

quite as favorably, and Dr. Edward Cahill, of the Massachusetts Bureau of Animal Industry, made the statement that 95 per cent. of all the hogs of Massachusetts are garbage-fed. Of 2,276 hogs sold by the Worcester pig farm to a local packing house, only 11 were condemned by the United States Government meat inspectors. This speaks very highly of the health maintained in the swine herds.

Operation of the Garbage Piggeries.

The garbage as it comes from the farm is neither washed nor steamed. Washing is considered uneconomical because so much valuable food material is washed away and wasted. It is declared to be unnecessary since no material advantage is gained thereby. Cooking or steaming the garbage has been found by experience to be bad, since the garbage is thereby made more acid than it ordinarily is and substances are incorporated in the food which are harmful to the hogs and which would not be eaten in the raw garbage. A hog is more capable of picking over and culling garbage than any man or machine can be.

Inoculation Against Cholera.

The double treatment for swine cholera is practiced in the State of Massachusetts under rigid Government supervision. This makes it possible to inoculate the hogs on the garbage-feeding farm and immunize them against hog cholera. Restrictions are placed on the double treatment in Canada, but the single or serum alone treatment may be used on garbage-feeding plants. It is furthermore required that the garbage be cooked. Speaking at the last Swine Breeders' Association meeting, in Toronto, Dr. F. Torrance, Veterinary Director General for Canada, expressed the opinion that the serum alone treatment combined with the cooking of garbage would protect the herds. At Worcester, the hogs are fed until they are frequently over a year old. It might be considered impracticable to use the single treatment on such hogs, as it only renders them immune for a period of six weeks to two months. It is not a Canadian practice to feed hogs up to the age stated, but if it were found to be economical and desirable some suitable arrangement might be made with the Health of Animals Branch, whereby the hogs could be protected against hog cholera.

Out-of-Door Feeding Platforms.

The pigs are fed in pens until about six months of age, during which time they consume garbage. They are then turned into hog lots (100 pigs to about three acres), with out-of-door feeding platforms made in 8-by-8-foot sections of 2-inch plank. These are mounted on skids and have a half-round timber on two sides to prevent the garbage being pushed off. The cost per section was \$7 with farm labor. Several sections are placed end to end, and when the ground around the platform becomes fouled the sections are skidded to another location and the ground of the former location plowed up. By this means the garbage trampled into the ground is kept from decaying and producing foul odors. The platforms are shovelled clean daily, and the material removed is composted or buried. The hogs are kept for about fifteen months, when they are sold. They then weigh 250 to 300 pounds. A herd of sows and boars are kept to provide feeding stock, and farrowing is controlled so there may be a sufficient number of pens. During farrowing and sometimes during inoculation a little grain and middlings are fed. Boars are rarely kept more than two years, and only prolific sows that are good mothers are kept for repeated breeding.

Cost and Revenue.

Space will not permit of a detailed description of buildings and equipment, but suffice it to say that the average net cost of disposal per year for nineteen years was \$10,169, or \$0.074 per capita. The total cost of collection and disposal per year now totals \$60,435. About 1,500 swine are sold each year, and at the price of pork in 1917 realized a total of \$60,000. In the years 1902 and 1910 a clear profit was shown over and above the cost of collection. In 1902 the total expenditures were \$18,765.03; the total receipts were \$18,766.99. In 1910 the total expenditures amounted to \$37,039.68, and the total receipts were \$43,224.25. The estimated cost of building and stocking a 20 to 30-ton garbage piggery is set at \$81,700.

There are about 2,000 swine on the Worcester farm during the winter months, but in summer this number is increased to 3,500. About 100 to 150 pigs, depending upon the size, will take care of one ton of garbage per day. One caretaker can care for about 250 to 300 pigs a day—feed them, bed and clean out the pens. About five cords of cleanings are produced daily (1,500 to 1,600 cords per year) and have a value of about \$4 per cord as fertilizer at the farm. The Home Farm has never bought fertilizer in any material quantity for its farm land, or truck garden, and the scavenger department has never been credited with the value of the pig manure from the piggery.

We have endeavored to set down briefly the system followed on a successful garbage-feeding hog farm. Such plants are common in the United States. There is a possibility that the desire to conserve feed and produce more food may lead cities and private individuals in Canada to consider garbage feeding. Before attempting any such plan, the promoters of such a scheme should become thoroughly acquainted with the details of the work and place the responsibilities connected with the operation of same in the hands of a competent and trained man.

Don't allow the flock of sheep to run in yards or old orchards where burrs are standing or where other weeds will get into and injure the fleece.

A Good Live Stock Show at Brandon.

