

it that way. I know, however, that if you go anywhere in this country and find two farms, one man feeding the most of the produce of his farm and then hiring extra help, if necessary, to care for his stock, and another man selling grain and taking little care of the manure, you do not need to ask twice who is making the most money. If the manure cannot be calculated into dollars and cents wages, the farmer gets those wages just the same in the increased productivity of his land."

Business Management

I stated that Mr. Hamill is not a specialized dairyman. The dairy herd, however, influences the profits from every other department. The fertility from the barn yard explains the productivity of the soil. "I manure 20 acres each year," said Mr. Hamill. "My object is to feed as much of what the farm produces as I can and have a considerable surplus over to sell. Outside of dairying, my specialty is alsike and red clover seed, which I find profitable. Take a 12-acre field, for instance. I may get 20 loads of clover

hay from it. If, then, I turn around and get \$200 worth of clover seed from the second crop, I have doubled the profitability of my land. I have done this time and again, and held out three or four bushels of seed for my own use. There is greater profit from clover run in this way than from any grain crop I can grow."

A hard and fast rule cannot be followed in farming, however, and Mr. Hamill believes in adapting himself to changing conditions. For instance: "This year," he said, "grain promises to be a good price, while there will probably be a shy market for clover seed. Accordingly I plowed up meadows for fall grain last summer. This to adapt myself to market conditions. I regard a three-year rotation, however, as the ideal where great production is aimed at. I myself try to follow a four-year rotation of corn, clover and fall wheat, but I do not stick close to this system. Most farmers, for instance, do not care to put one-quarter of their farm in hoe crop."

There is abundance of pasture land and good

pasture land on Craigielea Farm. This explains the absence of pasture in the rotation, fall wheat taking the place where pasture is usually found. "It is like corn to follow wheat," said Mr. Hamill. "It gives us a chance to get on the land and cultivate at a good time to kill the weeds. Some like to plow down clover for corn, but I like to have the clover for fall wheat and I can have it for both."

Craigielea Farm is increasing in productivity every year. "I do not see any limit to the possible productiveness of a farm," said the proprietor as we returned from a tour of inspection. "If I were to live on this farm 50 years, I could increase the production every year, weather conditions considered. If a man claims that he has reached the limit of production, there is something radically wrong with either the farm or the farmer. I have handled five different farms myself and have left all of them producing more than when I took them."

The buildings on the Hamill farm are of the (Concluded on page 16.)

All Around the Dairy Farm : Suggestions from Our Folks

A Silo Cheap and Good

SILOS have been erected by the hundreds all over eastern Ontario during the last few years. Many farmers who were either totally opposed or mildly indifferent to the use of ensilage now look upon the silo as practically a guarantee against lean years such as we experienced in 1913 and 1914. Silo enthusiasts in the corn belt states, using as their slogan, "A silo at one dollar a ton," have been inducing tenant farmers to build silos. This sounds alluring, but we must remember that many of these silos are constructed in the cheapest way and of the cheapest material. We are giving below a bill of material for a silo erected by Mr. S. Brown, of Peterboro Co., which is constructed of first-class material, and did not cost much more than the type advocated by the corn belt propagandists:

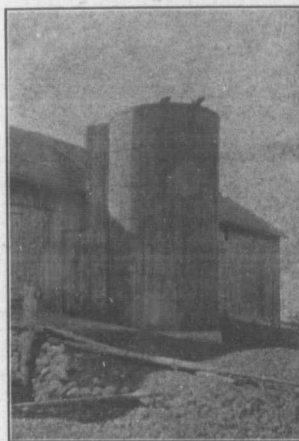
Lumber	\$61 00
8 hoops	16 50
Wages to workmen	12 50
Cement and gravel	25 00
Rent of forms	6 00
6 gals. of creosote	6 00
Hardware	2 00

