

Composition of solid stable manures :

(Richardson.)

Carbon	37.40
Hydrogen	5.27
Oxygen	25.52
Nitrogen	1.76
Ashes	30.05

100.00

Composition of ashes of stable manure :

Potash	3.22
Soda	2.70
Lime	0.34
Magnesia	0.26
Sulphuric acid	3.27
Chlorine	3.15
Silica	0.04
Phosphate of lime	7.11
Phosphate of Magnesia	2.26
Phosphate of Oxide of Iron	4.68
Carbonate of lime	9.34
Carbonate of Magnesia	1.63
Silica	27.01
Sand, &c.	34.96

100.00

Composition of liquid manure :

(Bossingault.)

	Horse.	Cow.
Urea	31.00	18.48
Hipurate of Potash	4.74	16.51
Lactate of Potash	20.09	17.16
Carbonate of Magnesia	4.16	4.74
Carbonate of lime	10.82	0.55
Sulphate of Potash	1.18	3.60
Chloride of Sodium	1.74	1.52
Silica	1.01	
Water, &c.	910.76	921.32

1,000.00

1,000.00

Urea, the principal organic ingredient of Urine consists of :

Carbon	20.0
Hydrogen	6.6
Oxygen	46.7
Nitrogen	26.7

100.00

It is, therefore, very rich in Nitrogen. In decomposing, it changes into carbonate of ammonia, which rapidly escapes, unless prevented by some absorbent material, as charcoal, or by the chemical action of sulphuric acid, or gypsum.

From the above tables, we see that the liquid manure contains large quantities of potash and soda ; and that a large portion is *Urea*, very rich in Nitrogen, and very similar to the richest ingredients of Guano. Johnston estimates 1,000 gallons of urine of the cow as equal to a hundred weight of Guano.