

Carbonate of lime, equal to 2.05 of quick lime, .	3.85	per cent.
Carbonate of magnesia, equal to .58 of pure calcined magnesia.....	1.20	"
Humic acid.....	2.80	"
Water.....	10.70	"
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	100.00	

Though this is spoken of as being more complete and thorough than that of Regnault, yet it is evident that it is far from being complete. No potash or soda, phosphoric or sulphuric acid, or chlorine is given, though the mud must have contained, and did, all of these. It is not stated from what part of the Nile the mud was taken. This may be taken as the type of a good wheat soil, all the inorganic constituents in large quantities, with the requisite physical condition to absorb all of the organic matter from the atmosphere.

In striking contrast with this was the analysis, very partial however, of a specimen from Sahara, the great desert in Africa, for which I was also indebted to the Rev. Mr. Jones. All of which was coarse sand, nearly, with a trace of iron and alumina, as silicate; there was the merest trace of lime, no magnesia, potash, soda, sulphuric or phosphoric acid or chlorine, and no organic matter was present. The specimen which I obtained was unfortunately too small to make a full analysis, it being only 15 grains. From its appearance, as well as from the analysis, one might know that it was a place "where no verdure quickens, no solitary tree takes root."

Soil from Missouri producing twenty barrels of corn to the acre, worked every year for the last fifteen years:

Organic matter,.....	11.00
Silica,.....	84.30
Iron as peroxide;.....	.80
Alumina,.....	1.10
Iron and alumina as phosphates,.....	.30
Lime as carb.,.....	1.13
Magnesia,.....	.30
Potash and soda,.....	.90
Sulphuric acid,.....	.12
Chlorine, a trace,.....	.04
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	99.99
Loss,.....	.01

Of the sand, there was of

Fine sand,.....	68.70
Coarse sand,.....	15.60

Soil of very rich bottom land in Illinois:

Organic (vegetable) matter,.....	9.10
Silica, (sand),.....	75.00
Iron as peroxide,.....	5.15