

Harvesting.—Most of our harvesting of peas is now done with a pea-harvester with a table or buncher attachment, and has greatly modified the labor difficulty we formerly experienced in harvesting. By cutting the peas while the straw is a little green, the straw makes splendid fodder if it does not get too much rain in curing. With the aid of the harvester it is not much more difficult to take off a crop of peas than any other crop.

Threshing.—Most of the threshing is done with the separator. Splitting the peas is prevented by having larger spur wheels put on the cylinder, which runs it more slowly, and concaves with only a few teeth in them. Much of the threshing of late peas is done in the field, which saves a lot of labor and barn room for storing other grain. Three wagons where the distance to haul is short, or four where it is long, will keep a machine running quite nicely. The straw is stacked or burned as the case may be. I do not approve of the latter way in disposing of it.

Prince Edward Co., Ont.

The Pea Crop.

PREPARING THE SEED—THE SOIL—SEEDING—VARIETIES.

Before seeding time approaches the bug in the seed must be destroyed. A treatment of carbon bisulphide will do the work satisfactorily. Place the bags of peas in a small, perfectly tight room. On the peas set a shallow dish, into which you pour some carbon bisulphide, in proportion to the space—about one pint to 250 cubic feet will answer the purpose—and make your exit as quickly as possible, leaving the room closed for about two days.

The season has much to do with making the crop a good one. With regard to the soil, I would say that sandy land and light loam grows too much straw and invites the growth of too many weeds, consequently the result is a small yield and of poor quality—not what you desire. I prefer clay, loam, a mixture, or a slightly gravelly soil. Of course, much depends on the variety you wish to raise. Some of the finer sorts require much nourishing and would do much better on the aforesaid sandy land or light loam in a high state of cultivation, because on other lands there might not be sufficient straw to harvest them properly, thereby rendering a loss; but I am writing of a crop grown for feed, etc.

Peas generally grow well after almost any crop, should the season be at all favorable during the blooming and filling period. The short-strawed varieties require highly cultivated soil, free from weeds, but the ordinary sorts will pay on the average land; and, in fact, it is a cheap means of increasing the fertility of the soil, leaving it in good shape for the following crop.

The preparation for sowing depends upon the condition and kind of soil. Fall-plowed land should be cultivated deeply and made not too fine with the harrow. Land not fall-plowed, after being plowed prepare in usual way with cultivator and harrow, or should you wish, cover seed when plowing shallowly, which is a splendid plan.

Early sowing for some early varieties is best, but generally the best time to sow is when the land can be put in the best shape—not too early or not too late. Medium late seeding usually produces seed freer from bugs.

Now, as to sowing. I would use the drill and drill in deeply in a good seed-bed, or you can sow by hand and gang-plow under, but I would endorse the use of the drill. Avoid, if possible, harrowing any seed out upon surface and finish in all cases with the harrow. Be sure the seed is well covered. A suggestion: Just try one or two sacks of Alberts' Thomas-Phosphate fertilizer per acre and note the results.

We find it much better to use plenty of seed, and far better returns will be given by so doing. From two and a half bushels to three and a half bushels per acre will generally be sufficient, but particularly in the face of a dry season more seed should be used.

Good early varieties are Alaska, White Kent, and American Wonder, for marketing and seed. Those which we think good for a general crop are the Golden Vine and Runners. There are many others which give abundant yields, but we consider that the above mentioned will give very satisfactory results.

W. C. HUFF.
Hastings Co., Ont.

Killing Thistles in a Corn Crop.

To the Editor FARMER'S ADVOCATE:

SIR,—In a recent issue of FARMER'S ADVOCATE, J. A. G., of Norfolk County, wants to know if he can kill Canada thistles with corn. I will tell you how we killed them in a six-acre field that was so bad that it had grown no crop but thistles for five years, and they three feet high. We plowed it in the fall and again about the 10th of May, and planted it to corn on the 18th of May. When corn was about six inches high, we started to cultivate with a Planet Junior one-horse cultivator, with three thistle knives on it, which cut full width of row, corn four feet apart. When corn was about twelve inches high we hand-hoed the hills, and were careful to pull all the thistles out of the hills by hand. We kept cultivator going until middle of July. We had the greatest crop of corn we ever had. The thistles totally disappeared, and that field will grow wheat or anything now.

Bothwell Co., Ont.

J. M. LANGSTOFF.

Cement Concrete Walls.

MIXING THE CONCRETE—LAYING THE FOUNDATION—BUILDING THE WALL.

