

Uses and Abuses of Fertilizers By Prof. R. J. H. De Leach, Director of Georgia Experiment Station. 3. ROTHAMSTED EXPERIMENT STATION AND FERTILIZERS.

The Third of a Series of Six Articles

The Rothamsted Experiment Station is in England, and is noted for the great work it has done along all lines of agricultural work. It has gone into the laws of soil tertility, has been the first to discover enery of these laws, and has in all its lifetory been especially interested in working out a plan of farm management by which soll fertility could be maintained at minimum cost to the farmers.

The Rothamsted experiments began in the year 1857, when Sir Johne Invallanted a fire discovered in a fire Bennett Lawes began experiments on his private estate. He was a man mop. The mop had been mod to who loved the soft and to experiment with it. Strange to say, he was a lish floors and was soaked in a factolic fertilizer manufacturer in a certain sense, as he early discovered a process ing oil. Spontaneous combinators for transforming bone into superphosphate by the use of sulphonic artid, sulfed - Sulety Engineer took out a patent for this in 1842, and built an extensive business which he managed for about thirty years, in 1843 he associated with him 3. H. Gilbert, and these two men for more than lifty years conducted eventure agricultural investigations in recard to solly and fertilizers, and needs and feeding of domestic animals in 1889 Sir John turned over his large state. which had now grown so important, and had become so well known in all furth parts of the civilized world, to a board of directors, and endowed it with nating purposes half a million dollars.

Twenty Years Experiments on Same Plots.

Among many other things that were done, experiments were conducted with fertilizers, mineral sairs, and many forms of ammoniates, also with animal manures, to determine just what solls needed to grow the most crops. For this work plots of ground were set aside, marked off and carefully measured, and then planted to the crop with which the investigator wished to work. Small plots would be used for the different kinds of inducral and animal manures, and in each series one plot would be left unfertilized throughout the entire experiments, while the others would have applied the far better to have new discondifferent combinations of fertilizers, etc. Careful reports were taken from [each end of these plots, and with interesting results. The same experiments

were continued for twenty years and more. It does not participate to ease between the following results. The plots the had no manure of any kind averaged may coll a percent life. the following results. The plots that had no manure of any sind averaged that is twenty years, 2.382 pounds of hay, the plots which had mineral manure and see pounds of monita salts, 5.711 pounds of hay, those with mineral manure and see pounds of won monita salts, 5.711 pounds of hay, those with mineral manure and see pounds of won monita salts, 6.702 pounds of hay, those with mineral manure and see pounds of won monita salts, 6.702 pounds of hay, those with mineral manure and see pounds of the mineral manure and see pounds of hay. Considering the very low their use, one could not fail to see the value of the manure salts.

Larger Yields Were Always Obtained.

The Rothamsted station was interested in the permanent im revenuent of land and the part played in this by the use of fertilizing materials from the many experiments carried out there was never a doubt of the wisdom of applying plant food to the soil. Larcor yields were always obtained wher pro-things being equal, and the tertilization of the soils throughout England and her possessions recommended. It was decided to ascertain the selfs is of fortilizers on corn. Seven plots were treated as follows: Plot 1. Unmanered

Keep Your Bowels Regular.

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Plot L l'inmanured

Plot 2. Mixed mineral manure, 300 pounds sulphate of potash, 200 pounds sulphate soda, 100 pounds sulphate mannesia, 1150 pounds superphosphate lime.

Plot 3. Ammonia salts, comprising 200 pounds sulphate ammonia and 200 pounds murlate of ammonia

Plot 4 Annuolia salts and mixed mineral manures, as Plot -Plot 5. Five hundred and forty pounds Peruvian guano Plot 5. Two thousand pounds rate - also Plot 7. Fourteen tons farmyard manure



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Proper Treatment for Billousn