

lasted, but it made the time pass quickly, and we were young, and strong, and willing. On the Saturday morning our work began in earnest. We rose at 3.30 a.m. and watered the cattle—an arduous task, as each animal was watered separately from a pail. Our bunch drank from 500 to 700 pails daily; and as each pail had to be lifted from a barrel about four feet high, we were always glad when the watering was finished. After water came hay; then we turned into our bunks until 8 o'clock, when breakfast was served. At 9 o'clock we commenced work again—drawing up hay from the hold, feeding meal, etc. Dinner at noon, and work from 2 till 5 o'clock, when our work was practically done; about 6 o'clock we tidied up the alleyways, and were free for the evening.

When we had got settled down to the routine, we told one man off as cattlemen's steward, or "Peggy," as he is always called. His duties were to fetch the rations, wash up, and to look after our general comfort. At the same time, it paid us to look after ourselves, or we might have found "grub" running short. At first we thought the food not so bad, but when we got hash, hash, hash, day after day, we began to tire of it. So I and my chums formed a committee of ways and means, to see what could be done in the matter. By careful and judicious "tipping," we persuaded the carpenter and his mate to supply us with food that they could dispense with—such as salmon, jam, and other stores—and for the rest of the voyage we had at least one good meal each day. We could laugh in our sleeves at the grumbings of the other fellows, though, of course, we had to pay a high price for our luxuries.

It will be seen that a cattle-boat is no place for the man who is not prepared to make himself agreeable, to take things as they come, and to work hard. One can't expect a thirty-dollar trip for nothing. We had one man, the son of a British army officer, who seemed to think he ought to have a valet to wait on him (as "Peggy" remarked, a nurse would have been more the thing). He would persist in throwing his clothes all over the place; and one night, when he had thrown his hat on the table, his coat on one bed, and his vest on another, he received them all at his head; someone took away his blanket, and while he was looking for it, his trousers disappeared. For about twenty minutes we tormented him, then we thought he had got enough for once. It was a pretty rough lesson, but an effective one, for he kept his clothes in his own bunk after that.

Washing was another difficulty, for when we were in mid-Atlantic, the water-pipe in the crews' quarters burst, and our only chance of washing was to take a bucket and dip it into one of the barrels from which the cattle were watered. In this way we got at least one wash each day, and that helped us to retain our self-respect.

We hadn't much time to talk, but what time was at our disposal was usually spent in talking of home, and speculating on the time of our arrival. Many and varied were the reports we got from the sailors, and we amused ourselves by asking every man we came across, when we should land, of course receiving a different answer from each.

To make a long story short, we arrived at Deptford one misty Thursday evening, about dark, and our duties were ended. The boat drew up alongside the wharf, and in half-an-hour five hundred cattle and seven hundred sheep were landed. Men belonging to the stock-yards did all the driving—we merely looked on to see that the animals were not ill-treated; for the foremen are responsible only for the time the stock is on the boat. We went ashore about 9 o'clock, after a voyage of exactly a fortnight; and although we were by no means sorry to leave the boat, we all agreed that, in spite of many drawbacks, we had experienced a very enjoyable time.

"FENBOIS."

Stock Foods in Pork Production.

Last fall Mr. J. H. Grisdale, of the Experimental Farm, Ottawa, undertook to investigate the use and value of stock foods for the production of pork, and accordingly instituted experiments, the details of which, as supplied us by Mr. Grisdale, are given herewith:

In August 32 pigs, ranging in weight from 43 to 80 lbs., were divided into eight groups of four pigs each, and for the next 90 days fed experimentally. In each case the individuals in a group were nearly uniform in size. The groups, however, showed considerable difference in their total weights, the heaviest group weighing 300 pounds, or 75 pounds per pig; while the lightest group weighed 180 pounds, or 45 pounds per pig. It was not possible to secure a more uniform lot at the time, and it was considered better to have considerable difference in the total weights of the lots, rather than to have some large and some small pigs in each lot. The experiment lasted 90 days. During that time the pigs were confined in pens, with small, floored yards attached. Lots 7 and 8, however, were outside, lot 7 having a small, unfloored yard and a cabin where, in to sleep, while lot 8 had a clover pasture of about one-eighth of an acre area, and a cabin wherein to sleep. The results, as given below in tabular form, speak for themselves, but it will be noticed that all supplementary foods fed other than skim milk and pasture had the effect of raising the cost of production. Skim milk, on the contrary, lowered the cost very noticeably, and pasture had a similar effect in a lesser degree. The meal used was a mixture of half shorts and half middlings, oats, peas and barley. In estimating the cost of production, the meal ration is valued

