

### Profitable Potatoes.

On a sandy loam soil, fertilized during the fall and winter with fifteen loads of good barnyard manure, and thoroughly worked in the spring, 501 bushels of potatoes were grown on one acre in 1914, the largest yield of potatoes in the Province of Ontario, as far as can be ascertained from the results of the Acre Profit Competition conducted in the different counties, and open to young men who attended the winter course in agriculture put on by the District Representatives. This crop was grown by Campbell Lamont, of Strathroy, Middlesex County, at a cost of \$32.62. Figuring the potatoes at 40 cents per bushel, the net profit is \$167.78 an acre. In the same neighborhood, on the same kind of soil, Archie Limon had 490 bushels, 40 pounds on an acre, at a cost of \$28.86, leaving a net profit of \$167.50. Still another, Allan McNeil had 471 bushels, 10 pounds, at a cost of \$40.80, leaving a net profit of \$147.97. These figures show the possible yield and profit where the soil is suitable, cultivation thorough, climatical conditions ideal, and variety of potatoes adapted to the locality.

In figuring the cost, rent of land was estimated at \$5.00 per acre, manure at 50 cents per load, man labor at 15 cents per hour, horse labor at 10 cents per hour, and the seed at 75 cents per bushel. The actual time was kept of preparing the soil, cultivation, planting and digging the potatoes, and spraying for bugs and blight. The variation in cost of production comes in by the difference in time of cultivation, amount of manure applied, also whether the potatoes were planted by machinery or by hand. Where the planter was used the planting was done for less than one-quarter what it cost by hand, the variation being from 53 cents per acre planting by machine to \$2.50 planting by hand, and from \$6.00 digging with the machine to \$12.00 plowing out the tubers and picking them up. This shows that where several acres of potatoes are grown, machinery for planting and digging saves expense.

The variety which gave these large yields is the Dooley, a potato which seems particularly adapted to the locality around Strathroy. It is a flat, round potato, with shallow eyes, a fairly stout stalk when growing and a purple blossom. The custom is to plant in rows about 33 inches apart, and the tubers 12 inches apart in the row. This system has given the most satisfactory yields.

### Weight of Hay in Mow.

Editor "The Farmer's Advocate":

In your issue of Jan. 14th in answer to a question relative to the amount of hay in a mow of certain dimensions, you state that one cubic foot of hay will weigh between 7 and 9 lbs., and that a mow 24 feet by 13 feet by 10 feet would contain 122.5 tons. I do not know how you arrive at this, but I have bought considerable hay by measurement and have weighed out some mows to find out how my calculations agree, and I am prepared to state that the estimate given in this article is twice too high. Fine timothy and blue grass put in in good condition and having been pressed with several loads of grain in the sheaf, piled on top of it will weigh out about 450 cubic feet to the ton. This you see would be equal to about 4½ lbs. per cubic foot. Coarse timothy and clover, even under these conditions will require 475 cubic feet to the ton. Where hay is put in the mow in small quantities, say 8 or 10 tons, without anything being put on top of it, the very best of hay cannot be estimated under 500 cubic feet to the ton, and the coarser, lighter hay will require nearly 600. Only yesterday I bought a mow of hay of 10 tons, and I found that it required about 510 cubic feet for a ton of hay. This was a good sample of clover and timothy mixed, fairly coarse and had oats piled on top of it from harvesting and threshing time. I am writing you this because I believe that many people place a good deal of confidence in your answers to questions. If I were going to buy the mow of hay referred to in the question, unless it had been packed by a mow of grain on top of it for some time, I would not buy it for a pound over six tons; if it had been heavily pressed one might get seven tons out of it.

Norfolk Co., Ont.

P. E. ANGLE.

[Note.—We are pleased to publish the foregoing letter based on practical experience, and any others of our readers who have had experience taking hay out of the mow are invited to give other readers a benefit of their findings. Estimating hay is a difficult task and no definite rule can be laid down. Our estimate may have been too high, but it was made from a rule which has held in the past for well-settled hay. Our correspondent's letter throws new light on the subject, and our columns are open for more of these results of practical experience. We feel sure they will show the weight of a cubic foot of hay to be very variable.—Editor.]

