

and stick to it. No matter how low in price ordinary stock goes, there will always be a demand for the top-notchers, and you may as well breed and raise them as anyone else.

A Saved Litter and an Interested Boy.

EDITOR "THE FARMER'S ADVOCATE":

To-day was the first time in my eighteen years of life to drive a load of hogs to town, get a cheque in my own name and cash that cheque all for myself.

You will ask "Where did you get the hogs from?" Last October one of father's sows, after having given birth to a litter of eleven pigs, died suddenly twelve hours later. Father, who had lost a sow in the same way two years ago had tried to raise that litter but was unsuccessful so he had no desire to try this one. After having buried the sow we took a look at the young pigs. "My goodness it's a shame to have such a nice litter of pigs die at the present high prices of pork," said father.

After dinner he looked at the pigs again and then he said, "You have always wanted pigs of your own to feed and care for so you can have this whole bunch now."

I did not say anything but I thought if dad could not raise young orphan pigs, how could I? The first thing I did was to catch them separately and pour a little warm milk down their throats. The next feed I gave them in a dish. The feed consisted of three parts milk and one part water, sweetened slightly with a little brown sugar. For the first week I fed them every two hours night and day and only once did I wish the litter had died with their mother, and that was one night when one little pig had died and the others were looking as if they might follow any time, and I wanted to go to a party but couldn't on their account. The other ten did not die so the next week I added a little cooked porridge made from corn meal and rolled oats in equal parts, and lengthened the interval between feeds from two hours to four. After a while I left off feeding at nights but fed them the last thing before going to bed.

A finer bunch of pigs never lived. They knew me and would come at the slightest call and follow me everywhere if allowed. At five months my porkers averaged 135 pounds and to-day when I sold them they averaged 210 pounds at 16¼ cents a pound. After giving my father one hundred dollars for feed, etc., I still have quite a neat sum over, and by feeding the pigs I learned a great deal, and so did father. He says he never saw me take so much pleasure out of my work as I do now, and before I close I wish to say that a father who has not given his son a calf or a pig to care for and feed and when it's sold allowed him the money all for himself I would advise to do so and see the pleasure the boy will take out of his farm work.

Perth Co., Ont.

A FARMER'S SON.

THE DAIRY.

Cut a little grass for the bull and calves confined in the stable.

Giftie Gat, an Ayrshire cow, has a five year cumulative advanced registry average of 12,056 lbs. of milk and 500.86 lbs. butter-fat.

If the main revenue comes from the cows do not let other work interfere with regularity in milking. There is ample proof that irregular milking reduces the milk yield.

Can the corn crop in a silo and provide summer pasture conditions in the winter. The silo also provides a means of keeping corn over for summer use if pastures are short.

Don't leave the cows in one pasture field until they pick it bare if there is another field to turn them into. Short grass will not pick up as readily as where there is a fairly good growth left.

How about those spring calves? Is their pen kept clean? Do they get a sufficient quantity of the right kinds of feed to keep them thrifty? Remember that the calf stage is an important period in the development of the cow.

Plan to get the most feed possible from the pastures as concentrates are high in price, but, even at that it doesn't pay to allow the milk yield to drop owing to scarcity of feed. Better to feed a little hay or grain to tide over until second-growth clover will furnish feed.

Believes Oleo Would Injure Dairying and Bacon Production.

EDITOR "THE FARMER'S ADVOCATE":

Following closely on the heels of your warning in "The Farmer's Advocate," re the oleo situation, of a couple of weeks ago, comes the announcement from Ottawa that the Government is seriously considering the free admission of oleo into Canada. This is very disturbing to a dairy farmer and presents a situation that demands immediate action. Surely the farmers have had enough to contend with the past year without this slap in the face. It seems like sarcasm for the Government to plead with the farmers for greater production one minute and turn around and cut their

throats, figuratively speaking, the next. It is not only the effect it will have on the dairy industry, but on its sister industry, bacon production, which is just now assuming such healthy proportions. Of course, the past year farming conditions have been abnormal but any fair-minded person cannot, at the present time, take exception to the price of butter. It isn't out of proportion to the price of sugar, flour and other things I might mention.

You have been the farmer's "Advocate" in the past; surely you won't fail us in this critical moment. Another good, vigorous editorial (and you can write them) might have a good effect.

