

crisis fall, on the manufacturers, the railroads, the banks or on the farmers? On the farmers of course. Then we should produce more, and there is no way that we can boost our agricultural resources better than by underdraining. If the farmers of Ontario would thoroughly drain their farms we could more than double our production in three years. If our Government does not pay these moneys my neighbors and I will no doubt come out somewhere, somehow, but what about the other fellows that are thinking about taking this means of draining their farms? This will block them at once. Then there are the men who have ventured so much in ditching machines, and the men who are thinking of purchasing machines. They need to be encouraged to bring in more of

them so that every farmer will be able to take advantage of them. On the other hand there is the Government agitation, the surveys, and the bulletins that have done much towards encouraging drainage. Will all this be thrown to the wind? Is it policy to do so? I say again it would be a breach of good faith. But after all I am not so much alarmed, it will come out all right yet. It is only another case of the old battle cry, the farmer will have to fight for himself or he will be left out of the race. We farmers have a battle on at home which is almost as essential in its outcome as that at the front, and I believe we are just waking up to the fact that we are capable of fighting for ourselves.

Kent Co., Ont.

CHAS. WHITMAN.

weather is wet there is danger of too much dirt going in the cellar. A good man can mattock out big roots as fast as another can top them with a hoe, and it is certainly more easily done than hand pulling.

Some plow out the roots. The moldboard is taken off the plow, and a projecting share cuts the roots. Two rows are turned into one, and afterwards the harrow is run over the rows lengthwise to rattle off any dirt which may adhere to the fibrous roots.

Those having a potato digger with a revolving wheel behind can often use this implement to advantage in taking up the turnips. The digger is run under the row and cuts the roots, which have nearly all the dirt removed by the revolving wheel which gives them quite a toss out behind.

Picking up must be done by hand or with a fork. We have seen very good time made where the roots were in rows with a large ensilage fork. Some use the common manure fork, and others, not inclined to bend their backs, an ordinary pitch fork. Hand picking is the most common practice, but in big rows the ensilage fork is just as fast and takes the back-ache out of the work.

In pulling white, grey-stone or soft turnips the harrow is injurious, by hand, the mattock or the plow being preferred.

Where at all possible unloading should be done with dump boxes down a trap door into the cellar. These boxes should have slat bottoms to allow the dirt to screen out, and the roots should be run down a slat-bottom spout to the cellar. It is well to throw all roots back from immediately under the trap or window through which they are dropped. This gets them out of the dirt and prevents loss from heating and decay. Where it is impossible to use dump boxes and the roots must be unloaded from an ordinary box, a long spout with slat bottom should be used. The scoop shovel hastens the unloading,

but it is heavy work. A hole is picked in one corner of the load and the shovel started. Some use the ensilage fork for this, and it works very well and is not so heavy to handle as is the shovel. Throwing back in the cellar is generally done on rainy days. Be careful to give the roots plenty of air. Leave all inlets open until severe frosts come. If it is necessary to pit any, plow out a pit bottom and clean it off about eight or nine inches deep. Pile the roots to a depth of 4½ or 5 feet in a long conical pile. Cover with straw only until hard frosts come, then

put six or seven inches of dirt on top of the straw. Place a few three or four-inch tile on end along the top to let in air, and the roots should keep well. Harvesting roots is work from start to finish, and all the ache will not be out of the backs of those engaged therein until after the last turnip or mangel has gone down the hole to the cellar.

THE DAIRY.

What is the Matter With Western Ontario Creamery Butter?

Editor "The Farmer's Advocate":

A great many are asking the question placed at the head of this article. Some of the editorial comments on the fact that Ontario butter was unable to win any prizes at the recent Canadian National Fair, have been rather severe. It does seem strange that at Toronto, the Ontario creamerymen were blanked for prizes, and that the next week, at London, they did very well. Had the judges anything to do with this? It is a well-known fact that one set of judges will place a lot of butter or cheese high, while another set will place a similar lot comparatively low, because of the difference in judges' standards, if there is such a thing. In judging butter and cheese, every judge is largely a law unto himself. It is true that he has a scale of points to guide him, but in the application of the scale there is no standard method. This is one of the difficulties in judging dairy products.

However, after making all due allowances for

Taking the Back-ache Out of Root Harvest.

Any farm boy or farmer himself who has had experience with harvesting the root crop will not hesitate to confirm the statement that turnips, mangels, and sugar beets put the ache in back-ache. Anyone who can contrive to get the roots lifted without a back-ache owes it to his fellow farmers to let them know how it may be done. Anyone who can eliminate a part of the ache is doing good service. This article will not prove a complete remedy, but it may help some to bend their creaking backs with less fear of breaking, and with fewer painful face contortions than if they harvested all their roots by the old way.