### Canada's Crops.

The Census and Statistics Office has issued its final report on the yield and value of field crops in 1914. The report states that, in marked contrast to 1913, the season proved particularly unfavorable to the growth of grain. Persistent drought throughout the greater part of the Northwest provinces resulted in a yield per acre of the chief cereals lower than in any season since 1910 and lower than the average of the six years ended 1913. In Ontario and Quebec, though the grain crops suffered from a dry season, the conditions were not so unfavorable, whilst in the Maritime provinces a favorable season resulted in good returns.

For the whole of Canada the area estimated to be sown to field crops was 35,102,175 acres, as compared with 35,375,430 acres in 1913; but owing to the drought the total productive area in 1914 was reduced to 33,440,075 acres. Upon this area the total production of grain crops in bushels was as follows: wheat 161,280,000 as against 231,717,000 in 1913, oats 313,078,000 against 404,669,000, barley 36,201,000 against 48,319,000, rye 2,016,800 against 2,300,000, peas 3,362,500 against 3,951,800, beans 797,500 against 793,300, buckwheat 8,626,000 against 8,372,000, mixed grains 16,382,500 against 15,792,000, flax 7,175,200 against 17,539,000 and corn for husking 13,924,000 against 16,768,000 bushels.

The yields per acre were in bushels as follows: Fall Wheat 21.41 compared with 23.29 in 1913; Spring Wheat 15.07 against 20.81; all wheat 15.67 against 21.04, oats 31.12 against 38.78; barley 24.21 against 29.96; rye 18.12 against 19.28; peas 17.64 against 18.05; beans 18.20 against 17.19; buckwheat 24.34 against 21.99; mixed grains 35.36 against 33.33, flax 6.62 against 11.30 and corn for husking 54.39 against 60.30.

Computed at average local market prices the values of these crops in 1914 were as follows: Wheat \$196,418,000; oats \$151,811,000; barley \$21,557,000; rye \$1,679,300; peas \$4,895,000; beans \$1,884,300; buckwheat \$6,213,000 mixed grains \$10,759,400; flax \$7,368,000 and corn for husking \$9,808,000. For all field crops, including root and fodder crops, the total value amounts to \$639,061,300, as compared with \$552,771,500 in 1913, the increase of \$86,289,800 being chiefly due to the enhancement of prices, which has thus more than counterbalanced the low yields of grain in consequence of the drought.

In the three Northwest provinces of Manitoba, Saskatchewan and Alberta the production in 1914 of wheat is placed at 140,958,000 bushels compared with 209,262,000 bushels in 1913, of oats at 150,843,000 bushels compared with 242,413,000 bushels and of barley at 19,535,000 bushels compared with 31,060,000 bushels. The wheat production of 1914 in Manitoba was 38,605,000 bushels from 2,616,000 acres, in Saskatchewan 73,494,000 bushels from 5,348,300 acres and in Alberta 28,859,000 bushels from 1,371,100 acres.

### A Small Engine Runs a Grinder.

Editor "The Farmer's Advocate":

One of your correspondents asks about grinding grain with a small engine, and my experience may help him and others. I bought a two and one-half H.P. gasoline engine a year ago for spraying and pumping. The agent tried to sell a grinder with the engine, but I did not think it had power enough to run one. Anyway he brought out an eight-inch, flat-plate grinder and started it going, and I have been using it ever since. It will grind five bags of barley or eight bags of oats an hour, and make as good a job as we usually get done at the mill. When buying an engine be sure to get a good one. The horse power is rated according to the size of the cylinder, and the fitting of the cylinder makes a big difference in the development of power.

Bruce Co., Ont.