at \$1 per 100 lbs., the skim milk at 15c. per 100 pounds, and the supplementary foods or stock foods at the cost of same on the Ottawa market, viz.: 'Anglo-Saxon Stock Food,' 10c. per lb.; 'International Stock Food,' 15c. per lb.; 'Herbageum,' 12c. per lb., and sugar and flax, 2½c. per lb. Pasture is not valued, but its value may be added from the data given."

Lots...	1	2	3	4	5	6	7	8
	Meal— Inside.	Meal— Anglo-Saxon Stock Food.	Meal— International Stock Food.	Meal— Sour Milk, Skim.	Meal— Herbageum.	Meal— Sugar and Flax.	Meal— Outside.	Meal— Pasture, clover and rape.
Description of Ration.								
Number of days on feed	90	90	90	90	90	90	90	90
Total weight to start	300 lbs.	206 lbs.	208 lbs.	180 lbs.	220 lbs.	240 lbs.	204 lbs.	250 lbs.
Average weight to start	75 "	51½ "	52 "	45 "	55 "	60 "	51 "	62½ "
Total weight at end of experiment	725 "	566 "	541 "	612 "	673 "	711 "	657 "	653 "
Average weight at end of experiment	181¼ "	141½ "	135½ "	153 "	168 "	178 "	164 "	163 "
Amount meal eaten	1880 "	1551 "	1456 "	1275 "	1781 "	1880 "	1942 "	1741 "
Amount other food		80 "	42 "	1385 "	322 "			pasture
Total gain of lot in 90 days	425 "	359 "	333 "	432 "	453 "	471 "	453 "	413 "
Amount meal required for 100 pounds	438 "	432 "	437 "	295 "	393 "	399 "	421 "	421 "
Amount other food for 100 lbs gain	22 "	22 "	12 "	309 "	10 "	68 "		pasture
Cost of 100 pounds gain	\$4.38	\$6.52	\$6.17	\$9.42	\$5.15	\$5.69	\$4.31	\$4.21
Daily rate of gain per pig	1.17 "	1 "	.925 "	1.20 "	1.25 "	1.31 "	1.25 "	1.15 "
Total gain per pig in 90 days	106½ "	89½ "	83½ "	108 "	113½ "	117½ "	113½ "	103½ "

replying to our inquiry for his conclusions upon the work, Mr. Grisdale writes:

"I believe that so far as our experiment goes it is correct; that is, so far as one experiment may be said, or can be held, to prove anything. We never draw definite conclusions from one experiment; we give the results for what they are worth. I am not prepared to say that stock foods are no good. In my address at the Guelph Winter Fair, I did not condemn stock foods entirely, but stated that they had their place, or at least that there possibly was a place for them, that place being as a tonic or condiment, to be given to cattle or live stock suffering from indigestion or ill health of some description. I believe that when the directions given by the stock food people are carried out for a short time—say, three or four weeks—the result will be favorable, but if continued longer, as they seem to advise in their directions, I do not see how the results could fail to be similar to those we have secured. You state that many feeders seem to succeed with the stock foods. I may say we succeeded. Where we did not seem to have succeeded, and where I doubt if any of the feeders will succeed, is in cheapening the cost of production, since the stock foods are expensive.

