was observed on the crop of the year of application, a favourable influence was noticeable on the succeeding crop. Of all classes of fertilizers, these no doubt approach more closely the farm manures, in their lasting character and in adding to the soil's store of organic matter.

PHOSPHATIC FERTILIZERS.

The choice of a phosphatic fertilizer will depend largely on the character of the soil to which it is to be applied. For soils rich in lime, superphosphate (acid phosphate) will give the quickest return and especially for crops that need, in their early stages, the stimulus afforded by immediately available phosphoric acid, e.g., the turnip crop. Superphosphate is also an excellent form for the cereals, in conjunction with nitrogen. The profitable application is in the neighbourhood of 300 pounds per acre.

For all sour soils, many clay loams deficient in lime, peats and mucks, basic slag has proven the most desirable form. It is an alkaline phosphate containing a certain amount of free lime. It contains no water-soluble phosphoric acid but nevertheless yields this element fairly readily for crop use. The dressing may be from 300 to 500 pounds per acre. Bone meal has proved a valuable fertilizer, more especially on the lighter loams that do not dry out too readily. It requires a well aerated and moist soil for its best results. It is essentially a phosphatic fertilizer, but undoubtedly a part of the response obtained from its application is in many instance due to its nitrogen, which, according to the method of its preparation, may vary from 1 to 4 per cent. It would seem to be most suitable for crops with a long season of growth. The application is usually about 500 pounds per acre, and has given good returns in conjunction with wood ashes—say 25 to 40 bushels per acre—to supply potash.

POTASSIC FERTILIZERS.

No potassic fertilizers has proved more valuable than good hardwood ashes. They present their potash in the form of carbonate which appears to be ideal for crop use. Further, they furnish a notable amount of phosphoric acid (about 2 per cent) and contain a considerable percentage of carbonate of lime, which is particularly efficient on light sandy loams and on peaty and muck soils. The application may be from 25 to 40 bushels per acre, the latter dressing being used by orchardists and market gardeners.

Muriate of potash and sulphate of potash are the two potassic fertilizers put on the market from the Stassfurt mines. Of the highest grade, they are practically identical as to potash content—about 48 per cent. They have been used more especially for the potato crop the sulphate being preferred, as the muriate, it is alleged, results in an inferior quality of tuber. Our experiments have shown these two compounds to be equally effective as to yields, with no marked inferiority in quality due to the muriate.

Of late years the percentage of potash in many brands of fertilizer intended for the potato crop has been steadily increased, in response to a demand for a fertilizer with a high potash content. A few years ago 2 per cent of potash in a fertilizer was considered rich enough; recently brands containing 8 per cent and 10 per cent have not been uncommon. The results of our experiments have not borne out this belief in the value of large dressings of potash. The maximum application of muriate of potash that has yielded a profit has been 100 pounds per acre (approximately 50 pounds potash) and not infrequently a dressing of 50 pounds per acre has marked the limit of profitable application. On heavy clay soils, potash fertilizers are not, as a rule, remunerative, but as already remarked, they are chiefly required by sandy, gravelly soils and those rich in organic matter, such as peat and mucks.