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Plans and Data of the Experimental Field Plots - 1925



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Recent Period - 1912 Onwards

Rothamsted Research

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RECENT PERIOD-1912 ONWARDS.

In the last few years the number of field experiments has been considerably increased to deal with problems of present day importance as they arise.

PROBLEMS CONNECTED WITH THE HUMUS SUPPLY.

- 1. The crop producing power of dung stored in different ways.
- 2. Systems of green manuring; the effect is measured by the yields of the succeeding crops, and a comparison is made between green manuring and direct dunging. The green crops are sown in the corn and allowed to grow after harvest.
- 3. Experiments on the fertilizing value of artificial farmyard manure, i.e., rotted straw.
- 4. Manurial trials with sewage sludge of various kinds.
- 5. Town refuse compared with dung as a manure for roots.

PROBLEMS CONNECTED WITH THE NEWER FERTILISERS.

- 1. The fertilizing value of the new basic slags and certain of the mineral phosphates, such as Gafsa, and Nauru phosphate for:—
 - (a) Grazing.
 - (b) Hay.
 - (c) Rotation of crops.
- 2. Comparison of the newer sources of quick acting nitrogen with sulphate of ammonia as a top dressing for:—
 - (a) Cereals.
 - (b) Roots.

Ammonium chloride, urea and ammonium nitrate have been used.

3. The effect of various potassic manures (notably sulphate of potash, muriate of potash, Kainit and Sylvinite) on the yield and quality of potatoes.

OTHER MANURIAL PROBLEMS.

- 1. The influence of manuring on the malting quality of barley.
- 2. The influence of varying the quantity and the time of application of nitrogenous fertilisers on the more important arable crops.

CHALKING.

Several arable fields have had chalk applied over certain areas leaving the remainder unchalked, thus allowing the effects of the chalking to be followed through subsequent rotations.

CULTIVATION PROBLEMS.

- 1. Subsoiling.—Many of the fields have subsoiled strips running through them giving areas which can be compared with the adjacent land where no subsoiling has been done.
- 2. Dynamometer measurements are made of the draw-bar pull of various tractor implements in order to throw light on the effect of implement design, and of manurial treatment, on draught.
- 3. Various cultivation operations are being compared in their effect on plant growth and crop yield.

PROBLEMS RELATING TO EXPERIMENTAL METHODS.

Trials of improved methods of plot arrangement and management are in progress. In addition detailed field studies of crops are made for the purpose of elaborating an adequate system of crop observation.