Hence Barley loses carbon in malting, probably in the form of acid, and also nitrogen, in the shape of albumen—possibly in part as ammonia—whilst the malt has gained hydrogen and oxygen—that is water; and 100 parts by weight of Barley is reduced to 80 parts by weight of Malt. So that the nutritive powers of Barley and malt would appear to be as follows:

59 Barley .... 100 Malt, according to the lowest extent.
79 Barley .... 100 Malt, to the highest.

The composition of Ash is as follows:

	Barley.	Malt.
Potash	16.00	14.54
Soda	8.86	6.08
Lime	3.23	3.89
Magnesia	4.30	9.82
Oxide of Iron	0.83	1.59
Phosphoric acid	36.80	35.34
Sulphuric acid	0.16	
Chlorine	0.15	trace.
Silica	29.67	28.74
	100.00	100.00
Per centage of Ash	3.05	2.52

The loss sustained by the Barley in Malting, may perhaps be stated as follows:

Water	6.00
Saline Matter	0.48
Organic Matter	12.52
	19.00

Barley Meal.—This is much used for feeding pigs in some places—whole grains as a mash for horses. According to Johnston, a crop of 40 bushels to the acre, produced at the rate of 40 bushels, weighing 2100lbs.; Starch, Sugar, &c. 1260lbs.; Gluten &c., from 250lbs. to 310lbs.; Oil or Fat, from 42lbs. to 63lbs.; and 60lbs. of Saline matter.

Oats.—According to Johnston the quantity of nutritive matter afforded by an acre of land from a crop of Oats producing 50 bushels, will be as follows; 50 bushels weighing 2100lbs., give 420lbs. of husk, or woody fibre; 1050lbs. of Starch; from 290lbs. to 400lbs. of Gluten, &c.; from 75lbs. to 150lbs. of Oil or fat, and 80lbs. of Saline matter.

Composition of the grain of Oat has been found to be as follows:

	Hopetoun Oats, Ayrshire. Fromberg.	Potato Oats, Northumberland. Norton.
Starch	64.80	65.60
Sugar	2.58	0.80
Gum	2.41	2.28
Nil	6.97	7.38
Casein (avenine.)	16.26	16.29
Albumen	1.29	2.17
Gluten	1.46	1.45
Epidermis	2.39	2.28
Alkaline salts and loss	1.84	1.75
	100.00	100.00