

forty loads farm-yard dung. The bone-dust gave a fair crop, the guano a third larger, and the dung gave the worst of all. This year the field was in barley, which seemed the best at first on the part manured with dung; then the bone dust portion looked best, but now that on the guano was better than either. At first he had from twelve to fifteen bushels from the poor land alluded to.

Such testimony from practical men is conclusive, if further evidence were needed, of the permanent benefit of guano. The Peruvian or Bolivian should be used.

#### RELATIVE VALUE OF VEGETABLES AS FOOD,

As a matter of practical utility to every farmer who keeps animals, we give from Boussingault the following table; exhibiting the relative value of different kinds of vegetable foods, calculated on the amount of nitrogen they contain; or, in other words, on the quantity of vegetable fibrine, albumen, and caseine they will furnish to the circulation:

	Am't per ct. of nitrogen.
Hay from red clover in flower	1.76
Hay of vetches	1.41
Lucerne hay	1.35
Common hay	1.04
Green clover	50
Potatoes	37
Green lucerne	30
Carrots	30
Wheat straw	20
Barley straw	20
Oat straw	19
Rye straw	17
Turnips	17
Beans	5.11
Vetches	4.37
Kidney beans	4.08
Lentils	4.00
Yellow peas	3.40
Wheat flour	2.27
Wheat grain	2.13
Rye	2.04
Oats	1.96
Barley flour	1.90
Barley grain	1.76

#### Value compared with Hay as 100

Hay from red clover in flower	60
Hay of vetches	74
Lucerne hay	75
Common hay	100
Green clover	208
Potatoes	281
Green lucerne	349
Carrots	347
Wheat straw	520
Barley straw	520
Oat straw	574
Rye straw	611
Turnips	612
Beans	20
Vetches	24
Kidney beans	25
Lentils	26
Yellow peas	31
Wheat flour	46
Wheat grain	49
Rye	51
Oats	54
Barley flour	55
Barley grain	59

In this table Boussingault has taken good common hay at 100 as the standard. Thus, 60 pounds of good hay from red clover in flower, is equal in nutriment to 100 pounds of common hay, 281 of potatoes, or 520 of wheat or barley straw. The leguminous plants—such as the beans, vetches, lentils, and peas—afford the most nitrogen, and every farmer knows they rank deservedly high

in the scale of nutrition; still, as they are destitute, or nearly so, of the phosphates required for the formation of bone, experience proves they are the most useful, when fed in connexion with some of the cerealia or grains. We believe that most farmers will find that their experience in feeding animals agrees very well with the estimates of the table. Thus, in soiling, 208 pounds of green clover, or 347 of green lucerne, will be found equal to 100 pounds of hay—a result which few will doubt who have made experiments in this mode of feeding. Forty-six pounds of wheat flour are equal in nutriment to 281 of potatoes; but the animal would fare better on the potatoes than on the flour, as there would be more bulk for the proper distention of the stomach.—*Alb. Cult.*

#### CULTIVATION OF CELERY.

From Mr. Ellsworth's Report for 1844.

DEAR SIR,—The cultivation and growth of celery, that most excellent and wholesome winter vegetable, require the close attention of the gardener to bring it to perfection.

A practical gardener will soon learn the art; and for the benefit of those who have yet to learn it, I beg to hand you the result of my own experience for the last twenty-five years.

In this country it is not necessary to sow the seed before the month of May, and then in the open ground, well manured with stable dung thoroughly cured, and not less than a year old. The colour, whether white or red, is a matter of taste. I generally mix my seed, and thus have both species. The seed is slow of vegetation, but, if good, never fails to germinate. Whether it be sown broadcast or in drills, is a matter of no consequence; as the seed being very small, the plants are sure to shoot up thick. So soon as the sprouts have attained the height of an inch, they should be pricked out in a bed of rich mould, at the distance of about three inches each way from each other. You cannot have good strong stocky plants without pursuing this method. If left standing in the seedling-bed, they will grow spindling, weak, and consumptive. No more attention is required, excepting that of keeping the plants perfectly free from weeds until August, when you will find the plants strong, healthy and vigorous.

Any time in this month dig your trenches eighteen inches deep, and as many wide. For this purpose I generally occupy the ground that has been used for early peas.

The quality of the celery, and chiefly its growth, depends entirely upon the next step. The trenches should be half filled with thoroughly cured stable manure. I have found the manure used for early hot-beds the best. It never fails of success. The increased fermentation of the manure, by the repeated waterings of the beds, the escape of the ammonia and noxious qualities of the manure render it sweet and capable of imparting the mildest and richest flavor to the plant. If fresh manure from the yard, of whatever kind, is used the celery will invariably grow strong and rank, with as little delicacy of flavour as there is in manure. With a garden fork of four tines, strike through the manure in the trench into the earth beneath and bring it up fresh, carefully mixing it with the manure as you proceed from one end of the trench to the other. Attention to this point is indispensable to the growth of good celery.

The plants taken up should be trimmed about the crown, just at the top of the root; all the young suckers taken off, leaving the plant trim and neat, with all its main stalks. With a dibble, which should be as large as the handle of a spade, as the roots will now be of considerable size, begin at one end of the trench with your face towards the other, and set in a single row of plants in the middle of the trench, and not less than six inches asunder; water them well. No tetotaler loves water better than does celery. It cannot have too much. The roots of this plant require more room than is generally allowed them, as any one may see when they are taken up for the table.