"As to the comparative economy of feeding meal inside versus outside on pasture, I would say that this is not the first experiment we have conducted here along similar lines with similar results; and, further, that experiments at Guelph go to show the same thing, that is, go to show that for quick feeding, pigs inside are likely to make better and quite as economical gains as pigs outside on pasture. Where duration of the feeding period is a matter of a minor consideration, cost of production can be materially reduced by putting the pigs on pasture and compelling them to gain a fair proportion of their living from that pasture; but where rapidity of gains and economy of cost are both of importance, then the pen-fed pig has an advantage over the pasture-fed pig."

Best Age for Economical Gains.

Prof. J. H. Grisdale, of the Central Experimental Farm, who, at the Maritime Winter Fair, had on the platform with him two animals, one a six-year-old ox, the other a yearling steer, said: First, look at the steer's face. We want a broad face, not too long, with a mild, large eye; a large muzzle. All good feeding steers have short, thick necks. We want a steer with a good constitution, for he must digest large quantities of food to make a rapid growth. To secure constitution an abundance of heart room is essential, shown by his thickness and depth. This also gives room for the organs of digestion behind the heart and lungs. He compared the conformation of the two animals beside him; the large ox, with a sharp shoulder and high back; the yearling, with great width of shoulder, top and back, and fullness of loin. The development of the hind quarters should also show length and depth and width, a straight and not a rounding ham. The thick, low-set steer will flesh much more cheaply than the rangy steer. From one year to two and a half years is the ideal age for feeding for beef. The relative cost of a pound of gain is as follows:

From birth to six months.....	2 cents per lb.
Six months to one year.....	5 "
One year to two years.....	8 "
Two years to three years	17 "

There is something in the young animal that enables it to make better use of its food than when it gets older. We find it pays to put feeding animals in a loose box (of course, they must be of fairly uniform size); eight or nine in a box is enough; bed them well, and keep them comfortable; keep the stall well ventilated. Under poor ventilation, a bunch of steers gained only one pound per day, while another lot gained 2½ pounds, with exactly the same feed and care, but good ventilation.

When putting up steers in the fall, feed lots of succulent food, and all the roughage you can economically get them to eat. Give every steer as many turnips as he wants, with four or five pounds straw, and as much hay. Well-cured clover is the best hay. After four to six weeks, begin the meal. Start with one pound per day; increase this quantity gradually. Oats, barley and peas mixed are a good ration. If you have to buy, get some food that is cheapest, according to its analysis.

Bran can often be got at a low price in summer. Gluten is one of our best feeds. The Edwardsburg Starch Co., of Montreal, has given us an honest gluten meal, almost equal to oil meal. It is quoted at \$25 per ton on track at Ottawa. A wide ration can be fed at the start of the feeding period with profit, but it must get narrower as the feeding period advances.

He urged all Maritime Province farmers interested in beef-raising to attend the short course at the new Agricultural College at Truro, and discuss with the experts who would be there the very best practices, as found by actual experience.

Smithfield Block Test.

Continuing its reports on the carcasses of cattle exhibited at Smithfield, the London, England, Live-Stock Journal has the following:

Shorthorn heifer, Fragrance, first prize in class (first at Birmingham); bred and exhibited by His Majesty the King; age, 2 years 9 months 21 days; live weight, 14 cwt. 2 qrs. 1 lb.; average daily gain of live weight, 1.59 lbs.; weight of dressed carcass, 1,160 lbs.; percentage of carcass to gross live weight, 70.77.

Shorthorn heifer, Jewel, winner of the champion plate as best beast in the show; exhibited by Earl Rosebery, and bred by John Ross; age, 2 years 8 months 27 days; live weight, 15 cwt. 2 qrs. 18 lbs.; average daily gain of live weight, 1.76 lbs.; weight of dressed carcass, 1,194 lbs.; percentage of carcass to gross live weight, 68.07.

Shorthorn steer, Reserve and highly commended in class; bred and exhibited by John Ross; age, 23 months 8 days; live weight, 14 cwt. 3 qrs. 5 lbs.; average daily gain of live weight, 1.88 lbs.; weight of dressed carcass, 1,122 lbs.; percentage of carcass to gross live weight, 69.03.

Hereford heifer, Rosalie, first prize in class