

in the other style given above, the frame below would need to be tie-braced, or have beams or rods across.—Editor.]

The Origin of a Popular Old Oat.

In the helpful series of contributions on the subject of seeds and seeding, running through "The Farmer's Advocate" lately, readers will have noticed a marked degree of unanimity on the subject of changing seed grain. Essentially, the need for it is not always conceded, though conditions arise making it desirable. It is remarkable, too, how the outstanding merit of certain varieties, properly cared for and grown, will persist. This point was brought out in the comprehensive letter by J. H. Grisdale, the Dominion Agriculturist, in regard to the old American Banner oat, perhaps yet the most widely-grown variety in Canada. Mr. Grisdale reports that in the field crops of the Central Experimental Farm this oat is yet unsurpassed, though many others have been tried, and it is field conditions that put varieties to the final test. Some sorts are, of course, better suited to certain conditions of soil and climate than others. The true origin of this popular old oat is not known, so far as we have been able to ascertain. James Vick's Sons, of Rochester, by whom it was introduced, received it as a sample for trial from a customer about 1880, and from this the stock was selected and worked up. Whether the original was the result of artificial cross-fertilization, or a "sport," or "mutant," as such unexpectedly remarkable varieties are called by De Vries and other scientists, may now never be learned, though the latter would seem probable. One of the first introductions of them in Canada was through John Miller, of Mongolia, York Co., Ont., who took third prize in the American Agricultural Competition for the best acre. On Nov. 28th, 1889, Mr. Miller wrote that about the time the oats were headed out, a heavy storm knocked the heaviest of them down. They did not rise again, so both quantity and quality were reduced. The oats from the prize acre weighed 35 pounds per measured bushel, and yielded 98 bushels 28 pounds. Where the oats stood up, they weighed 40½ pounds to the bushel. He grew 35 acres that year, and less than two acres of them were lodged. About the same time, quantities were sold by Vick's in Locust Hill, Beaverton, St. Helens and Napperton, Ont. A trial packet was also received at a very early date, and grown first in the farm garden by J. D. Thompson, of East Middlesex, and proved of such decided merit as to speedily become the general field crop of that farm and many others in the locality.

What Constitutes a Good Drain-Tile.

There is not much room for criticism in what is given below regarding drain tile. The statement regarding average tiles being slightly bowed, and not square on the ends, while it would have far as our observation goes, scarcely applicable now. Since tiles have been made in tubular shape, and of stiff clay, they are usually well shaped in every way, and in laying can be turned so as to be certain to fit.—Editor.]

Tile should be straight, cylindrical, and well burned. The test of good quality is that it should give a sharp, metallic sound when struck with a piece of metal. As clay pipe shrinks in burning, the length and thickness of the walls, and the diameter, may vary some with the degree of burning, the overburned ones being smaller in all dimensions than the underburned. The degree of shrinkage in clays in different localities is not the same, consequently, sizes, with the same degree of burning, may vary with the locality of manufacture. Manufacturers endeavor to so regulate their machines that the hardest-burned pipe will have the required dimensions. Usually, the average tile overruns in length from a quarter to half an inch. Clay tile, when exposed to the air in freezing and thawing weather, are liable to disintegrate; but when buried in earth they are not so affected. As customarily made, they are not square on the ends, and many of them are not perfectly straight, being slightly bowed. When these irregularities are small, or do not both occur in the same pipe, they will not interfere with the utility of the piece. Tile are sold at so much per 1,000 pieces, which are supposed to lay 1,000 feet of drain, the overrun in length offsetting breakage and rejections. When subjected to long transportation by rail and wagon, they do not always hold out; but a good quality of tile, carefully handled, will ordinarily lay the required number of feet.

Tile-layers should be instructed to throw out any tile which are soft, cracked or ill-shaped. A crack through the walls at the end, two inches in length, or any irregularity which would decrease the cross-section of the drain or prevent its being a good joint, should be sufficient cause for rejection.—[John T. Stewart, in University Press News.

Useful Contrivances.

Editor "The Farmer's Advocate":

I enclose plan of a homemade implement I use for planting potatoes, which consists of a marker for opening a furrow, and a contrivance for covering.

