

lighter and thinner steers, and give an equal profit, making allowance for their greater first cost per pound.

(3) The lighter and thinner the steers, the greater the need for economizing in regard to the meal ration.

(4) Conditions being equal, heavy steers are worth more per pound to buy as feeders than lighter ones, the selling price per pound being the same.

(5) Weight being equal, a fleshy steer is worth more per pound to buy as a feeder, the selling price per pound being the same.

(6) The lighter and thinner the steer, the greater the "spread" between the buying and selling price per pound necessary to compensate the man who feeds him.

(7) In this experiment, steers which weighed 1,053.5 pounds each when bought, which are increased 348.6 pounds each in weight, and were sold at 5c. per pound, required a spread of \$1 per cwt. between the buying and the selling price to give a profit of \$1.90 per head above value of food; whereas, a "spread" of only 45c. per cwt. between the buying and selling price gave an equal profit per head on steers sold at the same price per pound, which weighed 1,267.7 pounds each when bought, and required to be increased in weight only 90 pounds per head in order to finish them.

(8) The results of this experiment must not be regarded as conclusive. They indicate, however, what may happen in feeding steers, and seem to be in accord with the best practice in feeding.

THE CATTLE-FEEDER'S PROBLEMS.

Editor "The Farmer's Advocate":

This being more of a dairying than a cattle-feeding district, the answers to your questions submitted are necessarily more personal than gathered from those engaged in the business about here. The opinion, however, is prevalent that present prices of fat cattle are not encouraging enough to coax any new hands into it. For some years past the margin of profit, if any, has been so small that numbers have gone out of it, and, this year, all feeding material is so expensive many will be tempted to market a certainty rather than speculate on futures in beef.

The right kind of feeders, breedy two-year-olds, weighing 1,200 lbs., are always difficult to get at any price, but there are plenty of the 900- to 1,000-lb sort and unfinished three-year-olds. The export trade being so little influenced by our product, possibly this winter something to supply our local trade, some nice butchers', will make as good a return as anything.

The way Chicago packers are taking care of the enormous runs of cattle on the market, and filling their refrigerators, may indicate they are looking for dearer beef next spring.

Undoubtedly, it is best to start stabling early, and turn out during the day, thus avoiding any loss of flesh and less shrinkage by the gradual change of feeds. No rape is grown in this district for cattle. I avoid buying, in the fall, cattle that are not dehorned, and prefer feeding them in loose boxes.

For bulky food, our main reliance is ensilage mixed with an equal quantity, in bulk, of cut hay and straw, to which is added a few pulped roots.

For carrying steers over, the above ration is sufficient, except, perhaps, for the addition of a little bran; and, for finishing, I like to start on the foregoing with bran, for six weeks, then gradually beginning with two quarts of grain a day, increase it up to six quarts. My corn is planted in hills; is matured when cut, and would husk anywhere from 60 to 80 bushels shelled corn.

With bran at \$24, and shorts at \$27, they are entirely beyond their feeding value. Wheat, in comparison, at \$33.50 a ton would be far more economical. Oats at \$35 a ton are out of the question, and barley is not to be had. Corn, oil cake and wheat are what I would go into the market to buy.

Middlesex Co., Ont.

ROBT. McEWEN.

SILAGE FOR ECONOMICAL FEEDING.

Editor "The Farmer's Advocate":

In reply to your inquiries about cattle feeding, I will answer your questions as fairly as I can judge at present time. The number of cattle fed here will be half that of last year. The number of feeders available are considerably fewer than last year. We find it very hard to get heavy cattle with flesh enough. Light cattle are plentiful, because of the scarcity of feed, and, also, on that account, prices are lower. From \$3 to \$3.50 per cwt. is being paid. Perhaps the most economical cattle to buy are the short-keep fellows, if you can get them fleshy enough.

There is no better way, that I know, for preparing the bullock for economical gains than by having a few weeks on rape.

