

## Harvesting the Root Crop

By E. L. McCaskey.

I HAVE been asked to contribute my experience on harvesting the root crop to the reading columns of Farm and Dairy. Such a plain, practical, prosaic operation as pulling roots out of a field and putting them in a cellar, did not at first seem to me a proper subject for an article. I did not think I could say anything that everyone does not already know. However, I thought the same of my silo filling article which appeared in Farm and Dairy a few weeks ago, and found that many had gotten helpful hints from it, so I am emboldened to contribute the following:

I will confess "right off the bat," as the boys say, that my root acreage is limited to from two to five acres. I grow from four to 10 times as much corn as roots. But I will never go out of roots entirely as they are an important adjunct to the feeding ration. The greatest difficulty that I have experienced in growing the crop is the excessive amount of hand labor required and in harvesting as in all operations, I have endeavored to cut down this expensive item and find the easiest way.

### Mangels

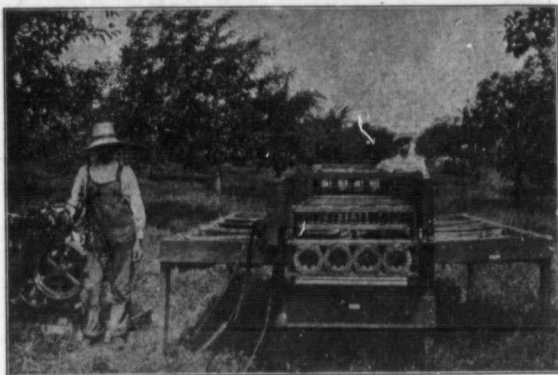
In harvesting my mangels, I have always gone on the assumption that they are to be broken as little as possible as they have a slight tendency to bleed and, I always thought, rotted more quickly when broken. Our plan is to pull by hand and twist off the tops, rather than cut them. As we practice level cultivation, the roots usually stand well out of the ground and are easily lifted. Occasionally, however, the crop will be hard to pull. Then we run down one side of the row with a light walking plow, throwing the furrow away from the mangels. A slight tilt out toward the furrow then makes them easy to lift. Four rows are thrown into one for convenience in loading.

This is the way I have always practiced. A few months ago, Mr. Alfred Hutchinson described an entirely different way in Farm and Dairy and a much easier way. He has given up the idea that mangels must be handled like eggs and be tops with a hoe and pulls them out with a harrow. This practice is so at variance with all my preconceived ideas of how to handle mangels, that I am not willing to try the method out on my whole crop. I am harvesting a half an acre or so this year according to Mr. Hutchinson's method and if it is successful and the roots keep well, it will reduce the expense of handling the mangel crop very considerably. I would add as a final word that mangels must not be frozen and should be in the cellar ahead of injurious frosts.

### Turnips

About half of our root acreage is annually devoted to turnips, this to divide the labor. Turnip seed is sown later than mangels. The plants are singled later and the harvesting can be delayed two to three weeks after mangel harvest, as freezing does not seem to permanently injure the turnip crop. Our plan is to go up and down the rows with a sharp hoe, topping two rows into the one row between. We have become so expert at this that we can take the tops off just as fast as we can walk. We then run a plow under the rest, turning the turnips out on the tops and, of course, turning two rows in together. We then let the turnips lie for a day or two in order that the soil adhering to the roots may dry and drop off and then throw them on to a cart. The carting dislodges some more soil. When put into a cellar, the roots are run for several feet over a slatted shoot which removes practically all of the rest of the soil adhering to them. This is a rough and ready method of handling the crop

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Apple Grading for Uniform Size Is Made Easily Possible by the Apple Grader. The apple-grading machine, with side rooving tables, as used at the Oka Agricultural Institute. Note the gasoline engine at the left, which provides the power. This is the same engine that is used on the spraying machine.

## Grading and Packing Apples

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ALL other things being equal, the article placed on the market in the most attractive manner and package will find the readiest sale and command the highest price. This fact has led the manufacturers of staple articles of commerce to put their best grades in attractive packages.

The advisability of marketing farm produce in as convenient a form as possible for handling is universally admitted, and the advent of the apple box, even in our Quebec Province, for such apples as Fameuse, McIntosh, and Wealthy, has marked the entering wedge in the better organization of the orchard. The reason the apple box is so well liked is because only well-graded and uniform apples can be thus sold in the same box, as the different packs adopted will not come out true if the grading and sizing has not been well done.

There is no reason not to grade and size uniformly even apples of first quality that enter into a barrel. The barrel, it is true, has for so many years been the cloak which covered, not so much inferior grades of apples, as ungraded and un-sized apples. The barrel has seemed to encourage carelessness in grading, for how many times have not inspectors seen the top and bottom artistically faced, and in the space between have found the general run of the pick?

### Why Not Uniformity?

The law on apple grading for No. 1 apples is not so very exacting, as we may put in the barrel apples of well-grown specimens of one variety, sound, of not less than medium size, etc. Of course a medium-sized apple differs from a large and a very large apple, so there is considerable latitude left, and in one barrel one can find medium, large and very large apples. Could we not put up a barrel pack by which we could put in one barrel the medium, in another the large, and in a third barrel the very large specimens of the same variety, but at the same time have still a No. 1 pack? In a word, could we not get a uniform pack of apples of quality No. 1 in the barrel as well as in the box?

It can be said in favor of this practice. It gives the buyer a more favorable impression when all the fruit within a given package is of uniform grade and size. As certain dealers re-

quire large apples for their trade, and others demand a rather medium size, the practice has an economic importance that we can readily understand.

The objection is sometimes heard that large apples packed by themselves do not carry as well as a mixture of medium and large-sized apples. This has not been the case with us in our shipments of barrels packed in a uniform grade.

### The Grading Machine

The real objection comes from those grown who say that the grading of No. 1 apples in uniform sizes is quite a job. I admit this, and yet no packer can put up a uniform pack that has not been accurately graded. Here is where the grading machine comes in to help the fruit grower.

We have been using a grading machine at Oka for the last two seasons, both for barrel and box packing. Now we would not do without it. As most of our apples are packed by the students at the College, who thus have a great chance to acquire some practical experience in packing apples, one readily understands the usefulness of such a machine. The boys handle only fruit graded very accurately and of uniform size.

The machine, I find after two years' experience, does not bruise the fruit. If there are any apples that are bruised, it is either in picking them in the trees and not taking enough care during their transport to the grader, or there is bruising caused in emptying boxes or baskets upon the canvas feeding table at the upper part of the machine. We have avoided this bruising by using special baskets which we have made here in Oka, and which open by the bottom.

If there ever was a machine that would pay for itself by its work and in saving of labor, this is one of them. Where enough fruit is packed to warrant the investment, I strongly advise its use. It is easily operated and very simple, and is easily put up when it arrives in pieces, as the pieces are tagged and numbered.

Early frosts are holding off well and the corn crop is getting an excellent opportunity to mature and make richer ensilage. It is usually wise to risk frost rather than ensilo the corn too soon.

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