



FIG. 7. SHOWING GRAPHICALLY THE RANGE IN YIELD OF TABLE TUBERS PER ACRE OBTAINED FROM TWENTY-EIGHT CERTIFICATION LINES OF DAKOTA AT ASHBURTON.

CAUSE OF UNPRODUCTIVENESS.

The reason for certain lines being unproductive cannot be discussed here at any length. The great majority have "run out" or degenerated, and some growers who are paying marked attention to purity are badly neglecting the general health or cropping-powers of their crops.

Degeneration is almost entirely due to the group collectively referred to as "virus" diseases. So far as is known, the condition is not brought about by ordinary fungi, bacteria, or micro-organisms, hence the term "virus," but they are nevertheless diseases, since they can be transmitted by grafting, by the juice of infected plants, and in the field by the agency of insects such as the green aphid so common on the potato-plant.

The various forms of virus disease have been or are being classified, and, without going into the question here, growers will no doubt recognize by the illustrations in this article conditions observed in their own crops. (Figs. 8, 9, and 10.) Instances in which the old tuber does