turnips in Ontario exceed these."—to satisfy his craving after knowledge, I herewith send you a tabular statement of 'some turnip raising' in North Wellington, as originally communicated to the *Elora Observer*, by Mr. Beattie, and would particularly call your correspondent's attention to No. 4 in the table, as well as to the note. DOMINIE.

PILKINGTON, Nov. 21, 1867.

NOTE BY ED. C. F.—We have not space to publish the whole of the tabular report sent us, but would state in reference to the above communication that the best yield was that of Mr. John Brockie, of Nichol, (the "No. 4" mentioned above), who raised 1,150⅞ bushels per acre. The drills were twenty-seven inches apart, and the space between the turnips was nine inches. Twelve loads per acre of farm-yard manure had been applied in the spring, and in addition fifty pounds of plaster per acre were applied after the second hand hoeing. The turnips were sown between the 15th and 20th of June, and singling commenced on the 4th July. The next yield was that of J. and F. Rennie, of Garafraxa, who raised 1148 bushels to the acre, having applied twenty-eight loads of manure to the acre, besides plaster. Alexander Watt, of Nichol, followed very close in the competition, and had raised 942½ bushels to the acre. The spaces between both drills and turnips were larger than in the preceding instances, being twenty-eight and twelve inches. Fifteen loads of barn-yard manure had been applied. Robert Irwin, of Pilkington, raised 926 bushels, and W. B. Telfer, Pilkington, 921 bushels to the acre. The Judges' note referred to is as follows:—

The 'loads' are understood to be waggon loads.

The Judges, for their own satisfaction, weighed a rod square amongst the largest of Mr. Brockie's turnips, and found them to weigh at the rate of 1220 bushels per acre; and at Mr. Rennie's request they weighed a plot amongst a few drills of "East Lothian Purple Tops," growing side by side with "Sutton's Champion," and ascertained it to yield at the rate of 1237½ bushels per acre.

"It may also be mentioned that they weighed another field for Messrs. Hunter, with larger turnips than the other, but which yielded only 789½ bushels per acre; width of drill fully thirty inches; distance apart twelve inches, but somewhat irregular."

Culture and use of the Teasel.

ALTHOUGH teasel heads are now very generally superseded by belts of fine wire cards, worked by machinery yet it may be interesting to furnish a few particulars about this special culture, which is still carried on very generally in this country, in North America, and on the Continent.

The fuller's thistle (*Dipsacus fullonum*) is cultivated in Yorkshire and woollen cloth manufacturing districts for its rough flower heads, which are used in raising the nap upon cloths, which is done by means of the rigid hooked awns or chaff of the heads. The teasel throws up its head in July and August; these are cut from the plant with a peculiarly formed knife, and then fastened to poles for drying. When dry they are picked and sorted into bundles. Upwards of twenty million teasel heads are annually imported into the United Kingdom from France. The use of the teasel heads is to draw out the ends of the wool from the manufactured cloth, so as to bring a regular pile or nap upon the surface, free from twistings and knottings, and to comb off the coarse and loose parts of the wool. The head of the true teasel is composed of incorporated flowers, each separated by a long, rigid, chaffy substance, the terminating point of which is furnished with a fine hook. Several of these heads are fixed in a frame, and with this the surface of the cloth is brushed until all the ends are drawn out, the loose parts combed off, and the cloth ceases to yield impediments to the free passage of the frame of teasels.

Should the hook of the chaff, when in use, become fixed in a knot, or find sufficient resistance, it breaks without injuring or contending with the cloth; and care is taken, by successive applications, to draw the impediments out. The dressing of a piece of cloth consumes 1,500 to 2,000 heads. They are used repeatedly in the different stages of the process; but a piece of fine cloth generally breaks this number before it is finished There is a consumption answering to the proposed fineness, pieces of the best kinds requiring 150 to 200 runnings up.

It is worth while for farmers to consider whether teasels, as a crop, are not worthy of more attention. We have seen it stated that a fair average crop is 200,000 burrs per acre, and a fair average price is one and a half dollars a thousand. Their cultivation is not a new thing in the States, though but little attended to. Nor is it difficult. A Mr. Wills, of East Windsor, Connecticut, grew them many years, and found them profitable. The most suitable soil is a rich, clayey loam, of rather a moist nature, such as would produce two tons of hay per acre. The time of planting is when the ground is in good order, about the 1st of June. In about two weeks the rows can be seen, when a hand or horse hoe must be put to work. At the second hoeing the plants may be thinned out, leaving them four or five inches apart.

The after culture is to keep the ground absolutely clean till about the middle of November, when the plants are covered with straw, held in place by earth, to remain till the 1st of May, or till freezing nights have passed, when the plants are uncovered, and the weeds kept down till the plants grow, as they soon do, to cover the ground closely. Soon after the flowers drop, the burrs must be cut with the stems about four inces long, and carried to the drying house, where they are spread upon shelves of poles, or small rails, in tiers one above another, so as to give free circulation of air. They may be placed a foot thick upon shelves of this sort. A good hand can cut 15,000 or 20,000 a day, and the harvest should commence by the time half the flowers in a field are off. The top burrs drop their flowers first; these are called "kings," but are not quite so good as the burrs next below, which are called "queens." A stalk has from four to six No. 1 teasels, and twenty to thirty, and sometimes fifty which are merchantable. The most common method of disposing of the teasel stalks is by mowing, drying and burning on the ground. Two crops in succession generally do well, but more than that is not recommended. The growing of fuller's thistles, in Austria, was commenced as far back as 1827, and furnishes a yearly produce of about forty to sixty millions of teasels, representing a value of about 100,000 florins, and the gross profit is 200 to 300 florins per yoke of land. In commerce, these teasels, which rival the Styrian and Bavarian in quality, are packed in boxes, and sell at one to three florins the thousand. The heads of the wild plants are less strong and serviceable than those of the cultivated plants. The fuller's thistle is indigenous in France as in England, and the bees find an abundant harvest in the fields where they are grown; as each head contains more than six hundred flowers, there are necessarily millions of flowers on an acre of land.

