

Hay yielded about 2½ tons per acre. Three years ago he had as much as 4 tons per acre on one three-acre field. Hay, barley, peas and wheat are the best crops on the whole.

Prices for farm products range high, and are about as follows per bushel: Wheat, \$1.25 to \$1.50; peas about the same; oats, 55c. to 75c.; barley, 75c.; potatoes, from 75c. to \$1.50; this year being the lowest on record for potatoes. Vegetables bring a fair price. Butter sells for 25c. to 50c. per pound, and eggs about the same per dozen. Meat is exceptionally high this year. Mr. McFarlane generally sells dressed pork at 12c., and beef at 8c. to 10c. per pound. For the produce of an acre he usually gets from \$30 to \$50. For that field of hay that three years ago yielded four tons per acre, he realized \$80 per acre, selling the hay out of the field at \$20 per ton.

Mr. McFarlane believes that soil fertility is not readily exhausted, he having known land cropped continuously for four years, and the last crop seemed as good as the first. He has also seen a hay field that was never plowed, and from which eight crops of hay have been cut that produces one and a half to two tons per acre still. Plowing would have improved it, however.

A settler going into that country with \$500.00 ought, in ten years, Mr. McFarlane thinks, to be worth \$6,000.00 to \$10,000.00.

The Spread of Noxious Weeds.

Editor "The Farmer's Advocate":

Why are weeds securing a stronger foothold in Ontario? This question cannot be answered in a few words by giving any one reason. It is due to a combination of reasons, chief among them being the scarcity of farm labor, sowing impure grain from the West or imperfectly cleaning the home-grown seed, the lax manner in which those responsible enforce the laws re the cutting of all noxious weeds on public highways, the scarcity of sheep, the absence of a good crop rotation, imperfect knowledge of farmers in regard to propagating habits of new weeds, and, lastly, carelessness in handling fanning-mill screenings.

Is it any wonder that weeds are spreading? There are also natural agencies at work, such as the wind, water and birds, but man cannot help these, except, perhaps, in the case of birds, but these do such an incalculable amount of good that they should be forgiven for the few weed seeds they carry.

The scarcity of labor accounts for the numerous fields of roots and corn in which weeds are permitted to grow and seed, unmolested, except when the roots were thinned or the corn scuffled.

Readers of "The Farmer's Advocate" have read of many cases where seed grain from the West was full of injurious seeds, so that reason needs no explanation. Western seed was responsible for the introduction into our district of the tumbling mustard, an annual plant, producing in the neighborhood of 1,500,000 seeds, but those who were so unfortunate as to sow the grain are endeavoring to eradicate it before it becomes very bad.

Sheep eat from 80% to 90% of the weeds, and are very fond of the perennial sow-thistle. They keep them nipped off so low that their vitality is so impaired that they easily yield to cultivation. Yet, in spite of their fondness for weeds, the number of sheep in Ontario decreased by over 650,000 between 1900 and 1908.

Weeds like cockle and chess cannot stand spring grains, but seem to be always ready to grow in winter wheat. In Ontario, where only a comparatively small area of wheat is sown, these weeds are not troublesome.

To be able to successfully combat weeds, farmers must know whether a weed is annual, biennial or perennial, and also its manner of growth, etc. If the weed is a newcomer, send a specimen to the Botanical Dept. of the O.A.C. for identification, and then "read it up" in *Farm Weeds*, or some reliable book.

Annuals are the easiest to kill by cutting off, but owing to the production of seed and their ability to mature very rapidly, they often become very trouble some. Some of the worst annuals are common mustard and wild oats.

Biennial weeds are not, as a rule, very trouble some in cultivated fields. Spudding below the crown or pulling by hand after a heavy rain is effective. The writer remembers the latter method in most seasons. Last year we had a number of land badly infested with curled dock, and by spending part of the summer there, pulling them, and piling them in heaps, the field was rid of them.

The perennials are the most trouble some, as they have running underground stems, and their cultivation is very tedious, only the late fall or to greater gain, the perennial weeds, for example, can be cut in the autumn, as the time to pull them is, as they have not yet developed, in the spring.

rootstalks. A few patches of this are comparatively easy to destroy if taken in time, but once let a field become overrun with either it or couch grass and the task becomes heavy.

