1912, the plants were sprayed with Bordeaux, and on the 24th December, 1912, the plants on the east side were sprayed with the ammoniacal carbonate-of-copper solution. The plants