

Or, if it is wished, the experiment may be made more complicated, as follows:

Plot No.	I.—Check.	No fertilizer.
"	II.—160 pounds	of nitrate of soda.
"	III.—160	" muriate of potash.
"	IV.—320	" superphosphate.
"	V.—Check.	No fertilizer.
"	VI.—160 pounds	nitrate of soda.
	320	" superphosphate.
"	VII.—160	" nitrate of soda.
	160	" muriate of potash.
"	VIII.—320	" superphosphate.
	160	" muriate of potash.
"	IX.—160	" nitrate of soda.
	160	" muriate of potash.
	320	" superphosphate.
"	X.—Check.	No fertilizer.

The amount of the fertilizers given are, in every case for an acre, but they are not intended to represent the quantities of these materials which should be used for various crops. That point will be arrived at as a result of the experiments. The application of the potash and superphosphate should be made broadcast before planting, preferably some weeks before. The nitrate is very soluble, and is easily leached from the soil, consequently, it is best applied in two or three applications, one at time of sowing seed, and the other two at intervals of three or four weeks. In every case, the fertilizers should be evenly distributed over the ground. The above mentioned quantities provide for one pound, or multiple thereof per square rod.

Careful notes should be made on the increased cost of production, the appearance and quality of the crop, and the weight of the products of the different plots should be determined, and the whole data used as a basis of comparison. As interest in the work increases, further experiments may be made with different quantities of these materials and with other fertilizers.

In these fertilizer experiments it may also be well to introduce lime into one or two of the plots, in order to determine whether this substance is needed either to correct acidity or to make other useful compounds available. Further, it would be good practice to include in the number of plots indicated one or two in which the cultivation of the soil was made more perfect, the object being to see whether the need is for more plant food or better cultivation.

All these experiments have a much wider scope than the simple finding out of the deficiencies of the soil. They are educative, as they encourage close observation and exact methods of work, and give the experimenter an opportunity to familiarize himself with the materials used as fertilizers.