Heavy Turnip Crop.

To the Editor of THE CANADA FARMER:

SIR.—I clip the following from the *Dumfries Courier* of Jan. 10, 1865:—"Mention was made in summer of a very luxuriant-looking crop of turnips on Boatholm, New Galloway, in the occupation of Mr. Rooke. The field gained the first prize offered by the Glenkins Society in autumn. On Thursday last the weight of the crop was carefully tested, when it was found to amount to 44 tons, 18 cwt., 1 qr., 2 lbs. per acre. The turnip sown was Dickson's Bronze Swede, and the manure applied was 27 cart-loads of dung, 5½ cwt. ground bones, 1 cwt. Upper Peruvian, and ½ cwt. best Peruvian guano per acre. It is believed the crop would have been heavier than it is but for a flood of the Ken that covered the holm in October, and for a time stopped the growth of the plant." At the turnip match for North and South Wentworth, reported in a former number of THE FARMER, the heaviest crop was 835$\frac{37}{56}$ bushels per acre. In THE FARMER of December 15, there is noticed a turnip crop in Markham that yielded 1,140 bushels per acre. The above noticed heavy crop gives 1 676$\frac{33}{56}$ bushels, being rather more than twice as heavy as the premium crop in Wentworth, and nearly one-third heavier than the Markham crop. It seems to have been very highly manured. W. R.

Cobourg, Feb. 8, 1865.

The Best Size for Potato Sets.

MR. G. MAW, of Broseley, gives in the *Gardener's Chronicle* the result of his observations on the crops yielded by potato sets of various sizes. The following passages are extracted from his communication:—

"During the last season, I have carried out a series of experiments, with the object of ascertaining what sized potato sets gave the most profitable crop, and the results have been so striking, and present such decided contrast to general practice, that they appear to me to be of sufficient importance to publish in your columns.

"My experience during the past year, convinces me that from one-fourth to one-third of the natural produce of the potato crop is lost, solely from insufficiently large potatoes being planted; and that, by a proper selection of sets, an increased crop, representing a clear profit of several tons per acre, can be obtained.

"On the 16th of February, I planted in rows, two feet apart, and one foot from set to set in the rows, 60 uncut sets of early prolific potatoes, viz:—

20 sets weighing 2 oz. each.
20 sets weighing 4 oz. each.
20 sets weighing 8 oz. each.

The 20 sets of 2 oz. each (2½ lb.) produced 21 lb. 3½ oz.
The 20 sets of 4 oz. each (5 lb.) produced 29 lb. 6¼ oz.
The 20 sets of 8 oz. each (10 lb.) produced 35 lb. 3½ oz.

"Another experiment was made with second kidneys, planted at intervals of a foot, in rows two feet apart, on the 31st of March, viz.:—

20 sets of 1 oz. (1¼ lb.) producing 15 lb. 9 oz.
20 sets of 2 oz. (2½ lb.) producing 16 lb. 15 oz.
20 set of 4 oz. (5 lb.) producing 19 lb. 15 oz.

On the 31st of March I also planted four lots of flake potatoes, in rows two feet apart, each lot occupying 40 square feet of ground, namely:—

20 sets, 1 foot apart, of 1 oz. each (1¼ lb.) producing 15 lb. 2 oz.
20 sets, 1 foot apart, of 2 oz. each (2½ lb.) producing 15 lb. 0 oz.
20 sets, 1 foot apart, of 4 oz. each (5 lb.) producing 18 lb. 12 oz.
16 sets, 1 foot 3 inches apart, of 8 oz. each (8 lb.) producing 30 lb. 12½ oz.

Mr. Maw, after dwelling particularly on the facts above detailed, and mentioning the somewhat similar results of further experiments, thus generalizes from what he has observed:—"It would seem that small sets cannot produce such a vigour of growth as to fully develop the potato-bearing capabilities of the soil. I believe that potato sets are seldom planted of much more than 2 oz. in weight—4 oz. sets are certainly the exception—so that, as a rule, the potato crop is starved from an insufficient vigour in the set.