I like to buy cattle dehorned, otherwise I would not dehorn. We follow the tied system.

We feed corn silage, mixed with chaff and cut clover hay; mixed in equal parts; two feeds mixed at one time, and fed twice a day; corn silage about 25 lbs. per head per day.

In running cattle over winter, we give two pounds grain per day. In finishing, start with two pounds, and increase to eight or ten pounds.

At present here, we can buy nothing cheaper than middlings, barley and corn.

It's a pity there were not more silos this year, as I think the only one who is in a position to feed is the man with a silo full of corn. There will be more next year.

GAVIN BARBOUR.

Waterloo Co., Ont.

FROZEN WHEAT AS FEED FOR STOCK.

Judging by press and other reports, some of the most fertile districts of the West have suffered from early frosts. It is probable, therefore, that considerable grain, more or less frozen, may find its way to our Eastern markets to be offered for feeding purposes. In view of the exceedingly high prices maintaining for all feed stuffs, it is safe to say that the average farmer would welcome, and gladly buy, frosted wheat did he know, or think, it to be of any appreciable value for stock-feeding purposes.

It is now some years since frosted grain, in any large quantities, has been on the market, hence data as to its feeding value are not very recent. In the later eighties, however, and in the earlier nineties, more or less feed of this character had to be utilized, and some interesting data of feeding experiments conducted during that period are available.

COMPOSITION.

A glance at the composition of two grades of frozen wheat of the same variety, grown the same year, as well as of a sample of bran, shows very little variation in composition, so far as valuable food constituents are concerned. The analyses given are taken from the report of the Chemist of the Dominion Experimental Farms for 1892.

RED FIFE.

	Dry matter.	Ash.	Fibre.	Carbo-hydrates.	Fat.	Albu-minoids.	Water.
No. 1 Hard.	90.92	1.61	1.94	71.51	2.03	18.83	9.08
Frozen A.	85.25	1.65	8.31	64.57	2.22	18.50	14.75
Frozen B.	88.86	1.71	4.32	66.57	2.57	18.69	11.14
Wheat bran	91.58	5.60	9.81	56.68	4.27	15.22	8.42

ITS VALUE FOR PORK PRODUCTION.

Being a highly-concentrated feed, its value as a feed for swine naturally claims precedence. Experiments conducted at Ottawa and at the Western branch farms show it to be a highly-satisfactory feed for this class of stock. Not to go too much into the details of the various experiments conducted, it may be said, in a general way, that frosted wheat proved to be a satisfactory feed in every case. In the first place, it appeared to be quite palatable to the pigs, whether fed whole or ground, soaked or dry, alone or mixed with other grains. In the second place, the animals so fed appeared to enjoy uniformly good health, and never went "off feed."

Where fed alone (ground), a bushel produced about 11 lbs. live-weight increase, and about 9 lbs. when fed alone, whole or unground, and soaked for 42 hours in cold water. Where fed alone, from 5 to 5½ lbs. produced 1 lb. increase in live weight; fed along with equal parts of barley, about 4½ lbs. produced 1 lb. increase in live weight; fed along with equal parts of barley, rye (all ground) and bran, about 4 lbs. of the mixture produced 1 lb. increase in live weight. In an experiment where skim milk was added to the mixture of equal parts frozen wheat, barley, rye (all ground) and bran, 3 lbs. of the mixture and 2.32 lbs. skim milk produced 1 lb. gain in live weight. Similar pigs fed on mixed grains (oats, peas and barley, ground) required from 4½ to 5 lbs. of the meal for 1 lb. gain in live weight.

It is evident, therefore, that frozen wheat compares very favorably with the coarse grains for hog feed, and it may be added that the frozen wheat proved to be almost as valuable as properly-matured wheat for this purpose.

BEEF PRODUCTION.

