

# THE GLEANER.

AND NORTHUMBERLAND, KENT, GLOUCESTER, AND RESTIGOUCHE  
COMMERCIAL AND AGRICULTURAL JOURNAL.

New Series, Vol. I:

*Nec araneorum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes.*

No. 4.

Miramichi, Tuesday Morning, October 18, 1842.

## THE GLEANER.

### Agricultural Journal.

From the Magazine of Domestic Economy.

#### The relative value of different kinds of Food for Cattle.

It is of great importance to farmers to know the comparative value of the various articles of food consumed by cattle, in order to raise the most profitable, and the one best suited to the soil they cultivate. We have received frequent inquiries on this score, and, having met the following analysis in the last number of the Journal of the Royal Agricultural Society of England, to which valuable work it has been contributed by the Rev. Wm. Rham, of Winkfield, we transcribe it, in order to diffuse such desirable information among our readers engaged in farming:

As the following table of the comparative value of different kinds of fodder in feeding cattle may not be generally known, I have translated it from the French. It has been published by M. Antoine, at Nancy, and is the result of experiments made by the principal agriculturists on the Continent—Thaer, Gemerhausen, Petro, Rieder, Weber, Krantz, Andre, Block, De Dombasle, Boussingault, Meyer, Plotow, Pohl, Smee, Crud, Schwertz, Pabst. It is unnecessary to give the figures which each of these experimentalists has set down; but the mean of these experiments being taken, there is more chance of their result being near the truth. Allowance must be made for the different qualities of the same food on different soils and different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season: so likewise any fodder raised on a rich dry soil will be more nourishing than on a poor one. The standard of comparison is the best upland meadow hay cut as the flower expands, and properly made and stacked without much heating; in short hay of the best quality. With respect to hay, such is the difference in value, that if 100lbs. of the best is used, it will require 120lbs. of a second quality to keep the same stock as well, 140lbs. of the third, and so on, till very coarse and hard hay not well made will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

I shall give the table as it stands, and add the notes which accompany it.

|   |     |
|---|-----|
| Good hay is equal in nourishment to                       | 100 |
| Latter math hay   | 102 |
| Clover hay, made when the blossom is completely developed | 90  |
| Ditto before the blossom expands                          | 88  |
| Clover, second crop                                       | 93  |
| Lucerne hay   | 98  |
| Sainfoin hay  | 89  |
| Tare hay  | 91  |
| Spergula arvensis, dried                                  | 90  |
| Clover hay, after the seed                                | 146 |

|  |     |
|--|-----|
| Green clover                             | 410 |
| Vetches or tares, green                  | 457 |
| Green Indian corn                        | 275 |
| Green Spergula                           | 425 |
| Stems and leaves of Jerusalem artichokes | 325 |
| Cow cabbage leaves                       | 541 |
| Beet-root leaves                         | 600 |
| Potatoe halm                             | 300 |
| Sheeter wheat straw                      | 374 |
| Rye straw                                | 442 |
| Oat Straw                                | 195 |
| Pea halm                                 | 153 |
| Vetch halm                               | 159 |
| Bean halm                                | 140 |
| Buckwheat straw                          | 195 |
| Dried stalks of Jerusalem artichokes     | 170 |
| Dried stalks of Indian corn              | 400 |
| Millet straw                             | 250 |
| Raw potatoes                             | 201 |
| Boiled ditto                             | 175 |
| White Silesian beet                      | 220 |
| Mangold-wurzel                           | 339 |
| Turnips                                  | 504 |
| Carrots                                  | 276 |
| Cobl kalis                               | 287 |
| Swedish Turnips                          | 308 |
| Ditto, with the leaves on                | 350 |
| Grain.—Rye                               | 54  |
| Wheat                                    | 45  |
| Barley                                   | 54  |
| Oats                                     | 59  |
| Vetches                                  | 50  |
| Peas                                     | 45  |
| Beans                                    | 45  |
| Buck-wheat                               | 64  |
| Indian corn                              | 57  |
| French beans, dried                      | 32  |
| Chestnuts                                | 47  |
| Acorns                                   | 68  |
| Horse chestnuts                          | 50  |
| Sunflower seed                           | 62  |
| Linseed cake                             | 69  |
| Wheat Bran                               | 105 |
| Rye bran                                 | 109 |
| Wheat, peas, and oat chaff               | 167 |
| Rye and barley chaff                     | 179 |
| Dried lime-tree leaves                   | 73  |
| Dried oak leaves                         | 53  |
| Dried Canada poplar leaves               | 67  |

Latter math is good for cows, but not for horses. The second cut is generally considered as inferior in nourishment to the first. New hay is not wholesome. At Paris, when a load of 1,000 kilos is bargained for, the seller must deliver, if between hay making and October 1, 1,300 kilos; from October 1 to April 1, 1,100; and after April only 1,000. This is fair, and allows for loss of weight in drying. In London a load of new hay weighs 20 cwt., of old hay only 18 cwt. Spurney (Spergula arvensis) is excellent food for cows; but except on poor moist sands, the crop is so light as not to pay for cultivation. It grows rapidly, and makes a good intermediate crop between barley harvest and winter.

The dried halm of the Trifolium incarnatum, after the seed is ripe, is little better than straw. Clover, lucerne, and sainfoin are generally supposed to lose three-fourths of their weight in drying; but in general they lose more, especially in moist climates where the sap is more diluted. When touched by the frost, they become very unwholesome, and should never be given to cattle except quite dry.