"This question is in no way related to that of thin seeding. The distance at which the sets should be placed is another matter, upon which I will not now enter, excepting to observe that I think, when small sets are planted, they are not put nearly thick enough in the rows. My experiments prove that the ground is capable of bearing a much greater weight of tubers than can be generated from 2-oz. or even 4-oz. sets, planted a foot apart; and I believe that such small sets, if placed at 6-inch or 8-inch intervals, would produce nearly as much to a root as if at a wider distance, and, of course, a much greater weight per acre; but upon this point I hope to experiment during another season.

"What I now wish to establish is, that the produce of the crop depends, much more than ordinary practice would seem to admit, on the size and vigour of the individual set. Small potatoes are diminutive in all their parts; the eyes are proportionately small and cannot produce such strong shoots as full sized tubers.

"All the 8-ounce sets I planted appeared above ground with remarkably strong and vigorous shoots, which maintained their superiority over those from the smaller sets throughout the whole period of growth, and no one who saw their splendid tops—nearly double the height of the others, could for a moment doubt what the result would be at the harvest.

"With potatoes nothing is easier than to select the largest tubers for planting. If the generation is to be conveyed through the smallest individuals of the crop, the gradual diminution of the produce is a matter of certainty; but if the potato were treated like live stock, and the finest individuals only allowed to generate, its gradual but permanent improvement, on the theory of inheritance, would be as certain, and the immediate increase of the crop could not but leave a rich profit over the extra weight of potatoes planted.

"This is a very simple matter of experience, which any one who has a garden can prove, at little or no expense, by planting a number of potatoes of various weights, and noticing whether the larger potatoes do not produce an excess of crop over the small sets, vastly greater than the extra weight of the set planted."

Two Flax Crops.

To the Editor of THE CANADA FARMER:

SIR.—Owing to the too frequent failure of our grain crops, farmers are desirous to know if it will pay to raise flax Forty years ago, when we lived the primitive life of a backwoodsman; when cotton cost seventy-five cents, and a dollar, per yard in cash; when cash could only be had for potash and black salts; we were under the necessity of growing flax. I will give a little of my experience in flax-growing. I raise crops by rotation, breaking up a piece of sod every year, taking five or six crops, and then seeding down with grass. The last crop but one, is a root crop, which I manure well, and seed down the following year with barley or wheat. I think it best to have the land in good heart when I put into grass.

In 1862 I manured a field of six acres for potatoes and turnips; it was a dry summer, potatoes were not half a crop, and turnips were an entire failure, owing to the fly and the drought. In 1863 I selected ¾ of an acre, of what I thought was the richest and most suitable of last year's turnip ground, for flax. On the first week of May I sowed a bushel and a peck of seed on it. I had sown the potato ground with barley, and the rest of the turnip field, about 4 acres, with spring wheat. The season for flax and grass was all that could be desired. The spring wheat that promised a yield of 30 bushels, scarcely gave 11; barley gave at the rate of 30 bushels per acre. A storm of wind and rain, a few days before we commenced harvesting the flax, tangled it so that the pulling of it was a tedious process, and considerable of the seed was lost. I sold the flax unweighed for fifteen dollars. I had the seed returned, of which I had ten bushels, which I sold for fifteen dollars. The expenses for preparing the land, seed, and harvesting, would be about seven dollars, leaving a margin of $23 of profit, from three-quarters of an acre.

