

	Ash, per cent.	Potash.	Soda.	Lime.	Magnesia.	Iron.	Phosphoric Acid.	Sulfuric Acid.	Silica.	Carbonic Acid.	Chlorin.
Wheat, straw .....	.053	18.0	.6	4.5	..	.3	4.1	..	72.4	..	..
Wheat, grain .....	.013	28.5	..	1.5	12.2	.2	57.3	..	.3	..	..
Barley, " .....	.018	13.7	6.8	2.2	8.6	1.1	39.8	.2	27.7	..	..
Peas, " .....	.030	35.5	2.5	10.1	11.9	..	30.1	4.7	1.5	.5	1.3
Beets, root.....	.062	39.0	6.0	7.0	4.4	.5	6.0	1.6	8.0	16.1	5.1
Potatoes, tubers ..	.040	50.0	1.5	1.8	5.4	.5	11.3	7.1	5.6	13.4	2.9

The constituents of soils may be divided into two classes—inorganic and organic. The mineral matter due to the disintegration of rocks is composed principally of lime, magnesia, oxid of iron, alumina, potash and soda combined with silica, phosphoric, carbonic and sulfuric acids. Of these the majority are usually found in sufficient abundance, the ones which are sometimes lacking being lime, potash and phosphoric acid. The organic portion of soil is known as humus, which consists of carbon, hydrogen, oxygen and nitrogen, only the last being of value to plant life.

Potash, which is derived mainly from the decomposition of felspathic rocks like granite, exists in the soil chiefly as the soluble potassium silicate. It may constitute as much as 2 per cent., though good agricultural soils contain as little as .25 per cent. Clay soils are usually richest in potash—a fact due to the retentiveness of clay and to the common origin of clay and potash.