If farmers realized more fully the damage they do, a greater effort would be put forth. They not only crowd out more delicate but beneficial plants, but rob them of large quantities of plant food and water, since their powers of assimilation are more highly developed. They increase the cost of preparing the seed-bed and harvesting the crop as thistles and bindweed. They are an eyesore, and detrimental to the value of any farm.

"Exterminate the weeds" should be our motto.

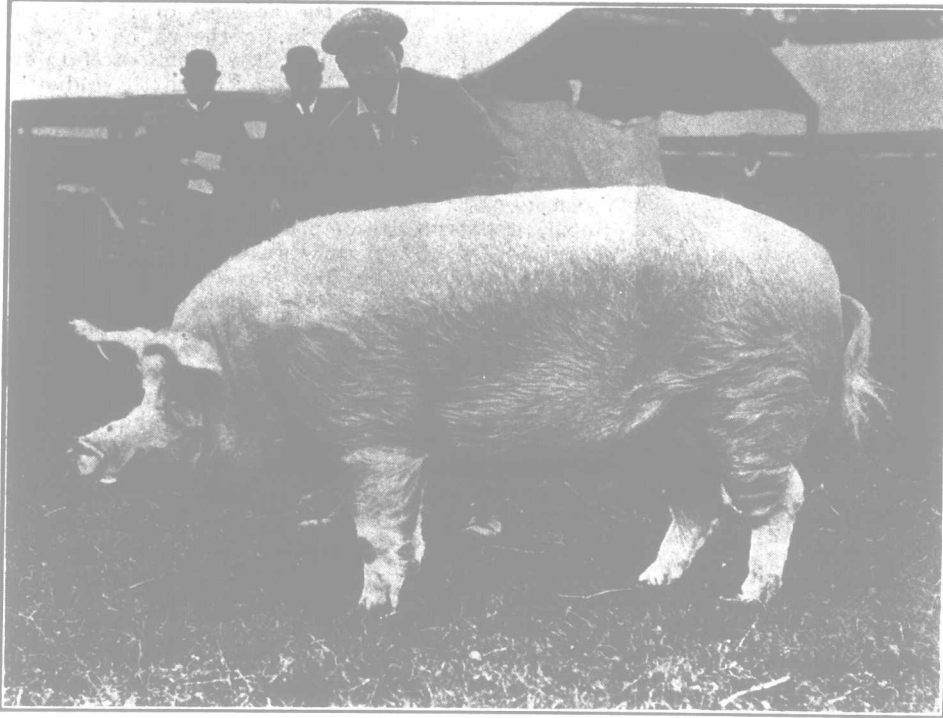
A MIDDLESEX YOUNG FARMER.

Believes in New Ontario.

Editor "The Farmer's Advocate":

We here get 160 acres on payment of 50 cents an acre. I have 320 acres, 160 acres which I located, the other 160 acres being a Veteran Lot. My sons, son-in-law and myself have five lots in all. I have myself made most of the improvements on these farms. We did not raise much crop until last summer, as we hadn't much land stumped, and it is not much use to put in a crop before the land is clear of stumps. The least we have chopped on any of the lots is 20 acres, and in all, we have chopped on the five lots, as near as I can judge, about 220 or 240 acres. We have 100 acres, in all, in crop, and of the land in crop there are 75 acres clear of stumps. The crop last year consisted of hay, oats, peas and potatoes, and was first class, but could not say just how much to the acre it yielded.

We have been up here six years. Prices range high, as a rule. On the average, hay sells at



Broadfield Wallace

Yorkshire boar. First and champion, Oxford County Show, England, 1910.

\$20 to \$25 a ton; oats, 50 to 75 cents per bushel, and peas \$1.25 per bushel. Wheat is not much handled here, and what is sold ranges in price from \$1.25 to \$1.50 per bushel. Potatoes this year bring from 80 cents to \$1.00 a bag. Vegetables range not much higher in price up here than in Old Ontario.

