phosphate, which gradually enters into the circulation of the plant. The presence of lime in a soil, even in a small proportion, accomplishes this result, and by reason of the less soluble condition to which it is thus reduced, there is also less danger of the phosphate being washed out of the soil. On many light sandy soils the use of ordinary super-phosphate is attended with great loss, as the mono-calcic phosphate is washed out of the soil, by the rain passing through it. In these cases the use of bone is still found the most economical form for adding phosphate of lime to the soil, as this waste is thereby prevented.

76. It is, however, quite possible for the form of phosphate produced by the action of sulphuric acid on bone or other phosphates to be of the same character as that produced by the decomposition of bones in the soil. By the use of one-half of the sulphuric acid required to make mono-calcic phosphate, we obtain the same form of phosphate of lime as is produced in the soil when bones decompose in the ordinary manner. It is, as we have seen, **a more desirable form** of phosphate, so far as the healthy growth of vegetation is concerned, and it is by no means improbable, and much to be desired, that circumstances may shortly lead to its more extensive use.

77. One other subject, closely associated with super-phosphate, demands notice in passing, viz., the **"reduced phosphates."** When a manufacturer has made a large quantity of super-phosphate, and has ascertained its strength by analysis, it very frequently happens that after a lapse of two or three months the super-phosphate is found to be reduced in strength. It is then known as a **"reduced super-phosphate."** A super-phosphate having 25 per cent. of soluble phosphate is often found to be reduced to 22 or perhaps to 20 per cent. If the value of this super-phosphate were to be determined by analysis, the manufacturer would lose largely, because chemists