Once more the Manitoba Winter Fair at Brandon was a substantial success. The visitors to the event were impressed by the high quality of the Clydesdales and Percherons, by the outstanding quality of the fat cattle, and by the success of the bull sale. The last-mentioned feature unmistakably marks the progress of the pure-bred cattle industry of Manitoba and the West generally. The quality of the bulls was good, and buyers were on hand to bid on the best animals. In all 189 bulls were sold, bringing \$48,060, or an average of \$254. The 154 Shorthorns brought an average of \$238.35; 18 Aberdeen-Angus brought an average of \$337, and 6 Herefords averaged \$281.68. The Shorthorn females, 8 in number, averaged \$321.25, and 2 Hereford females averaged \$402. The feature of the sale was the price paid for Rosewood 2nd, a Nonpareil year-old Shorthorn bull, bred and contributed by J. B. Davidson, Myrtle, Man. This bull sold for \$2,200 to C. McMillan, Oak Bluff.

The fat classes for cattle were well filled, and the entries were brought out in good fit. The grand champion bullock of the show was calved in 1916 and bred by J. D. McGregor, Brandon, Man. The name of this animal was Glencarnock Victor 3rd, following in order the two animals previously bred at Glencarnock and champions at Chicago.

The Clydesdale exhibit was of very high order. The classes were exceptionally large, the horses were unusually well fitted, and the winners had to be exceptionally good. In the aged-stallion class, no fewer than 23 horses lined up, and the judge, Dean Rutherford, of Saskatoon, encountered some heavy work in placing the awards. The winning horse was Edward Garnet, a big, stylish animal, shown by Ben Finlayson, Olds, Alta. In the three-year-old class, Thomas Halpenny, Regina, won with Baron Wallace of Hillcrest. There were over twenty in the two-year-old class, and here R. H. Taber, Condie, Sask., won the first-prize ribbon with Duke of Hillcrest, a quality horse by The Bruce. The yearlings also constituted a strong class; here Taber also stood first with Prince of Hillcrest, which entry later carried off the male championship of the show. The female classes were well filled, and some beautiful mares paraded before the judge. In the four-year-old and over class, Flashend Princess, shown by G. C. Porterfield, Brandon, stood first. Doon Lodge Manita, owned by Mrs. W. H. Bryce, Arcola, won the Canadian-bred championship for females.

The Percheron exhibit was not as large as has been seen in other Western show-rings, but the quality of the horses was uniformly high. The outstanding representative of the breed was George P., shown by Dr. Read, Regina. He was a very showy horse and hard to fault. He won the aged class and the championship for the breed.

THE FARM.

Comments on Correspondence.

EDITOR, "THE FARMER'S ADVOCATE":

I have been a reader of your valuable paper for a number of years. I have read many farmers' letters with pleasure, and a few, I must say, with disgust. It seems as though men in almost every walk of life have something to throw at the poor old farmer, in this time of stress and strife. The common by-word is "The farmers are getting rich." I think a great deal of this kind of talk is the farmer's own fault. Farmers are just like a lot of hens, if they lay an egg they have to cackle to let everybody know it. If a farmer happens to hit luck and make a few dollars, he has to advertise it, but he never advertises his mistakes or failures.

Now, just think what our city cousins and our ex-Food Controller, and a lot of our Government officials, who have never raised a hog and probably wouldn't know a hog from a load of hay, would think if they happened to read that letter in the February 28 issue, by J. P. Cole, where he says he made \$79.90 profit on four pigs not five months old. Can you blame the city folks for calling-us profiteers? I will just run over Mr. Cole's figures for fun for myself. He just gives account of 2,090 pounds of feed. If I am not mistaken, Government experiments have shown that it requires from 5 to 6 pounds of grain to make a pound of pork; 2,090 pounds divided by 5 gives us 418 pounds of pork. His four hogs weighed 720 pounds, so when we subtract 418 pounds we have 302 pounds of pork unaccounted for. That at \$18 per cwt. would be \$54.36, leaving his profit at \$25.54, which I would consider a very good profit. Maybe Mr. Cole keeps his brood sow and young pigs on hot air, but I find that it costs me more to make the first 100 pounds of a hog than it does the second 100 pounds.

We are making good money this winter feeding hogs, because we happened to be lucky enough last fall to have a lot of soft corn, but for the man buying all his feed, I think he has to be a good feeder if he breaks even. Yes, and here is a little more of the sunny side of the hog business. We must not forget that hogs, like human beings, will sometimes die in their young days, and again a man may get a nice bunch of hogs almost ready for the market when along comes hog cholera and away go his hogs into a hole in the ground, profit and all. We never had the cholera in our herd, but we will have to make a lot more profit yet this year to even up what we lost in the year 1916.