I have seen land which had been plowed for ten or more years, and it raised just as good a crop as it did at first. Some of our land gets harder than it should, but that condition one can find elsewhere. Land stands manuring well, as straw grows stiffer than in Old Ontario.

We have not seen any grain yet affected with rust, as there is not much fog here. We have tried to grow flax, but though the seed is good, the fibre is poor. I think the longer we crop the land, the better it becomes.

What the prospects are for a young man starting with \$500, depends on the man. One man may work three times as much as another. We cannot raise much of a crop before five years, as it is not practicable to raise a crop on new land, as we used to do in Old Ontario. Our timber stands are good, and the roots lie close on the top of the land. But if it is chopped for four or five years, one can cut most of the stumps out with one hoe. As you know, the country from Toronto to Chicago is the finest part of Canada, and I can assure that when this country is cleared, we will have our roads in good shape, and we will be able to fill in better farming sections and stock-raising places. The crops look as good as in the best of the country. M. H. ASH.

Bored Wells for Drainage Outlets.

Editor "The Farmer's Advocate":

Some time ago there appeared in "The Farmer's Advocate" an inquiry as to the use of artesian wells for drainage purposes, and the reply was such as might discourage anyone who might contemplate drainage by such means. Probably the difficulty arises through a somewhat strict use of the term "artesian," which has been literally taken to signify flowing wells.

The Encyclopedic Dictionary, in the course of a long definition of this word, says: "If a bore be made in the center of the basin, the water will be forced up by that standing at a higher level than itself, and may reach or even rise above the surface of the ground." This does not imply that an artesian well is necessarily what is popularly known as a "flowing" well.

In view of the remarkable interest in farm drainage through Western Ontario, some information as to the nature and success of drainage wells may be timely and useful. Several such are now in successful operation in North Cayuga and adjoining townships.

A word as to the topography of the locality may not be out of place, in order to show the conditions under which these wells operate. Although the land in this township is gently rolling, springs are not numerous; consequently, farmers are compelled to drill wells to the rock in order to insure a constant supply of water for stock. Considerable uncertainty and mystery are attached to the nature of the source of this supply, as a man may fail to "strike water" in one spot, and yet, by moving and drilling a few rods, or even feet, away, procure an abundant stream.

The well with which the writer is most familiar is 65½ feet deep, 3½ of that being in the rock, and the water rises to within about 40 feet of the surface of the land. Half a mile west is a well on

lower land, of a depth of 48 feet. Two miles or so east is a well, the water of which stands, I am told, about 16 feet from the surface, while still further east, 2½ or 3 miles, are wells that flow constantly. The Government survey is not yet made here, as in the western part of the Province, so that I cannot give the relative elevation of the surface of the ground at these different wells, but the land evidently slopes towards the east, the water in these wells being presumably level.

Most of these wells were drilled several years ago, the method of construction being as follows: A 10-inch or 12-inch hole was bored with an auger to the rock, if possible, and a 2½-inch drill was used in the rock. If stones too large for the

auger to dislodge were found in boring, the drill was used the rest of the way to the rock. A pine box was put into the auger hole as deep as that went, but if the drill had been used, an iron pipe was used below the box to the rock, usually 2 inch inside.

Of course, only those wells wherein the water does not rise to the top are useful for drainage purposes. Their use is based on an application of the principle that "water will seek its level," or, stated otherwise, that a column of water will not rise or stand higher than its fountain-head. The column of water in one of these wells stands presumably on a level with the source of supply, whatever that may be, whether lake or other source; and it cannot, in accordance with the well-known scientific principle involved, be made to rise or stand any higher. Consequently, no amount of water poured into a well can raise its level. In fact, one of the surest tests used by drillers to determine whether or not they have struck water is to try to fill up the pipe with water. If this can be done, they conclude that the supply of water is not good, for a drilled well should take the water down with a gulp or swish, or it will not give up an abundant supply. If it can be filled, it is unsatisfactory for watering stock, as well as for drainage.

A drainage well is usually placed on the solid ground close to the edge of the swamp to be drained. A box or trap is set sufficiently deep to receive the low enough to drain the swamp, and, where possible, other swamps are drained in a similar way.

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