CROP ROTATION AND SOIL CULTIVATION.

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The aim of every farmer should be to produce as large crops at as low cost as possible, while at the same time increasing the crop producing powers of his farm. Crop returns depend upon two things: Soil and soil management.

SOME SOIL FUNCTIONS.

The soil is the medium in which the roots of every crop live from seed sowing to harvest. The soil is likewise the source or rather the storage room for plant food. Crop returns depend to some extent upon the character of the soil, but more largely upon the handling of that soil previous to seeding, and, in the case of certain crops, to its management during the growing season.

FOOD REQUIREMENTS OF FARM CROPS.

Crops have different requirements as to plant food; some, as for instance roots, mange crops, require large quantities of readily available food suitable for the production of root, stem and leaf. Other crops, such as cereals or grain crops, will do with less readily available plant food, suitable for root, stem and leaf production, but need a proportionately greater supply of such plant food, or such elements, as enter into the composition and are necessary for the development of large quantities of seed, be this seed oats, barley, wheat or any other grain.

Crop Residues.

All crops when harvested leave behind them in the soil or on the surface thereof greater or lesser quantities of vegetable matter, such as roots, bits of stems, leaves, etc. The residues from crops such as potatoes, roots, corn and cereals are very small, in fact negligible, so far as they are likely to exert any influence upon the fertility or the physical condition of the soil in succeeding years. Certain other crops, however, such as pasture, sod, timothy hay, alfalfa and clovers, leave as residues large quantities of vegetable matter in the form of roots and stubble, and these residual substances