I have been looking over the hog and grain markets for the past fifteen years and comparing them, and I have come to the conclusion that the man who is raising hogs is about where he always was—just a little

profit if he figures right. But I don't think any of us will make that 11 per cent. on our investment, like the privileged packers are allowed. By the way, I see by to-day's paper that the Government is talking of laying aside a little, and, in case the packers have to sell on a declining market and lose money, it will be paid back to them. Now, would not this be a good way to increase the production of pork,—just let the Government lay aside a few millions to pay the farmer all he loses by holding his hogs till they are finished, even if the price does drop a couple of dollars a hundred, because we all know that there are thousands of hogs sold every year half-fat, for we know not when the price will drop?

I don't want you to think that I am an old grouch, because I am not. I am a young man who came in the first class of the M. S. A., but I am exempt on account of physical unfitness. I have been on a farm all my life and like the work, and I know that there is a good living, and a little to lay aside, on the old farm for the fellow who is willing to work hands, feet and head from five o'clock in the morning until eight o'clock at night. I don't think that many farmers will ever get rich.

Essex Co., Ont.

J. A. HEATHERINGTON.

Better Plowing Essential.

EDITOR "THE FARMER'S ADVOCATE":

To-day, more than ever before, the writer, as well as many others who held the plow fifty years ago, can testify to the truth that we grew more grain per acre on the run-down clay farms than we have in the past three years, even with all the tile draining and artificial fertilizers that are being expended on the farms. The writer, being a close observer and having farmed on various kinds of soils, firmly believes that at least two-thirds of the failures on low-muck and sandy lands and clay farms especially can be traced to the wide, flat lands leaving no drainage. We well remember seeing all the fields plowed in about six-pace lands, and after the crop was put in many of the furrows were run through with a plow and the cross furrows cleaned out nicely. This gave drainage and warmth to the soil and a complete failure, as we have known them too frequently the last few years, was unknown. The cause of this mode of plowing is no secret. It can be traced to the riding plows and other riding machinery, and the fear of the present young generation of a few bumps. I would like a little space to show the new beginner how to produce the greater production we read so much about, and give the thinker something to think over. In some of the particulars some may not agree with me, such as a clean cut, wide bottom plow, with a coulter, wheel and skimmer that will turn a miniature furrow of 1½ inches deep by 2½ inches wide, and a good stiff team that will turn a full furrow on striking out the lands. These first two furrows should be turned flat over so their edges just meet firmly together, but not one piled on top of the other to be dragged over the surface when cultivation begins. Strike out your lands six or seven paces wide and back furrow each land off by "geeing" about until the proper width. You will not plow two lands before you will see what a nice slope you have from the centre of the land to the ditch. If the furrows are turned over flat, rolling is of very little use and lost time, and the disk should be run lengthwise a couple of times, taking care not to get too deep so as to tear up the sods or weeds on top to start before your crop gets up and crowd it out. The disk when properly used is a good pulverizer, but otherwise it throws the land into knolls and holes for water to stand in. It should always be lapped half way to avoid the above unevenness. If the land is stubble or corn ground, there has been nothing better invented to pack and level it with than the good old drag harrow, and if it only could be made to ride easily it would not be so little used. By the time a field is dragged four times over there is scarcely a foot of land in that field that the horses have not stepped on. Work the lands mostly lengthwise and don't try to fill the furrows up, but work the edges down, and when you get a good crop when your neighbor has none you won't mind the reaper bumping a little.

In conclusion I want to put in this already too lengthy letter a few don'ts. Don't get your seeds too deep down in the cold, wet ground. Don't roll after planting, unless you give it a harrowing after. Don't plant corn, beans, or potatoes, deep in a hole, but on top, and cover with earth; try this if you want these to grow this year and you surely do as seeds never were higher in price. Don't sow timothy or clovers in front or behind the drill without rolling or dragging first. Try this with one-third less seed. Give a light dragging after as those spindly little plants cannot shove their way through two inches of heavy soil, and half of the seed after or before a drill goes three inches deep. Don't think you are gaining time by plowing wide lands, as you are not. One gains one round across the field every time a land is struck out. I want to tell you how a neighbor of mine made a complete failure growing factory peas last year. He had the sod field plowed without a skimmer so the grass and weeds showed in the edge of every furrow, and plowed in as wide lands as possible. He crossed and cornerwise disked so deeply that the field was all covered with bits of sod. He rolled and dragged it and drilled them in at least four inches deep, then rolled the sods in to grow and the peas so solid they could not get through the ground, and as peas cost the company from \$12 to \$15 to seed an acre, it is a serious thing to make such mistakes.

Elgin Co., Ont.

G. H. C.

Note.—It is hardly likely that the farms which our correspondent speaks of farming fifty years ago were as badly run-down as far as fertility is concerned as they are now after a half century of cropping. The land would be new then.—EDITOR.

Human

EDITOR "THE FARMER'S ADVOCATE":

In December on the stump in ment. Not as a three years ago would vote as I

I knew, and every day, that political pariah but had never g or party issues, strong enough, the Conservative me for my support

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A second class and his surname, changing the first generally unreason does not stand a