In making concrete, lay down some straight-edge boards on the ground, and drive stakes on each side to keep them from spreading. This platform should be 2 ft. square, with no sides to it. Now make a box without any bottom—just 2 ft. square, inside measure, and 8 inches deep which will hold just two paper sacks of cement. Fill this with gravel as often as you wish your concrete gauged for walls; it is usually 5 of gravel to 1 of cement. After the gravel is measured, spread the cement on top and shovel over twice dry. By letting every shovelful drop in the same spot the pile will form a cone shape, and the concrete will mix by rolling down the sides of the pile. After the concrete is mixed dry, level it off about shovel deep and make a hole in center, and pour in about two pails of water, and work the concrete to center, and to finish wetting it, if a rose sprinkler is used it will distribute the water more evenly. Shovel this over twice, the same as it was done when mixed dry, and it is ready for use. The concrete should not be wetter than to resemble moist earth. By taking it up in the hand it will pack, but not leave any moisture on the hand.

In building walls for barns, the trench should be below frost and 20 inches wide. Fill in with concrete two or three inches deep, and then put in all the stone that can be got in one layer deep, and ram concrete around them till trench is filled. The footing should extend four inches on each side of wall. After the footing is in, nail two planks together edgewise and stand them on end for outside corner, and another on inside, and wire them together at bottom to keep them from spreading; also, tack a strip at top for same purpose. Brace them from top to stake in ground to keep them plumb. Tack a beveled strip in corner of outside plank, so that when wall is completed it will leave a beveled corner on building. Stretch a line from corner to corner, one at top, the other at bottom, from these outside plank in line with wall. Then stand upright, every six or seven feet, and opposite each other, and if wall is to be one foot thick they should be 18 inches apart, and three inches from the lines to allow room for plank and wedges. Wire these uprights at bottom, and brace them at top the same as corner plank. These wires are built in wall, and may be cut off after building is completed. Now place in plank, stand them on edge, and put inch wedges between plank and upright, one at top, the other at bottom. The top wedge should have a nail tacked in it, so as to allow the wedge to hang on plank to keep it from dropping down. Take small sticks and saw them a foot long, and place them between plank to keep the wedges tight to uprights; these spread-sticks can be taken out as wall is being built. Now fill in with concrete about 4 inches thick; place in stone in center of wall, and about two inches from plank and from each other; ram these down well and fill in with concrete well rammed; repeat till plank is filled. In raising plank, loosen the wedges, raise the plank up and let them lap about 1½ or 2 inches on wall already built; put in wedges and spread sticks as before, and fill again with concrete. These plank can be raised three times a day in warm weather. Never put in over four inches of concrete at a time before ramming.

NORVAL B. HAGAR,
Travelling Instructor for John Battle Estate Cement Works.
Welland Co., Ont.

A Criticism of Some of the Work of the Experimental Farms.

To the Editor FARMER'S ADVOCATE:

SIR,—I have received the last bulletin (No. 32) of the Experimental Farms reports. I was disappointed with the results obtained. In oats at the Central Farm, of the first twelve recommended only one was in the list last year. This year, of twelve from the Central, one is in the Nappan Farm recommendation, not one in the Brandon, one in the Indian Head, and one in the Agassiz Farm. Forty-one sorts are included in the sixty mentioned by the five farms, and to make confusion worse, the last on the Central Farm list (Danish Island) is the first at the British Columbia Farm. A few years ago everyone was wanting Banner oats. Where is Banner now? Last year it was not on the list; this year only three of the five farms have it listed on Nos. 8, 9, 10. Two-rowed barley—fifteen are on the list, and with two more last year only leaves one out. Six-rowed barley—eighteen on the list, with two more last year only two are left out. Spring wheat—twenty-nine are recommended, with eight more last year leaves only four not recommended. All the rest are nearly the same except white carrots, where the Intermediate White, under different names, is uniformly the best. Amidst all this confusion, what conclusion can the farmer draw to get the best sorts? He might as well chase a "will-o'-the-wisp." He should write Failure across it, and sow what is doing best in his own neighborhood.

