importance. It is never found in the soil in large proportion: in our richest soils it barely reaches .5 per cent., that is, in 100 lbs of soil there is rarely as much as ½ lb. of phosphoric acid.

26. We here give a list of the more important bodies usually found in cultivated soils, so that the student may have the opportunity of making himself acquainted with their properties from his textbook on chemistry.

INORGANIC MATTERS IN SOILS.

Silica.	Alumina.
Phosphoric acid.	Lime.
Carbonic acid.	Ammonia.
Sulphuric acid.	Potash.
Chlorine.	Soda.
	Magnesia.
	Oxide of iron.

27. In addition to the inorganic matters of soils we have a second group of substances existing in them as **organic** matter. This matter consists of substances which may have grown under the influence either of vegetable or of animal life, and have consequently been organized as part of some living plant or animal. The process of decay in the soil brings these vegetable or animal remains into such a condition that they again become available for yielding nourishment to vegetation. Any inorganic matter which had formed part of the structure of the vegetable or animal, becomes an addition to the mineral matter of the soil, whilst the organic matter forms a series of substances which practically yield to the soil—

Carbon, with the elements of water (**Oxygen** and **Hydrogen**), in various forms of combination; also

Ammonia and other nitrogenous matters.

28. The inorganic and organic substances in the soil constitute a very large number of bodies, but by the aid of chemical analysis the composition of soils