Leeds Co., Ont.

C. H. McNISH.

[Note.—We have stated the case against oleo several times during the past eight months, and are prepared to hold the ground taken. Would suggest that all farmers interested write their member of parliament expressing their views and asking him to give the matter his best consideration if it comes up for further discussion. You can count on the help of "The Farmer's Advocate." —Editor.]

Loss of Fat in the Whey When Using Pepsin.

EDITOR "THE FARMER'S ADVOCATE":

Owing to the scarcity of rennet extract in Canada in 1916, many of the cheesemakers were obliged to use pepsin as a substitute. It was generally admitted at the end of the season that there was a greater loss of fat in the whey when pepsin was used than there was when using rennet extract.

Considerable work was done at the Finch Dairy Station between February 23 and May 10, 1917, endeavoring to eliminate this extra loss of fat. Tests were made with different quantities of pepsin, setting the milk at different temperatures and developing a higher acidity in the milk before setting than is commonly practiced. In preparing the pepsin solutions, one pound of pepsin was dissolved in one gallon of water.

The following results will, no doubt, be of interest to cheesemakers:

Summary of all the Vats from February 23 to May 10 at the Finch Dairy Station.

Coagulant used.	No. vats in whey	Time hr. min.	Set-ting deg.	Coagulant per 1,000 lbs. milk in whey	
				oz.	% fat
Pepsin Ordinary temp.....	40	2 57	85.3	4.55	218
Pepsin, high temp.....	16	2 47	88.2	4.29	249
Rennet, ordinary temp.....	12	2 50	85.5	4.80	209
Rennet, high temp.....	4	2 47	88.5	5.37	252
Pepsin, high acidity, low temp.....	12	2 05	85.7	3.94	268
Pepsin, high acidity, high temp.....	6	1 55	87.8	4.50	306
*Vats set high temp. 4	2	29	90.5	4.31	228
*Vats set low temp. 4	2	29	85.0	4.25	196
*Extra pepsin.....	4	3 08	85.0	5.75	171
*Normal pepsin.....	4	3 08	85.0	4.00	194

*Same milk divided into different vats.

Summing up all the tests made between February 23 and May 10, we would say that in using pepsin, the best results were secured by setting at a temperature of 85 degrees and using enough pepsin to coagulate the milk ready to cut in from 25 to 30 minutes. Setting the milk at temperatures over 86 degrees increased the loss of fat in the whey in nearly every case.

The loss of fat in the whey was lessened by increasing the quantity of pepsin per 1,000 pounds of milk from 4 ounces to 5.5 and 6 ounces. Developing the acidity in the milk so that the curds dipped in less than 2 hours and 15 minutes from time of setting, increased the loss of fat in the whey to a marked extent.

It was found advisable to allow the coagulation to get fairly firm before cutting, but there was no advantage in letting it get over firm.

In some cases the whey from milk set with pepsin tested lower in fat than the whey from milk set with rennet extract. It seems, however, that varying conditions in the milk from day to day as found in every-day factory work affect the loss of fat in the whey to a greater extent when pepsin is used than when rennet extract is used. Therefore, the greatest care must be exercised in cutting the curd and stirring it while cooking when making cheese with pepsin.

GEO. H. BARR.

Keep Up the Milk Flow During Mid-Summer.

It is doubtful if any substitute has been found for June pastures for dairy cows. The grass at this time of the year is fresh, succulent and palatable; the days are balmy and the flies are not troublesome. Cows respond to these ideal conditions by giving a heavy flow of milk without the use of concentrates, clover hay or silage. The quality of dairy products produced in the month of June is considered superior to the quality of products produced at other seasons of the year. June butter, in particular, is in demand to put in storage. June conditions do not last through the entire summer; the milk flow falls off in July and reaches a low ebb by the middle of August, unless pastures are substituted. Once the production drops below normal at this season it cannot be brought back by any system of feeding. Prevention is the only course. It is essential to keep up production

every year, but it is doubly so this year with the high prices and demand for dairy products. A milk cow is an animal that responds to good treatment.