One experiment the farms could make that would be of more benefit to farmers would be to find out whether a change of seed is beneficial or not. On page 44, Experimental Farm reports for

1898, we find experiments with fertilizers. This is either a very valuable report or very misleading. It is very discouraging anyway. Of wheat, for fifteen tons of manure, ten bushels. Of barley, the best twenty bushels, oats nineteen and three-quarters, above the unmanured plots. Mangolds, for twenty tons of manure, fourteen tons; and swede turnips, nearly seven tons; carrots, eleven tons, for fifteen tons of manure—the best in the roots. For 200 pounds of nitrate of soda, wheat gave five bushels, barley nine, and oats nineteen extra. Mangolds, for 300 pounds, six and a quarter tons; swede turnips, two tons; and for 200 pounds carrots, three tons extra above unmanured plots. This is a bad showing. On the average there is only from fifty to seventy-five (excepting barley in the manured plot) per cent. of the cost of the manure or fertilizer used, except salt. All the others are no better than these I have quoted.

Is the land at the C. E. F. third-class, or is the climate to blame? The returns from the Rothamstead Farm (England) gave for fourteen tons of manure (average of twenty-eight years), twenty and a half bushels of wheat and twenty-six bushels of barley (2,240 pounds to the ton, and sixty-three lbs. wheat and fifty-six pounds of barley to the bushel), which is better than the Central Experimental Farm. This is discouraging the use of fertilizers, and a blow at intensive farming. A system of experiments should be commenced that would be a better test and of more value to the general farmer than the C. E. F. tests. Let the Government select six fields—two in Western Ontario, one central, one eastern, and two in Quebec—about eight or ten acres each, fairly uniform land, that has grown a crop of grain, and not rich, the owner of which intends sowing with grain again. Give him half a ton of nitrate of soda, to be sown on half the field, nothing on the other half, a strip of a foot or two being left, so that the binder can cut it separate. It should be carefully kept separate in the threshing, so that the returns could be sworn to—fertilized and unfertilized. The farmer should be one anxious to make the test a success, and some of the neighbors should look over it at harvest and threshing, so that they could certify it had been fairly carried out. I do not look upon the C. E. F. tests as in the interest of the farmer, but more of a scientific test. For the benefit of the farmer, tests should be made on a hungry field that has not been sown with the same crop or manured with the same fertilizer for several years, something after that style, and we should soon see if \$1.50 could be realized from every dollar expended. One year's test would show the probabilities of it, and three years would prove it either a success or a failure. I have no faith in Prof. Robertson's Illustrated Farms unless he gives items of expenditure, amount realized, and finishes with balance to profit.

BRITISH COLUMBIAN.

Form of Silo.

To the Editor FARMER'S ADVOCATE:

SIR,—Your paper should be of practical benefit to farmers throughout Canada as imparting to them in a clear manner the means by which greater results can be obtained from the soil by a little book knowledge. I am interested in No. 472 of your paper on silos. Every farmer who keeps stock, horses, cattle (beef or milk) should have one on his place. For a cheap, concise, no-waste feed, ensilage has no equal. The silo (now in the third year) at Valley Farm is 16x21x25, rounded corners, lower six feet concreted, balance matched wood. This style can be improved upon, and it is with the object of giving your readers my experience this letter is written. The silo having its sides perpendicular allows the ensilage to fall away from the sides, thereby permitting the air to get in. This causes the ensilage to rot, and accordingly there is waste.

I would suggest a silo should be built with the bottom at least 1 foot in 10 feet smaller every way than the top; i. e., silo 15 feet deep should be 14 feet smaller at bottom than at top. This would force the ensilage to jam tight against the sides as it gradually sinks, thereby keeping the whole mass tight and solid. Yours truly—

Wentworth Co., Ont. WM. HENDRIE, JR.

[NOTE.—It is the general practice in building concrete silos to leave the bottom a few inches wider than the top. This allows the silage to swell while settling without bursting the walls. This sort of silo gives satisfaction.—ED.]

Concrete vs. Stone Silo.

To the Editor FARMER'S ADVOCATE:

SIR,—In your issue of April 1st, I noticed an enquiry from Mr. H. G. Thomson about how to build a silo. My experience is that it would be impossible to build a silo 30 feet high and 15 feet in diameter, out of stone, and the walls only one foot thick. I have had an experience of 23 years in stone and mason work, and never saw or built a wall 30 feet high and only one foot thick, out of stone. For the last three years I have devoted my time entirely to concrete work for all kinds of farm buildings, and I have never yet met a farmer who had used concrete for a silo but who acknowledged that it gave the best satisfaction, and was much preferable to stone or brick. In your issue of February 15th there appears a letter from me on concrete silos. Of course silos can be built in any shape—round, octagonal or square—to suit one's fancy.

Welland Co., Ont. NORVAL B. HAGAR.