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## They Contain all the Elements of Plant Food. 11

for if that which is grown on the farm only is consumed nothing is added to the resources it already contains. Therefore, the only feasible plan that can be devised is to buy the amount of fertilizer that will be required to produce the crop intended to be sold, or the farm will be just the amount short that it required to produce the crop grown.

The practice of growing potatoes for sale is really worse in one particular than in producing wheat, for here the straw is left to be returned to the land; therefore, it is more on a par with growing grain and selling both straw and grain from the farm. Here also the greater the yield in the crop sold a larger amount is sold from the producing power, and it is only a question of time until a farm under this management will not pay for the expenditures required in growing the crop sown on it. The advantages that the experiments that have been conducted through the prizes offered in the contest we are about to review must be of untold benefit to all agriculturists. If it can be proved that a fertilizer can be supplied at an expenditure that the crop will warrant, the tables are then turned the other way, and the crop thus produced is a material advantage to the land it is produced upon, for the potato crop is one that gives the best results as a cleaning crop, and it is also one of the most useful to follow with grain.

**It must be borne in mind**, in estimating the results obtained from any commercial fertilizer or stable manure, that it requires a moderate amount of moisture all through the growing season. In order to receive the best advantage from any fertilizer, the elements contained in it must be made soluble under a moist condition of the soil to which it has been applied. Therefore, the extremely dry weather experienced at the most critical period prevented the crop in this contest obtaining the benefit that it otherwise would have derived. Taking it all round we must consider that the results obtained were astonishing, as it is generally conceded that last season was the most unfavorable for potato production we have had in many years.

The following are the yields per acre reported, together with the mode of working the land adopted by each of the most successful contestants:

**David Quantrill, Cobourg**, grew 315 bushels of potatoes, of which 15 bushels were small, comprising two varieties, viz., Burbank's Seedling and Rural New Yorker No. 2. The land was prepared by plowing (in the fall of 1891) out of sod off which had been cut one crop of hay one year after being seeded. The land was replowed May 12, 1892, and thoroughly harrowed and drilled; then 600 pounds of Freeman's Potato Manure was applied in the drill and mixed with the soil, an additional 600 pounds having been sown broadcast, thus 1,200 pounds was used on this acre. The seed was planted, whole medium-sized potatoes being selected, and 960 pounds to the acre, and planted May 24th. The vines appeared above the ground June 3rd. The cultivation consisted in harrowing the ground three times, twice cultivating between the rows; also hand hoeing, to effectually kill the weeds among the plants. The crop was harvested September 20th by hand digging with potato forks.

**Mr. Henry Pickett, Clarkson**, grew 281½ bushels of potatoes, of which 30 bushels were small, comprising two varieties, viz., Freeman and Rural New Yorker No. 2. He used 2,200 pounds of Freeman's Potato Manure, and prepared the land by applying first 400 pounds before plowing, which was performed May 16, then 600 pounds were sown broad-