

### Fertilizers for Sugar Beets.

A Kent Co., Ont., farmer, whose land is a little run down, wants to grow sugar beets. Provided he has not enough farm manure, he desires a statement in the "Farmer's Advocate" of what fertilizers should be purchased, and what quantities per acre should be applied.

It is true that when the crowns and tops of beets are left on the field the growth of sugar beets does not take a very large amount of plant food away from the land. It is, however, equally true that to secure the best results, both in tons per acre and high sugar content, there must be a large amount of available plant food in the soil. Nitrogen, potash, phosphoric acid and lime are the four constituents most needed by the plant. In some experimental work which we have done with fertilizers on land in good condition, we found that nitrate of soda increased the yield of beets per acre, but decreased the percentage of sugar. Potash used alone also increased the yield, and, like the nitrate of soda, decreased the percentage of sugar, but when phosphoric acid was used along with the potash, the yield was slightly increased and the sugar content was very much higher. Nitrogen and potash are both needed to force large growth and phosphoric acid must be used with them to hasten maturity. On soils which are in a run-down condition, I think it would be necessary to apply all three of these constituents; 100 lbs. of nitrate of soda, 150 lbs. of muriate of potash, and 300 lbs. of superphosphate per acre would, I think, be about the proper quantities to apply. They should be applied as a top-dressing and harrowed into the ground just previous to sowing. One-half of the nitrate of soda should be saved, and applied after the beets are well up, or about the time they are thinned. On clay soils, lime, applied at the rate of a ton or a ton and a half per acre, may give good results. It is taken up in considerable quantities by the beets, and it also tends to bring potash into an available condition in such soils. I would, however, strongly advise sugar-beet growers to experiment in a small way before going largely into the use of these fertilizers. Moreover, it cannot be too strongly emphasized that fertilizers will not take the place of cultivation. It is only when the land is in such a state of cultivation that the roots of the plant have free access to all parts of the soil that the plant food supplied is recovered, and that proper returns can be got for the fertilizers used.

R. HARCOURT.

Ontario Agricultural College.

### Remodelling Barn.

I intend remodelling my barn next summer, and putting a self-supporting hip-roof on it. The barn is 42 x 76 feet. The self-supporting hip-roof, which is built without a purline plate or post, has proven all right in this township, but the gable ends are weak, having no support except the scantling extending from the plate, or girt, to the rafter, which is necessarily long, owing to the extra height of the hip-roof. My lower rafters will be eighteen feet long, and the upper ones sixteen feet, which make a roof between eighteen and twenty feet above the plates on which it rests. If some of your mechanical subscribers could suggest a stronger gable-end construction, we would have an ideal roof.

Hastings Co., Ont. F. A. COMERFORD.

### Prince Edward Co.

Most of the farmers here had their fall plowing completed before the hard frost of December 2nd came, and it was well that they had, as this frost put a stop to all operations of that kind.

With the abundance of rain we had last summer and fall, there would seem to be no fear of a scarcity of water; yet there is that difficulty, a great many all over the county are complaining of their cisterns being dry and their wells nearly so.

There seems to be plenty of fodder throughout the county to winter the stock that is being kept, yet the crop of this year was not up to that of last, either in grain or straw production.

The price of apples has been very discouraging, and, consequently, a great many have gone to waste, for the packers would only take the choicest, and the price given by evaporators was so low that it hardly paid for picking and hauling.

Bacon hogs have taken another drop, and there seems little prospect for advance at the present time.

All the cheese factories have closed, and despite the low price of cheese this season, they report a fairly prosperous season. Butter is reported very scarce, and those who failed to bargain for it early in the season are experiencing some difficulty in obtaining their winter supply, as the farmers' wives say that since the winter started the cows have fallen off so in their milk that they will hardly have enough for themselves. Eggs sell at 25c. per dozen, and are hard to procure at that. Turkeys are very high again, and very scarce, owing to the cold, wet summer, which was bad for turkey-raising. Chickens are also a good price, and are not as scarce as last season.

Beef is very cheap, owing to the fact that a great many cows are being marketed because of the low price of cheese.

A. S. W.

### Back to the Farm.

Things on the farm are changing, and we already observe, if we watch the barometer of social life, that there is a tendency to get back to the country. Fifteen years ago, for instance, less than fifty per cent of the population were moving countryward; in 1900, the statistics show that seventy per cent. were seeking out homes in rural districts, and it is likely that the proportion now going away from the city reaches seventy-five per cent. At last, with Solomon, they are discovering that "all is vanity" in the cities; that friendships are difficult, that the neighbors don't know the names one of the other; that noise, dirt, confusion are there, and the struggle to live is at the desperate stage all the time.

The telephone, the trolley line, free rural mail delivery—these are mitigating the unsocial side of rural life, and the beauty of nature is doing the rest. Intelligent men and women, seeking the health of their families, physical, moral and spiritual, are taking up homes where acres abound, and are giving to rural life something it has lacked before. The practical farmer finds in these additions to his neighborhood circle stimulus and cheer, and the children of the farm and of the families from the city find mutual pleasure in association. The movement is an all-round good one. It marks a new era in rural life, and a change of inestimable value to those with courage enough to pull up stakes and leave the town. It is one of the most encouraging signs of the times. —[From Opportunity.



Cross-bred Yearling Wether.

First as under one year at the International and the Ontario Winter Fair, 1903. First and champion long-wool at London, St. Louis and Chicago, 1904. Exhibited by John T. Gibson, Denfield, Ontario.

### Good Year with Sugar Beets.

To the Editor "Farmer's Advocate":

Sir,—We are pleased to state that, to date, we have sliced a little over 32,000 tons of beets, and produced about 8,000,000 lbs. of sugar. Our campaign will be completed in the course of a few days.