The main point to consider is the feed supply. Many dairymen are confronted year after year with parched pastures during mid-summer, and yet they fail to do anything to relieve the situation. They apparently live in hopes that each succeeding season will not be as bad as the last. This is certainly a poor policy and points to lack of efficient management. There are different crops which can be grown that will supply the herd with feed that will permit it to keep up the milk flow. Many dairymen have erected a second silo, as experience has proven that silage is an excellent substitute for pasture. No crop grown on the farm returns as large a yield as does corn, which, if properly ensiled, can be kept in excellent condition for feeding the year around. As soon as grass becomes a little short and before there is any appreciable decrease in the milk flow, a small amount of silage is fed night and morning. As the season advances the amount is increased, until fresh pasture is available from the second growth of clover. Some dairymen rely on a spring-sown crop to furnish feed from July to the end of the summer season. A mixture of oats, barley and wheat sown at the rate of three bushels to the acre will furnish excellent pasture from last of June, and as it is eaten off will continue growing up, thus furnishing fresh feed. This crop has supplied ample feed to keep more than one cow to the acre from July until fall. Others rely on having a plot of oats and peas, or a field of alfalfa, near the buildings to be cut and fed in the stable during the latter part of June and July. Good results are obtained from these crops, but handling them in the way mentioned necessitates a considerable amount of work.

Silage and spring-sown pasture crops must be arranged for months before they are to be used. The man who has not made provision for this class of feed may possibly have alfalfa or green oats which he can cut, and later in the season green corn will be found an excellent substitute for the pasture. It is possible to greatly relieve the situation by not allowing the stock to crop the grass too closely. If there are two or more pasture fields, allow the cows on one this week and on another the next. Considerably more feed will be obtained under this method than by confining stock to one field for several weeks. As the grass becomes short, cured clover hay fed in the stable will readily be eaten. Concentrates are also found valuable in keeping up the milk flow. A mixture of three parts bran and one part cotton seed, or equal parts bran and ground oats have proven to be especially valuable for cows on pasture. Three or four pounds of this mixture, depending on the milk flow, can be fed to advantage night and morning.

It is generally considered that pasturing is the most expensive way of supplying feed for stock. However, it greatly relieves the labor situation and is beneficial to the stock. A number of successful dairymen find that it pays them to stable the cows during the day and turn them on pasture at night. The stables are kept well ventilated and partially darkened, consequently the cows are not tormented by flies. Hay and grain are fed in the stable, and it is generally found that once the pastures begin to dry up that the cows take readily to stable feeding. Of course this system entails extra work, but it is believed that the increased milk flow gives ample remuneration. A smaller acreage is required for pasture, thus leaving a larger area for hay, grain or corn.

It is generally noticed that the cows seek out a shady place in which to rest during mid-day, if they are on pasture. On many farms such places are far too few. It is true that trees prevent cultivated crops from growing near them, but what is lost in crops is usually made up by the extra comfort these trees afford the stock. Think twice before cutting down large shade trees along the lane or in fields used for pasture. By slight changing of fences it is sometimes possible to give the stock access to a clump of trees throughout the entire summer.

A constant supply of water should be furnished. A cow in full milk consumes a large amount of water every day, and if this is not available it is unreasonable to expect the milk flow to be high. While watering twice a day may be sufficient during cold weather, it is not enough during the heat of summer. The stock will frequently go to the watering place three or four times during a day to quench their thirst. Consequently, the pasture-field gate should be left open to permit the cows going to the yard for water whenever they feel like it. However, if it is a considerable distance from pasture to barn energy is used up in walking, which will necessarily lower the milk yield. Where large records are aimed at water is piped to the pasture field. This can frequently be done at very little expense, especially where the fall is sufficient to permit water to flow by gravity from the main supply tank to the field.

Salt is necessary to the health of animals, especially those which consume large quantities of vegetable foods. If deprived of this substance for a considerable length of time the vitality of the system is lowered. It is claimed that a dry cow requires slightly over one-half ounce of salt per day, while a cow in milk requires an extra half ounce per day for each twenty pounds of milk produced. Salt should be kept in a box which is accessible to the stock. Salting at irregular intervals is not good practice. Rock salt placed in the pasture field proves satisfactory, although some stockmen object to using it. Too frequently the cows are hurried on the way from pasture field to barn. If the best results are to be obtained this practice must be avoided. Undue excitement frequently results in a reduced milk flow and may affect the quality of the milk. When scattered over the field it is no easy task rounding the