\$138 00

This silo is 13x32 feet. The first eight feet is underground and of concrete construction. The remaining twenty-four feet is built of 2x6 spruce staves, dressed on both sides, tongued and grooved and bevelled. This material was purchased from a local lumber company. The staves were given a good coating of creosote before erection, thus rendering them less liable to decay from rain and the juices in the silage. Iron plates made from hoop iron were inserted in grooves cut in the ends of the staves to keep air from entering at the joints. A continuous doorway runs from top to bottom, the cross pieces being made of pieces of staves cut the proper length. This is a great convenience when taking out the ensilage. This silo cost considerably less to erect than many of the manufactured kinds, and affords ideal storage for one of the best of farm roughages.

"O.P.V." Ensilage

WE may explain that the "O.P.V." of the heading stands for oats, peas, and vetches. "O.P.V. ensilage" promises to make the silo popular in districts where the corn crop, owing to adverse climatic conditions, has not been a success. The term, we believe, originated at



A Good Silo at Small Cost.

This silo was erected on the farm of Mr. Stewart Brown, Peterboro Co., Ont., at a cost of \$138. Particulars are given in the article adjoining.

—Photo by an editor of Farm and Dairy.

the Nova Scotia Agricultural College Farm at Truro, and they are there conducting experiments to demonstrate the value of oats, peas, and vetches as an ensilage crop. In a few Nova Scotia counties in the south-western part of the province, corn grows well, but the rest of the province and in the other Maritime provinces, too, the corn crop has not been a success.

In the spring of 1914 on May 13th, 5.7 acres were seeded on the college farm with one and one-half bushels of oats, three-quarters of a bushel of peas, and one-half bushel of vetches to the acre. Sixty-five tons of green feed were put in the silo, or at the rate of 11.4 tons an acre. This material contained 28 per cent. of dry matter, which was eight per cent. more than was contained in corn silage which was put in the same silo the same year. It was run through an ensilage cutter into the silo, and during the winter fed both to young stock and cows, being fed equally to both.

The next year, six acres were seeded the same

way, except that the proportions were changed to two and one-half bushels of oats, one bushel peas, and one-third bushel vetches. Part of the land was not dry enough to yield a good crop, but the yield was still 10 tons to the acre. The crop was cut just as the oats were beginning to enter the dough stage, as, if cut later, the mixture will be too bulky and will not settle well in the silo. O.P.V. ensilage may prove a boon to the Maritime sections of Canada.

The Feeding of Heifers

By "Herdman"

I HAVE at various times dealt with the feeding of heifer calves during their first year, and have always placed the emphasis on growth. I believe in feeding calves liberal quantities of whole milk, then skim milk, and then finally good, liberal feeding with grain and the best hay that the farm produces. This same feeding system during the yearling stage of growth would develop a fat, pudgy animal of inferior dairy quality. During the yearling stage, I am to develop capacity. Good pasture is an excellent place for the yearling heifer. During the winter months the very best of roughage should be fed, such as alfalfa or well cured clover, corn ensilage, and roots, but I would strictly advise against feeding much grain during this period of the heifer's life. For the small quantities that are fed, I prefer ground oats. The soiling system of feeding yearling heifers is no good. If the dairyman has no pasture, I would advise him to rent pasture land.

During the two-year-old stage, I would feed more liberally. Our heifers are timed to freshen at 30 months, and the drain on the heifer's system from the 24th month to the 30th month is great. I would avoid getting the heifers overfat; at the same time I like to have them freshest in right good condition. During the last month or so I like to feed a handful of ground flax seed in a very thin gruel of bran mash once a day. And right here I want to make a confession.

Every dairy cattle man with whom I have talked and who has had a long experience, has confessed that he has had more trouble with heifers during their first calving period than with mature cows. A large percentage of the calves come weak and not a few are born dead. I have not had more trouble than most good dairymen, but this is a condition that has always puzzled me. May it be that certain feeds are more desirable than others at this period? In a recent issue of Hoard's Dairyman, the results