Having succeeded pretty well in flax-growing in 1863, I concluded I would double the quantity of ground in '64. About the beginning of May, I selected half an acre of turnip ground, soil loam, and sowed it with flax, and about the middle of May I sowed an acre more on what had been wheat stubble; it being the second crop since it was broke up; it was clay soil, and had been in pasture for about six years. It was well ploughed in the fall, but the spring being unusually wet, instead of ploughing, I cultivated it well with the cultivator We all know the result of the dry season on the crops of 1864. I don't think I exceed the truth when I say, they generally were not one-third of the usual yield. We pulled the flax without kid gloves; it was a tedious job, and scarce worth the labour. When there is a failure in the grain or hay crop, there is generally a rise in the price, but there seems to be an exception in the case of a poor crop of flax. In '63, good flax brought twenty dollars per ton, without the seed. In '64, it was selling from ten to fourteen dollars per ton, with the seed. I have thrashed the seed of my nice little crop of flax, but I have no thought of taking the fibre to market, as I don't think it would pay for the trouble. If flax can be raised with profit, no doubt farmers will raise it; but let them observe the old maxim—"Sow your flax in the mire" [on low land]. "Plant your corn in the fire" [on high dry land] PIONEER.

London, March 2, 1865

SPREADING MANURE IN AUTUMN.—We have strongly urged this practice for several years. At first the advice was received with strong objections from some quarters. We are glad to observe the practice is gaining ground and its advantages becoming appreciated. A late number of the *Genesee Farmer* says:—"Mr Lyman Balcom, of Steuben Co., an old and experienced farmer writes me that he thinks 'one load of manure, hauled out and spread at any time between the 20th of September and winter, is worth more than two loads applied at any other season of the year.'"—*Country Gentleman.*

A CHEAP HOME-MADE GATE.—I take five pieces of inch boards, each ten feet long, one of these eight inches wide for the bottom strip, and each of the others four inches wide. I then take one piece four inches wide for one end upright, and one piece eight inches wide for the end piece where the hinges are to be. These end strips are four feet long, that being high enough for any gate for ordinary purposes. Now lay down your end piece, then place the eight-inch wide and ten-foot long strip for the bottom, nail it at each end to the upright with wrought nails: now take three of the four inch wide strips and lay them on parallel with the bottom one, dividing the spaces so as to leave four inches between the lower two boards, and six inches each space between the upper ones; nail as before. Now turn the gate over, and take the remaining strip, lay it at an angle from the bottom, at the hinge end, to the top, at the latch end; cut it so that it will fit in and lay close to the long strips; nail it thoroughly. Now hang with strong hinges and you have a gate that is light, and will not sag, and just as perfect against cattle as one made by a joiner, and costing from three to five dollars. Any person can put together and hang such a gate in two hours.—*Cor. of Ohio Farmer.*

A PROFITABLE PIECE OF GROUND.—The following is taken from the *Massachusetts Spy*, communicated to that paper by Wm. Eaton, of Auburn, Mass.:

I planted this year three-quarters of an acre of ground. I planted most of it with the early white potatoes, and raised eighty bushels on the piece, and sold sixty-five bushels for $130 50. The other fifteen I valued at $25; value of corn and corn shocks, $11; peas, beans and beets, $12. About September 10th, my brother sowed two-thirds with turnips. Two-thirds of them were fed to the fat cattle, with tops and all on, and cut thirty-one bushels. If all the piece had been sown with turnips there would have been $62 worth.

The way I managed was thus: I gave the ground in the first place a thorough plowing, eight inches deep, and then a thorough harrowing. Then I struck it out both ways with a small horse plow, and after that a good shovelling in the hills. I hoed the piece three times; I put one plow both ways every time I hoed it. This half hoeing, half ploughing, half manuring, I don't think much of. The manure I used was from one hog and one horse, and the wash from the house, and what ashes I had. The beet bed was sixteen and a half feet long and five feet wide, and I used hen manure. I raised four and one-half bushels of turnip-beets on the piece. When the beets were out of the ground I gave them a good sprinkling of ashes. In the fall I gave my hog pen a good coating of loam about eight inches deep. In the spring I put my horse manure in the pen and give it a thorough working over. In the fall I got it out into the field and gave it another working over. Where I laid the heaps of manure, the potatoes were one-third larger, and yielded one-third more. When I dug the potatoes I covered the vines and weeds all up, thus keeping the ground light for the turnips. If you will thoroughly manure the ground you plant, you will get your reward for your labour. We, brother farmers, go over too much ground, and manure and hoe too little