For a marker, take a piece of timber about 8 feet long, either round or square, and, with a two-inch auger, bore holes 3 feet apart for teeth. The teeth are made of hard wood, 2 feet long, and flat; 6 inches wide, and pointed. Put in a

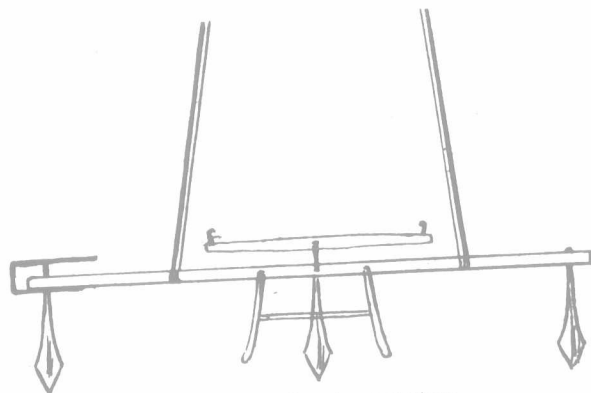


Fig. 1.—Marker for potatoes.

pair of shafts; also handles. Fasten on a whiffletree. Mark out first row straight, then keep one tooth in outside furrow for a guide.

The coverer is made of plank, two side-pieces 14 inches wide and 2 feet long, and bevelled on lower edge. Place them on edge two feet apart in front, and one foot behind, then spike on cross-pieces on the top, and put a tongue in it, and a pair of handles to guide it. Also put a box on top to hold stones or weights to hold it down if the ground is hard. I find it works fine. The marker makes a furrow about three inches deep, or less, if desired; and, when covered in this way

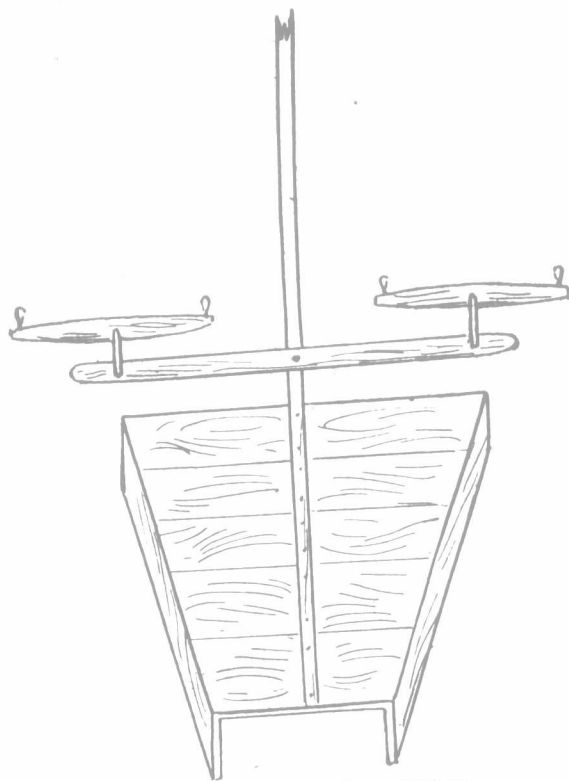


Fig. 2.—Coverer for potatoes.

the potatoes are easier to dig, either with a potato-digger or by hand.

I use the marker for planting corn, also. I mark the ground both ways, and plant on corners, covering with the foot, and run a light harrow over it when corn is just coming up.

Algoma, Ont.

GEO. SMEDLEY.

Labor-savers.

Editor "The Farmer's Advocate":

When I built my barn, I wanted to make the best provisions for feeding calves possible. I visited the barn of several dairymen who raised calves, to learn how to construct mine satisfactorily. But, as I saw none that suited, I determined to study out my own. You never had all the tying-up I wanted. I had previously known when one may break loose and devour its neighbor's meal. Then, too, the tying plan does not allow them to exercise, which I believe to be

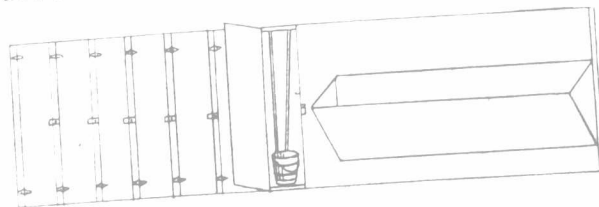


Fig. 3.—Doors, with stanchions behind, for handy calf feeding. Swing manger.