As to the value of this feed for beef cattle, not so many experiments are on record; but, at Brandon in 1892, Mr. S. A. Bedford, then Superintendent, fed steers on (1) frozen-wheat chop and cut straw, (2) frozen-wheat chop, turnips and cut straw, and (3) barley chop, turnips, hay and cut straw. The first lot made a daily gain of 1 3-10 lbs. per day; the second lot, 1 7-10 lbs. per day, and the last lot, 1 9-10 lbs. per day. Mr. Bedford, at the time, estimated the value of the wheat when so fed at 56c. per bushel in the first case, and 61c. in the second case, where fed along with turnips and hay. Steers were bought at 2½c. per lb., and sold at 4c. per lb., live weight. The steers in lot (1) were occasionally "off feed," indicating that unless some succulent feed were fed along with the chopped frozen wheat ration, it would be better to add some other meal to the ground wheat. It would probably be wise to use bran, or, if available, some crushed oats as a feed to mix with the ground wheat. If corn were at hand, it would be of value, but had better be accompanied by some opener or loosener. A mixture of equal parts corn, oats or barley, or bran and frozen wheat, would be practically certain to prove satisfactory as a meal feed. Oil meal or gluten would hardly be advisable, but for the finishing period, a small admixture of one or the other would likely prove useful.

DAIRY CATTLE.

No very reliable data re value of frozen wheat for dairy cows seem to be available, but a comparison of its composition with that of wheat bran would lead one to suppose that it would be of very considerable value for milk production, especially if it were fed along with something to lighten or open it up, as oats, corn and cob meal, or bran.

Horses, also, might be expected to do well on it, where it did not exceed one-half of the grain portion.

It must, of course, be remembered that the above remarks apply to what might be called average samples of non-gradable frozen wheat. Samples might be found that would make a better showing than experiments conducted would indicate as probable. Other samples might be offered that would fall considerably short of results obtained from samples experimented with. It is safe to conclude, however, that even the worst samples likely to be offered are practically certain to prove of very considerable feeding value, and sure to be safe feeds.

J. H. GRISDALE.

Central Experimental Farm.

THE FARM.

DEMONSTRATION FARM IN NORTHERN ONTARIO

Anticipating an early influx of a farming population, during the past summer, Hon. Nelson Mon-teith, Minister of Agriculture for Ontario, selected what, in his judgment, would be a good site for the Demonstration Farm in Northern Ontario. Recently, Mr. C. C. James, the Deputy Minister, and Mr. Thos. Southworth, of the Colonization Branch, went north to inspect the location somewhat carefully, and to advise what work should be undertaken. We understand that they have recommended to the Minister that a square mile of land be transferred to the Department of Agriculture for the purpose, and this is now being done. It is situated north of the Height of Land, approximately four hundred and fifty miles north of Toronto, at a point where the Temiskaming & Northern Ontario Railway crosses the Driftwood River. It consists of lot 12, second concession of Walker, and lot 1 in the second concession of Clergue.

At present, trains are running through from Toronto to Englehart. About December 1st the Commission will take over the road from Englehart to McDougall's Chutes.

By a reference to the map of Northern Ontario, it will be seen that the Driftwood River empties into the Black River, the Black River into the Abitibi, and the latter into the Moose, which empties into James Bay. The T. & N. O. joins the Grand Trunk Pacific nearly forty miles beyond the Driftwood. Railway construction north of McDougall's Chutes has been retarded this year owing to excessive rains, and also owing to the fact that the contractors are late in putting up steel bridges over the rivers. There is a very large area of fine agricultural land adjacent to the railway, from the Height of Land north.

One hundred acres of land on the farm will first be cleared, and later on tenders may be called for the erection of the first farm buildings. Clearing will be commenced on the south-west quarter of the square mile. The farm buildings will be located on the west bank of the river, and a station will probably be located on the east bank. At present there is a fairly good contractor's bridge across the river.

A California stockman reports that many severe cases of white scours in calves are cured by castor oil, with a few drops of camphor, succeeded in a couple of hours with two or three eggs, then changing the milk by putting the calf on another cow.