All beasts are fond of the green stems of the Indian corn or maize; but it has not yet been much cultivated in

Britain. If sown in May so as to be free from frost, after the seeds have been well soaked in water, the crop will come up well, and be ready to cut green in September and October, without ever producing any seed; but within the stalk will be found the embryo of the seed ear, which is extremely sweet and pleasant to the taste. It is very good boiled as greens. Green spurney gives excellent milk and butter when the cows are fed on it. There is a variety which is much larger than the common field spurney, and which is worth attention.

The stems of Jerusalem artichokes when young, may be good fodder, but they soon get hard and woody. The leaves of the cow-cabbage when given quite fresh, and none of them withered and decayed, are excellent for the cows, and give no taste to the butter. Straw is, on the whole, but poor food, and unless cattle have something better with it, they will not keep in any condition; when given with turnips or other roots, straw corrects their watery nature, and is very useful. Cut into chaff, it is very good for sheep when fed on turnips and oil cake; and when newly thrashed is as good nearly as hay. By a judicious mixture of different kinds of food, a more economical mode of feeding may be substituted for a more expensive one, and the same result obtained. The value of straw depends much on the soil; a very clean crop will not give so nourishing straw as one containing many succulent weeds. Peas and vetch halm are superior to straw, especially when cut into chaff; it is by some thought equal to hay. The same may be said of bean halm not left too long in the field, and cut before it is completely dry. Buckwheat halm is of little value; it is thought unwholesome if given to sheep.

The dried stems of Jerusalem artichokes must be cut into chaff, and then boiled or macerated in water, otherwise the cattle cannot chew them. The same may be said of the stems of millet, sorgho, and maize. Raw potatoes increase the milk of cows, but they must be given with caution, and only a few at first, till the stomach is accustomed to them; boiled, they fatten any kind of stock; mixed with cut chaff, they are excellent for horses. 14lbs. of boiled potatoes will allow a diminution of 8lbs. of hay; hence their value in this way is easily calculated. When hay is £4 4s. a load, it is just 1-2 per lb., the 14lbs of boiled potatoes are therefore worth 4d., and 56lbs. being reduced by boiling to 42lbs., the potatoes are equal in value to 2s. per cwt., which is 40s. per ton. From this must be deducted the expense of boiling; when fuel is cheap this will be compensated by the dung, which would have been lost had the potatoes been sold. If 14lbs of boiled potatoes are equal to 16lbs of raw, potatoes are one half the value of hay; and if hay is 1-2d per lb. raw potatoes are worth 1-4d per lb., 1s. 2d. the half, and consequently more than when boiled.

Every kind of cattle eat turnips except horses. Turnips will feed store pigs, but they will not fatten on them. Carrots and parsnips are excellent for horses, and when boiled will fatten

hogs. Ruta Baga is liked by horses, and it makes their coats fine; but must not be given in too great quantities, or it will gripe them.

In France the flour of buckwheat, seasoned with salt, and mixed with water, is used to fatten oxen, sheep and swine.

Hogs fattened with chesnuts have fine-flavored flesh.

If the horse chesnuts are boiled, the bitter part is boiled out and cattle will eat them readily; mixed with other food, they soon become accustomed to them.

Oil-cake varies in nutriment as in price; if linseed-cake is 17.50, rape cake will be 16.60, cameline and hemp-seed cake 9, poppy-cake 8.

Bran is good for horses mixed with oats, and for milch cows excellent. If it can be got at 1-2 per lb. it is worth as much as the best hay.

The value of dried leaves is taken chiefly from their analysis by Sprengel; but they must be gathered when green and dried like hay.

On the Feeding of Animals.—A certain quantity of food is required to keep an animal alive and in health: this is called its necessary ration of food; if it has more, it will gain flesh, or give milk or wool.

An ox requires 2 per cent. of his weight in hay per day; if he works, he requires 2 1-2 per cent. A milch cow, 3 per cent.; a fattening ox 5 per cent.; 4 1-2 per cent. when half fat, and only 4 per cent. when fat, or 4 1-2 on the average. Sheep grown up take 3 1-3 per cent. of their weight in hay per day to keep in store condition.

Growing animals require more food and should never be stinted.

#### Professor Johnstone on Agricultural Chemistry

Dew.—The Dew, celebrated through all times and in every tongue for its sweet influences, presents the most beautiful and striking illustration of the agency of water in the economy of nature, and exhibits one of those wise and bountiful adaptations, by which the whole system of things, animate and inanimate, is fitted and bound together. All bodies on the surface of the earth radiate, or throw out rays of heat, in straight lines—every warmer body to every colder; and the entire surface is itself continually sending rays upwards through the clear air into free space. Thus on the earth's surface all bodies strive, as it were, after an equal temperature (an equilibrium of heat), while the surface as a whole tends gradually to a cooler state. But, while the sun shines this cooling will not take place, for the earth then receives in general more heat than it gives off; and if the clear sky be shut out by a canopy of clouds, these will arrest and again throw back a portion of the heat, and prevent it from being so dissipated. At night, then, when the sun is absent, the earth will cool the most; on clear nights also more than when it is cloudy; and when clouds only partially obscure the sky, those parts will become coolest which look towards the clearest portions of the heavens. Now, when the surface cools, the air in contact with it must cool also; and, like the warm currents,