To start with we wish it understood that there is very little that is really new in this article, but some of it may be new to someone and many may try some of the methods outlined for the first time, although they have been acquainted with them for years. The novice must disabuse his mind of any idea that he may have of getting up the roots without hard work. It is strenuous exercise under the best of conditions.

MANGELS.

Owing to their being injured by sharp frosts mangels are the first to be lifted. The work should commence early enough that the roots are not blackened by frost, otherwise rot may ensue where the discoloration takes place. It is always best in harvesting this crop to draw in all the roots the same day as they are pulled, as they are much more likely to be frosted if pulled and left on the ground than when standing with their tops for protection, and the bottom part of the root under ground. If they must be left out for one or more nights it is good policy to throw them in small piles and cover over with tops. The tops can be forked onto the piles, and a light covering is all that is necessary to prevent frost bites.

As a general thing pulling is done by hand, and it is not any easy matter to take the back-ache out of the job. We know one boy who did it. He was working along with the owner of the farm, a big, able-bodied man, and in keeping up his end had rather a difficult task. But the boy was made of the right kind of stuff, and when his back tired he bound a couple of old twine sacks around his knees and went down on them to the relief of his spinal column, and to his credit be it said he kept up his end and quit at six o'clock fresh and good natured. He held to the belief that he could get a new pair of overalls, but could not obtain a new back.

Nearly all the mangels grown in Ontario are pulled by hand, and most of them are topped by a quick jerk or have the tops twisted off by hand. It is claimed that this method injures the root less than where a knife or hoe is used in topping. Growers are getting on to the fact that intermediate and globe-shaped varieties pull a little more easily than some of the longer varieties, and many grow them for that reason. Some go so far as to top these round or intermediate sorts with the hoe and harrow them out with a light harrow, claiming that the roots are not seriously damaged and that they keep all right. The hand method, however, is still most relied upon.

Some time ago we read of an arrangement which a grower made to pull his mangels, consisting of a V-shaped puller made of old lumber. The front end is formed of two one-inch boards about six inches wide nailed together to form the V. Across the wide end of the V is placed a piece of scantling, and to this scantling the whiffletrees are fastened. Straight back from the scantling are two pieces of plank set on edge to form "runners" and about six feet long. From these scantling two boards extend out as wings on either side back of the V-shaped front. Rough boards are nailed on the top of the frame so built, and stones are placed on front of the frame just back of the V to keep the front end down. The driver stands on the back end to give added weight. This is drawn along between two rows of mangels. The V-shaped front forces the mangels from the ground and a little to one side. Any not so forced out are pulled by the wings of the implement. As the puller is hauled back between the next two rows the same process is repeated, throwing two rows into one. These

mangels are topped with a hoe before pulling commences. We have never tried this puller, but some may like to see what it will do. Some who have tried it speak well of the method.

In pulling by hand the best method is to pull two rows each time across the field, going down two and back two, putting four rows into one. There is then room for the horses and wagon between the pulled rows, and it is very handy to load the wagons. Some load with the fork. For ease it is all right, but for speed the hands win.

TURNIPS.

Later on just before freezing-up time comes the turnip harvest. Swede turnips being much harder than mangels are not injured by knife or harrow, and so it is not imperative that they be hand-pulled. Many, however, still pull by hand, and top with a heavy knife with a hook on the end and made expressly for the purpose. The



A Comfortable Farm Home in Prince Edward County, Ont.

roots are thrown four rows into one, and the tops kept separate. This is a clean way of taking up the crop. One clip with the knife severs the bottom of the root with adhering dirt, and another clip takes off the top and the turnip drops. Good pullers lift an acre a day, but many work hard at half the quantity.

Most growers nowadays prefer to top the turnips with a heavy and good sharp hoe, after which they are pulled either with a mattock or the harrow, or may be lifted with the plow or other implement rigged to suit the purpose. A good man if he works can knock the tops off two acres of turnips per day, and with the harrow pulling is a short job. It is much easier and is done in shorter time, but it takes longer to pick up the roots. Two strokes crosswise of the rows and a third lengthwise to rattle off the dirt generally makes clean work of the pulling. If the roots are topped two or three days previous to harrowing out the tops wither and do not clog and pile up in the harrows so badly. If top too long before pulling. Some rake up the tops and draw them off before harrowing. This saves trouble in picking the roots out of the piles of tops, but on the whole is not a saving drawing. This saves the loss caused by wagons crushing roots and facilitates picking up the roots. It may be done to good advantage where the roots are small; where they are large not so much time is saved.

An implement which is much used, especially in dry weather, when no mud sticks to the roots is the mattock. The roots which have been topped with the hoe are mattocked two rows into one, and are very handy to pick up. If the

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