

ELECTRICAL STIMULATION OF CROPS.

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AMONG the many uses to which electricity is now being put perhaps one of the most interesting and far-reaching is its application to the stimulation of plant-growth. In view of the increasing world food-shortage at the present time, due to various war influences, any means whereby stimulation of crops can be effected becomes of national importance.

The first experiments worthy of note in the direction of this new science of electro-culture were started in England in 1911 by Professors Priestly and Jorgensen and Miss Dudgeon. Up to 1915 no very conclusive results were obtained, but in that year considerable improvements were effected in the methods employed, giving definite results of commercial importance. As indicating the degree of success achieved, it was found that increases up to 50 per cent. over the normal crop were obtained with oats on Miss Dudgeon's land, while a crop of potatoes treated electrically yielded 40 tons $6\frac{1}{4}$ cwt. from 8 acres, as against 34 tons $3\frac{1}{2}$ cwt. from soil not so treated, an increase of 15 per cent. Moreover, the "electrical" crop was ready for lifting a week earlier, and the class of potato was superior in every way to that of the untreated crop. Even more striking results were obtained last year at Miss Dudgeon's farm at Dumfries, where an electrified area of 1 acre produced no less than 62 bushels of oats and 4,924 lb. of straw, as against 42 bushels of oats and 2,619 lb. of straw on the normal crop, an increase of 49 per cent. in oats and 88 per cent. in straw.

These are only a few of the more important results obtained. Many investigators are now in the field, and their work is being greatly stimulated by the exigencies of the war. The English Board of Agriculture is turning serious attention to the problem of electro-culture, and many experts are agreed that by its aid the people in Britain will be made far more independent of imported food, and this without calling on the already scanty reserves of man-power.

NEW ZEALAND CONDITIONS AND LOCAL EXPERIMENTS.

In consequence of the development of large hydro-electric-power supplies, enabling electricity to be used freely and at a very cheap