In France the culture is carried on around Louviers, Elbeuf, Sedan, Carcarssone, and other seats of the woollen manufacture, and the teasel heads of the wild plants are utilized, to some extent, in the factories. The harvest there commences about the middle of July, when the flowers have fallen from the heads, and the teasels are of a whitish color The heads are sorted according to their size, the finest being termed "males," and the others "females." The best are those which are long, cylindrical, and armed with fine hooks. The produce of each head is about five teasels; but in good soils and favorable seasons it reaches seven to nine, which would yield twenty to thirty bales per hectare.—*Technologist.*

ROTATION OF CROPS.—Gen. N. H. Halstead of Newark, N. J., President of the New Jersey Agricultural Society, whose farm on the Pacific gives evidence of his skill in management, recently gave the following account of the system of rotation pursued by him for enriching his grass lands, the success of which is shown by the fact that he often obtained three and sometimes four tons of hay per acre:—1st year.—The ground having been ploughed and harrowed, clover is sown alone, or without any grain or other crop, early in the spring, and remains untouched during the season. 2nd year.—A crop of clover hay is cut in June, and the second crop is turned under with the plough for enriching the land—remaining inverted all winter. 3rd year.—Corn is planted by manuring in the hill and dressing with ashes; and after cutting up, the stubble is ploughed under in ridges for winter, by first inverting the line of hills with a furrow, and then turning two other furrows upon it. 4th year.—Manure is applied early in the spring, and oats sown—or the manure is spread on the oat stubble—or both. Lime is applied to the oat stubble, which is harrowed before ploughing. Turnips are then sown, (the strap-leaved) and the crops removed before winter. 5th year.—Early potatoes are manured in the furrow, and after digging, the land is subsoiled, and rye and timothy grown. 6th year.—The following year the rye stubble is rolled, and fifty bushels per acre of manure added. This finishes the process, and the field is laid aside to grass for ten or twelve years. The land is sandy loam, and heavy cattle are not allowed to tread upon it.

The Dairy.

Advantages of Spayed Cows.

IN a notice of Prof. McClure's late work, the *Utica Herald* says:—

We add another extract from the work on the *advantages of spayed cows*, a subject which perhaps will be of interest to dairymen, especially at this time, when there is so much difficulty in obtaining good milking stock, and so many losses are constantly arising from abortive cows. The following reasons are given by the professor why dairymen should spay their cows when not intended for breeding:—

"1. Spayed cows are more easily kept in good condition than cows not spayed.

2. They are less liable to sickness of an epizootic kind, and when sick, more certain and easy of cure.

3. When epizootic diseases are present in the vicinity, or even in the herd, spayed cows are always in condition and fit for the butcher, and to prevent loss and save expense in the treatment with the attendant risk of loss of some, and loss of condition and milk of all that are affected, they can be sold, not at a loss, as is the case with cows not spayed, and when pleuro pneumonia is among them.

4. Spayed cows give the same quantity and quality of milk all the year round, if they are properly fed and cared for.

5. Ten spayed cows will give the year round as much milk as double the number of cows not spayed, thus saving the interest on the outlay for ten cows, together with the absence of risk from loss of some of the principal by the death of one or more from sickness or accident, not to speak of the feed of ten cows. The feed of ten cows and the manure of ten cows, the farmer can best tell the difference in their value.

6. With spayed cows there is no risk to run from milk fever, nor trouble with cows called bullers.

7. Spayed cows are easily fattened.

8. Spayed cows cannot abort or slink their calves."

The disadvantages are summed up under the two following heads:

"The expense of the operation and attendant risk of the animal dying, although this is not great—about one in a hundred—and the expense of the operation will be from $3 to $5, which will depend upon the distance the operator has to travel, and how many animals are to be operated upon.

"Spayed cows are apt to accumulate fat and flesh, so that they will become dry much sooner than cows not spayed. Still there can be little loss, for a fat cow is always ready for sale. These, then, are the objections to spaying cows, if objections they may be called. We now leave the subject to those who are immediately interested."

We have never heard of any trial being made of spayed cows in the dairy districts of New York, but have frequently seen statements of the profits resulting from cows which had been spayed in Europe. The question of profit is one of considerable importance to the dairymen, and we should be glad to see the experiment tried on a few animals, at least, to fully test its comparative merits.

☞ A Massachusetts farmer says he can winter his cows on steamed feed for one-third less expense than on dry feed, and get one-fourth more milk. This is the result of five years' experience.

☞ The influence of food on the quantity of milk is very striking. A half-starved cow not only yields but little milk, but what it yields is miserably poor. On the other hand, the liberal supply of food rich in nitrogenous and phosphatic elements of nutrition tell directly on the milk. Nothing, therefore, can be more injurious than to stint dairy cows in food.

STILTON CHEESE.—The manufacture of this cheese, justly renowned for its many commendable qualities, was begun by the Scarboro cheese factory late in the past season. An improvement has been effected by this company in the manner of packing the cheese, it being put up in porcelain pots instead of the cans, as is that of English manufacture. It is thus less liable to mixture with foreign and unhealthy ingredients. The company have been, since starting, extensively manufacturing Cheddar cheese, a description for which they took first prizes at the last Provincial Exhibition, and at the Scarboro, Pickering, and Yorkville shows, and twice in Toronto.