The growers are thoroughly pleased this year, as the returns received from the crop have been most satisfactory in every way. We will get double the acreage this year we have had previously, and much less work will be involved in securing the same, as the farmers are tendering acreage freely.

Compared with turnips, the beet crop will bring from one-quarter to one-half more per acre, while the labor involved is about the same in either case. We think we can assure you that the beet crop is becoming established in Canada, so far as the farming community is concerned, and that from this time on all the tonnage desired will be supplied.

Thanking you for your interest, we are,  
Yours truly,  
D. A. GORDON, Manager.  
The Wallaceburg Sugar Co., Limited.

### Worth \$4.50 a Year.

I cannot refrain from putting in a word for the "Farmer's Advocate and Home Magazine." It is a very welcome paper at our house, from oldest to youngest, all admire it. It is indeed a "Farmer's Advocate," in every true sense of the word. I wish it all success. Would not be without it for three times the money. May it live long, and never die.

WILLIAM LENEY.

### Best-growing Satisfactory to Farmers.

A series of twenty important farmers' meetings in the County of Waterloo, Ont., was commenced at Conestogo. Dr. Shuttleworth opened the meeting by brief references to the results of the present season in the growing and delivering of beets. In all, not less than 3,500 measured acres were grown for the Berlin factory by 1,647 farmers, distributed over eighteen different counties. Waterloo County produced for the factory a magnificent crop, of about 15,000 tons, while the outside acreage, distributed over seventeen counties, was grown adjacent to and shipped from about 133 stations, from points reaching out from Waterloo in all directions, approximately one hundred miles. "The campaign just closed has been successful," continued Dr. Shuttleworth, "something over seven million pounds of granulated sugar having been produced, all of which has been marketed as rapidly as manufactured. The factory, therefore, will close its campaign with empty sheds and empty warehouses."

Mr. J. G. Hurst, one of the leading farmers of Conestogo, who grew fifteen acres of beets this year, asked whether we cannot "get a large beet which is also rich in sugar." Mr. Simpson Rennie replied that when land was rich and properly worked it is quite possible, and gave illustrations from the beet fields of Scarboro Township of very large sugar beets testing as high as sixteen per cent. of sugar.

Mr. Simpson Rennie, without doubt one of the most experienced growers of roots in the Province of Ontario, dwelt particularly upon soil cultivation necessary for the best results in the growing of sugar beets, and presented figures, giving relative cost and profit in the cultivation of various farm crops. "The soil of Ontario I consider excellently adapted to the growing of sugar beets. I am glad to see how the farmers in Waterloo County and elsewhere have taken hold of this new agricultural industry, and I am confident there will be a great many more go into the growing of sugar beets when they know the amount of money there is in the crop when properly handled."

"A number of farmers in Scarboro Township began growing beets two years ago. This year there have been no less than thirty carloads shipped from Agincourt in York County, a distance of eighty miles from the factory. Some of those farmers have a considerable distance to haul their beets to the station, and the freight they have to pay is eighty cents per ton. Those farmers grew sugar beets to make money, and not for fun. You in the County of Waterloo have a decided advantage over those growers at a distance, since you can team your beets to the factory, and thereby save the freight. I have here to present to you growers in Waterloo County figures based on actual results of the growers in Scarboro, assuming an average of fifteen tons per acre, which is considered about the average that Scarboro farmers are producing. The following figures, of course, are chiefly made up of items for work, rent of land, etc., and are really earned by the grower, except the items of freight and seed:

Rent of land per acre .....	\$ 4 00
Manure .....	7 00
Fall plowing (twice) .....	3 00
Spring cultivation for seeding .....	1 25
Sowing .....	1 40
Thinning and hoeing (first and second times) .....	7 50
Scuffling four or five times .....	2 00
Pulling .....	1 00
Topping .....	7 50
Teaming a distance of 3 miles to station .....	7 50
Freight on 15 tons, at 80c. per ton .....	12 00
Additional freight on 6 per cent. tare .....	90
Eighteen pounds seed, at 10c. per pound .....	1 80
Making total cost per acre on a fifteen-ton crop, produced at a distance of 80 miles from the factory, and delivered at Berlin .....	\$56 85
Taking the average per cent. of sugar of last year's total deliveries, viz., 15.3, these 15 tons would realize at the factory \$5.10 per ton, or a total of .....	\$76 50
After deducting the above estimated cost .....	56 85
We realize a profit of .....	\$19 65
But to this should be justly added the commercial value of the pulp, viz., .....	3 75
And we have a clear net profit of .....	\$23 40

"It must not be forgotten, as above mentioned," continued Mr. Rennie, "that most of the items of estimated cost are sums of money actually earned by the grower, and are based on an allowance of \$3.00 per day for team, and \$1.50 per day for hands."

These figures, as presented, were carefully discussed by Mr. George Wright, of Conestogo, who grew ten acres of beets this year; Messrs. Wm. Scheffele, J. G. Hurst, Johnson Wilkinson, Samuel Shelly, Wm. Hommerich, and others, all of whom are experienced beet-growers. They consider the estimated cost fair, and the actual net profits about as good as were received by themselves for their own beets after teaming them at a distance of eight miles to Berlin.

At Woolwich, following the addresses delivered by Messrs. Shuttleworth and Rennie, Chairman Shantz and Messrs. Shub, Martin, Bauman, Weber, Brubacher, and others, led in a very profitable discussion. Mr. Simpson Rennie emphasized the importance of thorough fall preparation of land, which is better with two plowings