

Soda 1.56—potash 0.16,	. . . . .	1.72
Sulphuric acid,	. . . . .	7.44
Phosphoric acid,	. . . . .	1.91
Silica soluble,	. . . . .	.34
Chlorine,	. . . . .	.15

According to existing modes of estimating the value of manures, it may be worth five dollars per ton if ground and ready for use.

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## CHAPTER XIII.

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### ASHES FROM WOOD AND COAL.

The average composition of the ashes from the different kinds of wood used in this State are as follows, according to Prof. Campbell:

Potash	-	-	-	-	-	-	9.3
Soda	-	-	-	-	-	-	2.5
Lime	-	-	-	-	-	-	41.2
Magnesia	-	-	-	-	-	-	6.2
Oxides of iron and manganese	-	-	-	-	-	-	1.6
Sulphuric acid	-	-	-	-	-	-	1.5
Phosphoric acid	-	-	-	-	-	-	4.3
Silica	-	-	-	-	-	-	3.2
Carbonic acid	-	-	-	-	-	-	30.7
Chlorine	-	-	-	-	-	-	0.5

It will be seen that each material of which wood ashes is composed, is also an essential constituent of our ordinary field crops. There is no difficulty therefore in understanding why they are so effective as a manure.

The use of ashes is so well understood by every one, that further remarks upon the subject would be useless.

What are called spent ashes from the soap-makers, are produced by adding 8 or 10 per cent. of lime, and leeching out nearly the whole of the potash and soda. A small portion of these being combined with silica remain in the ashes, which also retains, after being leached, nearly the whole of the remainder of the constituents of fresh ashes, with an addition to the quantity of lime.

The only difficulty in reference to the use of spent ashes