

crossed wires, and wind it round until it draws the brace in its place firmly, and stop, as both posts can be easily drawn back out of shape with this purchase. Then dig or bore another hole ten feet from this for a third post or second brace post. Set this post in the hole and spike a good piece of rail or cedar on it lengthwise, so the top of it comes level with the surface; take a good strong rail, cut to fit the post, and place on this block and up to the top of second or now middle post. This makes an anchor out of ordinary posts that will never give as long as the posts last.

G. H. CAUGHELL.

Elgin Co., Ont.

FALL-WHEAT SEEDING.

The harvest, which promised to be late, will be finished by the usual time. The hot, dry weather of late has hastened maturity. The late-sown barley and oats have suffered, and will be light in weight and deficient in yield. The land in this locality is exceedingly dry, and some may be undecided about the advisability of sowing fall wheat. Our experience has been that a dry fall-wheat seeding is followed by a good harvest. The autumns of 1874 and 1881 were both hot and dry, and the seed was sown in a bed of dust; fine and frequent rains fell after the 20th September, with no frost until October, and the wheat made a splendid growth, with the result that the harvests of 1875 and 1882 were "bumper" years for fall wheat, 40 bushels per acre being a common yield on good land.

We advise a generous seeding of fall wheat, and prefer a thorough surface cultivation to plowing for it. Last year, the stubbles being compacted by the wet season, we departed from our usual custom and plowed them, with the result that, the fall being dry, we lost the moisture; consequently there was a poor fall growth, and the crop was below the average. The headlands, which we did not plow, but surface cultivated, gave a splendid crop, with the exception of a couple of low-lying places.

Our custom is, as soon as the crop is off, to double disk the land both ways, then harrow, and leave until time of sowing. We then cultivate twice over lengthways of the land, then harrow and drill. We have followed this plan for about fifteen years, and have found it gives good satisfaction, more especially in a dry fall.

We first tested the two methods on a pea stubble, and there was a difference of fully seven bushels per acre in favor of surface cultivation. Fall wheat seems to prefer a fine, shallow seed-bed, with a firm bottom. This holds the moisture, favors tillering, and a perfect network of roots is formed on top of the subsoil, instead of penetrating into it, to be broken the following spring by the alternate freezing and thawing, besides the action of the winter's frost upon the subsoil loosens its particles, into which the plant roots will push as soon as growth commences in the spring.

We also practice sprinkling the seed with formalin. We use a mixture of 2 ozs. to 12 quarts water. This is stronger than Mr. Zavitz recommends, but in our experience nothing weaker is effective. We have been using it at this strength for several years, and have found no injury from it. Last fall we sowed a small plot of hand-selected seed on the same field, at the same time, which we did not sprinkle, with the result that it did not germinate as readily nor do as well afterwards, as did the seed dressed with formalin.

If the seed is free from smut, we believe it pays to damp the seed by sprinkling with salt and water, as it will germinate better for it.

Simcoe Co., Ont.

FRED FOYSTON.

STONE WALLS FOR CELLARS.

The stone walls for cellars are generally from 18 inches to 24 inches or more in thickness, and vary in height. It is advisable that they be not less than 7 feet high all round the building to give head room, but preferable that they be higher, so that windows may be inserted to give light, and a door for convenient access. It is of great importance that the ground upon which the cellar is built be thoroughly dry, and that no water from the surrounding soil can find admission within the area of the cellar. For this purpose the ground should be well drained that surrounds the house, having drain pipes laid at the necessary grade to carry off the rain water from the region of the cellar.

In the building of the cellar walls particular note should be taken in laying off the lines to the proper notches on the batter boards, and see that the builders are working to plumb lines that hang at intervals from the long lines, at the same time using the stones that are at hand, and squaring the too irregular ones by using the stone hammer to make a face on them. Care should be taken to see that the mason levels the walls every two feet, and keeps the horizontal joints as near to a level as possible. It is also important that bond stone be introduced into every ten square feet of wall.

to give the necessary strength. In walls that have practically two faces there is sometimes a tendency to build the two faces with long narrow stones, and place in between them small stones, with some mortar on top. Such a wall may have the appearance of strength on the faces, but under a heavy superincumbent load may collapse, for want of proper bonding. In order to find out this defect when the wall is built, and previous to the setting of the mortar, it is advisable to insert a steel rod about 3-16 inch in diameter and four feet long into the center of the wall, to ascertain whether the stones overlap each other properly or not, and if the stones in center are well bedded or not. They will be removed out of their place or joggle against each other if not thoroughly bedded. All stones should be set at least six inches in depth from the face, and laid so that there split surface is horizontal and breaking joints in the length of the wall, as well as through and through, and all angles should be bonded alternately, using the largest stones for the corners. It is necessary that the cellar walls be built entirely free from the bank, so that they may be self-supporting, besides affording an opportunity for the wall being cemented from the outside if required. There is a very unsatisfactory method of building cellar walls up to the top of the ground without mortar, of stones varying in thickness, brought to a face on the cellar side, and having tails of the stone in irregular projection on the outside, some of them resting against the bank, and others scarcely filling out to the necessary thickness, and the whole smoothed over on the inside by a thin layer of mortar. This method should be avoided for several reasons. In the first place, a wall of this description has little or no protection against water, for the uneven projections on the outer face serve to catch the water which runs down on the outside, and to lead it in to the inside face, where the pointing of the mortar is very little protection. Again, any movement, such as produced by frost in the ground, has a tendency to overturn the wall because of the long stones that tail into the ground, and often act upon the soil in such a way that any settlement or upheaval of the



Colling's Chief.