essential. What I wanted was a plan by which I could feed each calf exactly what I wanted it to have, and know it ate it. If I wanted to feed each one differently, I could do so, and thereby determine the best way to feed; and if I wanted to know whether it paid to buy stock foods or prepared calf foods, I could learn, and not guess. Then, too, it must be a labor-saving scheme; no standing with a club to keep back part of the herd while one or two were being fed. There was also the sucking habit to be overcome.

I studied the problem, and at last succeeded in building a pen which has overcome all the difficulties, is indeed a labor-saver, economical, handy, and which has made calf-rearing a pleasure. My calf pen is a large box stall in basement, well lighted and ventilated, and faces feed alley. It has a swing manger about half its length, which is made on the same principle as the flour bins used in kitchen cabinets. It tips out in alley while you put in the feed, and no calf gets its nose there until you are ready. I use this for cut feed and ensilage. The other half of the pen front is composed of doors a foot wide, four feet high, with a board four inches wide between each two. They all open out in alleyway. There is a common stanchion in the center of each opening. As soon as you open a door, a calf will put out his head; fasten the stanchion, open the next door, and so on, until all are fastened.

Put pail of milk on the floor in front of each one. When you have fed the last one his milk, you can usually start at the first one, and feed it its meal. It is no trouble to get the pail. Pick it up, put in what you like, and replace. When they are all fed meal, I go about some other work until all are through eating. I then put some feed in swing manger or hay in rack. The calves never form the sucking habit, and are contented and healthy. An outside door opens into barnyard, where they are let out every few days for exercise.

Norfolk Co., Ont.

Two Men Fill Silo.

There are some disadvantages—as well as advantages—in the co-operative method of filling silos. In many districts there are not enough farmers who have silos within a reasonable distance of each other to make a sufficient force to run a powerful steam-blower outfit, and time is wasted going to and fro. And again, let the work be managed as well as possible, there will be unavoidable delays, and somebody will be left till the last, and have overripe corn to handle.

There has arisen a desire on the part of some who could not in any case very well change work, for a light-running cutter and blower which might be run by a small gasoline engine. We are glad, therefore, to receive the following contribution from Smith Brothers, of Middlesex County, detailing their experience last season with an eight-horse-power gasoline engine for silo-filling:

Our silo is made of matched lumber, in size 12 by 25 feet. In filling, we had the cut corn blown about 32 feet in height. The agent said, "Try the engine, and if it will not blow over 30 feet, ship it back at the firm's expense." So we had the pipes up five or six feet higher than the silo, to test the power thoroughly before purchasing.

We did not change work with neighbors, but just the two of us ran the outfit, and hauled the corn. As everything was new, and the engine was run a very considerable time before everything was in working order, it is impossible to say how much gasoline was used, but, at a rough guess, I should say about ten gallons, at 15½ cents per gallon. Considering the way steam engines burn the wood, gasoline is far the cheapest, if you have to buy both.

We would not like to recommend others to do as we have done, only we might say that, so far as we were concerned, it was most satisfactory. In the first place, there was no worry about getting help, or a steam outfit to come just when your corn is in proper condition to handle, but just go at it yourself when corn is ready and you are ready.

I cannot say whether or not there is any advantage in slow, rather than fast filling, but I have heard our neighbors say that theirs had settled quite a number of feet, and some have corn still out in the field. There is one advantage in our way, one can just start up engine and fill again. The disadvantage is, perhaps, that when you fill it yourself, if you do not work—as some I hear at changing work, do not—everything stops.

The keeping quality of our silage will not be of interest to any farmer, except he is in a case like ourselves, who did not decide to erect a silo until winter. In fact, I wished, when we were filling ours, we had somebody else's experience to go by, as I thought the silage would all spoil. We drew it out of stook and filled silo about the last of November or first of December. Of course, we had a stream of water running in blower all the time. The corn came out just as good as the day it was put in, or nearly so. The cows ate it all up and looked for more, and that is a good sign. The cause of our being so late was that we