A. J. MACKINNON

### Septic Tank.

Editor "The Farmer's Advocate":

I noticed inquiry regarding septic tank in a recent issue. Perhaps my experience may be of some use to some interested. I put in a septic tank a few years ago, fitted in the best way I think possible, that is with large brass flush valve, etc. I was given to understand all I had to do was to fix tank, have fixtures installed, put on permanent top and leave it. We noticed disagreeable odor, not in bath-room, but in room adjoining. We tore off the top, turned on the water taps and cleaned it thoroughly till it was perfectly clean. Of course with brass flush valve it not only flushes but it pumps and drains all liquid out clean, by suction, but other refuse has to be cleaned out. Disinfectants spoil your valves. Clean your septic tank and you will have no disagreeable odors or gas.

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### Agriculture in Australia and New Zealand.

If New Zealand and Australia have any superiority over Canada as an agricultural country it is simply the matter of climate. Their summer is our winter and when it costs us most to produce the Islands of the South can meet us on the European market with their products grown under most favorable conditions. Dr. G. C. Creelman, President of the Ontario Agricultural College, gave expression to these statements, after an extended tour of five months in the Tropics, in an interview with a representative of the "Farmer's Advocate." In this period Dr. Creelman visited New Zealand, Australia, Honolulu, Japan, China and other points of interest with a commission interested in science and agriculture.

Australia is larger than the United States, most as large as Canada, is equal in extent to three-quarters of Europe and comprises one-quarter of the land area of the British Empire, yet the character of the soil is such that it will remain largely a ranching country. Irrigation is the problem of the farmers and Dr. Creelman said they did not have enough water to irrigate between the mountains and the sea.

In Australia, the homesteader must go well back before he can acquire free land as the owners of ranches are loth to break them up. The chief exports of Australia are wool, mutton and rabbits, and they amount to about \$80 per capita. Dr. Creelman emphasized the fact that Australia is not a manufacturing country. Even the glass sashes in the fronts of their shops are made in the Home Land. Ninety-six per cent. of the total population of Australia were born either in Australia or in the British Isles. It is strictly a British-speaking people.

New Zealand, though small in area looms up as an agricultural country. Their products are cheese, butter and wool and the cheese factory industry gave the commission the impression of one in which considerable money is invested. They have excellent water, well-paid makers, good buildings and their standard is high throughout. Dr. Creelman emphasized the fact that the factories appear more up-to-date, more modern and better equipped than are the factories in this country. All the butter placed on the market is made under direct inspection of the New Zealand Government. Climate is the one great influencing factor in this little island. They have neither barns nor hay stacks, they cultivate very little land and their cows can eat green grass every day of the year.

The great drawback of New Zealand and Australia is "their remoteness from markets and sources of immigration." Prospects are better for homesteading in New Zealand than in Australia for in the former country the Government is buying up large tracts of land, subdividing them, building roads and selling them to settlers almost at cost. The farmers of these southern countries have more time for leisure, recreation and reading as their area under cultivation is very much less than in this country, yet there is very little difference between the farmers of New Zealand and Canada.

Another interesting feature of the trip was a large sugar-cane farm on the Island of Honolulu. Each day under their system of irrigation this one farm used 5,000,000 gallons of water, equal to the consumption of water in the city of San Francisco. Their implements were all large and one steam plow was turning a furrow three feet deep. Other implements were used in the same proportion.

"Japan and China are another world," said Dr. Creelman, although they have intensive methods of cultivation yet they are not applicable to Canada and there is no lesson in them for us.

Dr. Creelman spoke enthusiastically of the great amount of shipping carried on in the Pacific Ocean. The trade through Australian ports is represented by \$700,000,000. The trade through New Zealand ports is represented by \$200,000,000 and the exchange of commodities through the medium of the Pacific Ocean has been estimated at a total of three billions of dollars. The President saw a great future for Canada in the merchant marine that might be developed in this country when Canada has acquired a population of one hundred millions of people. We are manufacturing in Canada what the people of Australia and New Zealand require and they are producing commodities that we can put to good use here in this country. There is sure to be a great growth in trade between Canada and these far-away Islands.

One Western Ontario dairyman said at the recent convention that there is no bad butter and cheese made in Western Ontario, and other speakers asked for greater efficiency. If there are no really bad dairy products turned out of this district it seems that there is still room for improvement. Not all of them are the best possible.