

detrimentally affected the growth of the tomato plants. The yield, however, showed no improvement over that from the control plot, nor was the quality of tomatoes improved.

Cocoa-bean husks, used on unsterilized soil at the rate of 15 tons per acre in three successive seasons, have given a decided improvement in yield over the corresponding unsterilized plot without cocoa-bean husks.

Typical yields for the above treatment are as follows: sterilized soil with compost, 9.0 lb.; sterilized soil with sawdust, 8.1 lb.; sterilized soil (control), 8.2 lb.; unsterilized soil, 5.2 lb.; and unsterilized soil plus cocoa husks, 7.0 lb., per plant.

This season a very marked improvement in quality of tomatoes was obtained on plots treated each year with an additional 1 ton of potassic manure per acre. The yield, however, with this treatment showed no increase over that from the standard formula.

USE OF NITROGEN FOR GLASSHOUSE TOMATOES

Tests have been carried out concerning the value of repeated small doses of nitrogenous manure compared with the standard procedure in which one-third of the nitrogen is applied before planting and the remainder given in two dressings during the growth of the plants. The value of greatly increasing the quantity of nitrogenous fertilizer was also tested on one plot. Little difference in yield of tomatoes was obtained with these variations in the use of nitrogen under the particular conditions of the experiment. Quality of fruit appeared to be slightly improved with the large dressing of nitrogenous manure. Typical yield results are as follows: standard procedure, 11.8 lb.; frequent small applications of nitrogen, 11.6 lb.; extra nitrogen, 11.8 lb., per plant. The experiment was carried out on steam-sterilized soil, and the total quantity of nitrogen for the standard treatment and the more frequent application of nitrogen was the same.

EFFECT OF LATE PLANTING ON YIELD AND QUALITY OF TOMATOES

This year a plot of Potentate tomato plants was planted on 9th October for comparison with corresponding plots planted at the normal planting date, 22nd August. Although the tomato plants in the late planting suffered to some extent from mosaic infection, they grew extremely well, and began to ripen only a fortnight later than the fruit of the August planting. Although the yield (9.3 lb.) from the late-planted plot was considerably lower than the yield (11.4 lb.) of the corresponding plot planted in August, the quality of the tomatoes showed great improvement, no less than 70 per cent. being of first grade, compared with less than 40 per cent. for the August planting. This result confirms the experiment on "cloud" reported in the previous season, when late-planted tomatoes showed 1.1 per cent. "cloud," compared with 9.1 per cent. for the August-planted crop.

VARIETY TESTS

Six varieties of tomatoes, five of which were obtained from the Cheshunt Station, England, were tested under glasshouse conditions, using a standard manurial programme on steam-sterilized soil. The varieties comprised Invincible, Mayland Beauty, Potentate, Queen, E.S.1, and E.S.5. Of these varieties, Mayland Beauty, E.S.1, and E.S.5 have somewhat small fruit, and may require heated glasshouse conditions to secure the best results.

Potentate and Queen varieties showed similar characteristics. Yield of tomatoes was 11.6 lb. and 11.9 lb. per plant respectively, and quality of tomatoes was better than that of Potentate (New Zealand) grown in another glasshouse. Mayland Beauty, which has somewhat similar characteristics to E.S.5, likewise gave a very good yield of