Shorthorn bull, calved Feb., 1906. Prizewinner at local shows in north of Ireland.

soil will open cracks and cause the wall to bulge inward. It is important that both the outside and inside faces of the wall be smooth and impervious to the ingress of water.

When the cellar walls have been completed up to grade, and the excavation been filled in to the natural level of the ground, then we may proceed to consider the underpinning of the portion of walls above ground. There are various kinds of material that may be used for underpinning. Sometimes long pieces of granite or freestone may be utilized for this purpose; sometimes an eight-inch brick wall is built upon the stone walls of cellar, and quite frequently the walls of cellar are continued up to the sill, of the same character as underneath the ground, only the face joints are often left without mortar for about three-quarters of an inch in depth from surface, to be afterwards filled in with Portland cement mortar, colored to give desired effect, and drawn with a tool made for the purpose, either a concave, v-shaped, or raised joint. Particular attention should be given to see that the underpinning is built up to the sill the full thickness of the wall, at the same time leaving out spaces for girders, and having the top carefully levelled off at the bottom of the sill. Sometimes the cellar walls above foundations are built of concrete cement blocks, hollow in center, but this would require separate consideration. The drain pipes are led from the interior of the cellar, through the walls, and at a proper grade for the exit of water. It is preferable to have a concrete cement floor, if possible, although it entails considerable expense, according to the amount of surface covered. When the walls of cellar are built, and the openings left for the windows and door, then the frames for same may be inserted, also the beams and lintels laid at the proper level, and all thoroughly secured.

W. M. BROWN, C. E.

Simcoe Co., Ont.

Every farmer in Canada needs "The Farmer's Advocate."

THE SOW THISTLE.

Editor "The Farmer's Advocate":

Of all the foul weeds with which mankind has been cursed, and we know of eighty, the sow thistle, to my mind, takes the lead. The Canadian thistle has come and gone. Fields infested with wild oats have been cleaned. Good cultivation eradicates mustard, flax, and most of our noxious weeds, but the sow thistle has come, and, in the face of our present system of cultivation, has conquered. This pest is a Russian importation, and made its appearance in Simcoe County some twenty years ago. At first its progress seemed slow, and was not regarded seriously, being commonly supposed to be akin to the dandelion family. At first, also, it was satisfied with the low, undrained lands, but little by little it has extended its boundary, until to-day it has invaded our Province, in many sections reducing the product of the farm 50 per cent., while many fields have been left uncultivated entirely. It has, during the past half-dozen years, spread with alarming rapidity, the congeniality of the wet seasons apparently making conditions more favorable for its growth. Some of the more hopeful had thought that a succession of dry years would check its growth, and finally it might leave us as quickly as it appeared. Well would it be for the Ontario farmer if this were the case. The present season is one of extreme drought; so dry, in fact, as to seriously affect our crops and pasture, without any apparent effect on the sow thistle.

The fact that it luxuriates in low, damp places, shows that it consumes large quantities of moisture; thus, in a dry season, it not only robs the growing grain of plant food, but also of its already meagre supply of moisture, leaving it starved, stunted, and almost worthless. Nor is this all. Being of such a sappy nature, with a close network of leaves, it is most difficult to cut, and impossible to thoroughly dry out the sheaves. Grain thus placed in the mow generally comes out in a mouldy condition, and requires one-third more power to thresh it, thereby increasing the cost.

The question, then, is, "What are we to do?" There is but one answer: Revert to the old-fashioned, bare summer-fallow. Even then, to the farm badly infested with sow thistle, it will take a long time, with much manoeuvring, to destroy this field enemy.

Although the sow thistle absorbs large quantities of water, it is just as dependent on sunlight. After a good plowing in June, the surface should be worked thoroughly, not allowing the feeders or leaves to appear at all. This, of course, requires close attention, and can be done quickly with the wide-cut cultivator. If properly done, there should be hardly any trace left by "ridging-up" time, which process should completely kill it.

A very bad field, worked in the above manner last summer, although the wheat had been winter-killed in several places, failed to show any sign of sow thistle. Had any weaklings appeared, a light plowing after the wheat was harvested would complete the destruction.

By following up this course with the worst fields, and seeding to clover as much as possible to give time for thorough cultivation, sow thistle can not only be checked, but can be completely destroyed. There are farms in Simcoe to-day reduced in value \$1,000 simply because they are covered with sow thistle and are unproductive.

Summer-fallowing may seem an expensive way to get rid of it, but it is the only way, and is not expensive, as one crop should repay for the work, besides the satisfaction of seeing the farm clean and restored to its proper value.

Simcoe Co., Ont.

W. D. WATSON.

THE DAIRY.

WEIGHED MILK ONCE A WEEK.

Editor "The Farmer's Advocate":

I kept an individual record of my eight cows last season, but it was not a daily record; only a weekly one. As I only hire by the day, I found I could not spare the time daily, so I weighed the milk one day a week (on Wednesday), and by multiplying by seven I got a fair average for the week, and I found the figures were very nearly correct, as compared with a daily. In that way it takes very little time—about two or three minutes per cow. I was induced to keep a record by attending Farmers' Institute meetings last year. I knew some of my cows were doing nothing to what they should, but I was in the dark as to which ones, and as to the time there was the greatest difference in the falling off, also as to the one that held to her milk the best throughout the season.

I claim the knowledge I have received has far more than repaid me for the loss of time, although I did not keep an accurate record as to whey, skim milk, etc. I simply kept the amounts each gave, and I find I have some cows to dispose of.

C. J. GREENWOOD.

Northumberland Co., Ont.