

advantage of this most valuable crop for their lambs. We have had a large amount of experience with rape during the past five years, at the Agricultural College, and I wish to state that my estimation of the value of the rape plant for autumn feed increases every year. I could, if necessary, say a good deal upon this crop in its relation to the fattening of sheep and lambs in the autumn months, but to do it justice would extend this paper to too great a length. I would, however, like to draw your attention to a few facts in regard to this crop. We have grown rape as the only crop upon the land during the season, thus having it under favorable conditions. This rape, when pastured by lambs, produced on those animals live weight increase at the rate of 762 pounds per acre. This is certainly high and may not always be expected, but it shows what can be done. The land received no special treatment for the rape crop, but was in good condition. In 1893, we grew rape under somewhat similar conditions, and received 27.2 tons green rape per acre. In an experiment conducted in 1891, in which rape was grown after winter wheat, it was found that one acre of the rape increased the live weight of the lambs 179 pounds. The animals received no other food, but, of course, were given salt.

The principal method which has been adopted in growing rape at the Experimental Farm has been after a crop of rye which had been taken from the land in June. In three years' experience in growing rape after rye, we find that on the average, one acre of rape will pasture from ten to sixteen lambs from two to two and one-half months, and each lamb will increase at the rate of about 8 pounds per month.

In an experiment which was carried on in 1891, in feeding lambs upon rape alone, rape and meal, and rape and pasture, it was found that the increase in the live weight per lamb was 11.7 pounds per month on rape alone, 12.0 pounds per month on rape with meal, and 14.1 pounds per month on rape and pasture. These results favor the use of a pasture for the lambs to run into from the rape field. It also tends to show that half a pound of oats per lamb per day, when on rape, is not necessary. The nutritive ratio of green rape, as given by Wolfe, is 1:2.9, while that of red clover in full bloom is only 1:5.7. But as rape contains more water than clover, the same authority estimated clover as being worth 15 per cent. more than rape, pound for pound, for feeding purposes. On the other hand, we have found that rape will produce from two to three times more in weight from a given area than a single cutting of clover.

**Chatty Stock Letter from the States.**

(FROM OUR CHICAGO CORRESPONDENT.)

The new year started in good shape at Chicago, and about all kinds of live stock has arrived more freely, so far, than a year ago. The quality of the stock coming is not so good as it usually is at this season. Ripe, corn-fed cattle seem to be at a slight premium again, but it is about time, as the feeders who marketed their stock during December feel that, with a few exceptions, those who had only partly-finished cattle got relatively the best prices.

Top cattle, \$5.75; top hogs, \$1.70; top sheep, \$1.00; top lambs, \$1.50; these prices, of course, are for finest qualities, compared with a year ago. Cattle are 25 cents higher, hogs 75 cents lower, sheep 25 cents higher and lambs not quite so high.

The latest advices by cable from the London and Liverpool live stock markets are more encouraging. Best American steers, 12½ cents per lb., and top sheep, 14 cents per lb., sinking the offal.

Corn-fed, western range cattle are selling pretty well. The Standard Cattle Co. marketed a lot of 1,411-lb. steers at \$4.00, and some 1,238-lb. heifers at \$4.10.

The Cudahy Packing Co., formerly an offshoot of Armour & Co., have opened a slaughtering and packing establishment at Chicago, in addition to their original plant at Omaha, Nebraska.

The writer regrets to say that he feels that the criticism on the Chicago Fat Stock Show, in the last issue of the ADVOCATE, is just, and not overdrawn.

The export demand here for good horses is very strong, and it is calculated that fully 50 per cent. of the good horses now being sold in Chicago are for foreign use.

An unusually large percentage of the hogs now being marketed consists of fat brood sows. This shows that heavy hogs are scarce among the farmers; also that farmers either are not breeding as many sows as usual, or are depending more largely on the young crop. The quality of the hog is generally poor. In Nebraska, where the quality was so good a year ago, it is especially poor now. An Omaha authority, speaking of a week's receipts there, says:—"Offerings included no choice heavy; in fact, loads weighing over 225 lbs. were few and far between. Light hogs and pigs made up the bulk of the supply, and they were mostly on the common order. The average weight for the week will not exceed 197 lbs. The average for January, 1894, was 257 lbs."

"Mark my words, we are on the eve of light receipts of cattle, and high markets," said an experienced cattle salesman to your correspondent. Texas is feeding about as many cattle as last year, but other Southern States are a little short. The number of all kinds of cattle in Texas is reported to be fifty per cent. less than it was eight years ago. The cotton-seed meal feeders down there have had

hard work getting what cattle, of suitable ages, they wanted for fattening purposes. It is undoubtedly true that the crop of Texas grass beeves will be light this year.

Lumpy jaw in cattle (*actinomyces*) gives the farmers of the Western States a great deal of trouble. There are scores of remedies, but the writer knows of none more efficient than the following, which was recently made public, and free of charge, by Capt. J. G. Heaps, of Kewanee, Ill.:—Pure arsenious acid, half ounce; pure gum arabic, half ounce; caustic potash, in sticks, two drachms; rain-water, one ounce. The above ingredients will be sufficient to treat four animals. Put in a wide-mouthed bottle (marked poison); thoroughly mix; secure animal; cut lump open, clean out all matter in lump; take a smooth stick, wrap cotton around it, saturate with the compound, and put cotton inside of lump; fill the cavity full and take stick to keep it there. The lump will soon swell up large, but in a few days will grow smaller, and in a short time drop out and the cavity heal over.

Cottonseed meal is becoming more and more an important factor in animal feeding. Until recently its use was confined largely to the Southern States, where it is grown, but the corn shortage of the past year brought it to the northern corn belt in vast quantities. Cattle feeders pronounce it a success without doubt.

**A Good Breed of Pigs.**

BY J. D., CAPE BRETON.

The result of a good deal of experimenting with breed against breed of pigs, by the United States Stations, is the verdict: "There is no best breed of pigs." The great majority of farmers, especially in the eastern part of the Dominion, would feel insulted if one doubted that they understood thoroughly what "best breed of pigs" means. Still, a little study will show one that so many things go to make up what should be a "best breed," that it may be hard to get farmers to agree on what to call best. I know many farmers who would say the best pigs are those which keep on growing till they are right big. I know others who would say that the best are those that eat the least!—are easily kept. Let us try to look into the matter in a way that we may get as near as possible to the "best" without serious disagreement. What is the good of a pig, anyway? Is it not that it is a machine which converts material the farmer has, or can have, into a quantity of pork worth more money in the market than the said material itself, or if otherwise manufactured. A pig that won't do this is no good at all. A pig that does a little more than another of it is a better pig. It, then, looks as if the one which can do more than all the others is the best pig. Would it, then, not follow that the breed having the largest percentage of pigs approaching this theoretical best pig would be the best breed? Looks as though we "had him." A few thoughts on what materials different farmers may have to turn into pork, on the comparative power of different pigs to turn each of these foods into pork, and on the various markets there may be, and we see

"Alps over Alps arise"

between us and deciding on a "best breed" for all. The most I dare venture on now is to throw some light on what is a *sure, good* breed for a district in which the markets are pretty much alike and the majority of the farmers have much the same foods. Such a district is the Maritime Provinces, I believe. As to the condition of the markets, there is no distinction made in pork fairly fat and upwards, so far as I can learn. Difference of quality of pork made by the different breeds would not, then, count. And it is here—in quality—that there is an indisputable difference between some of the breeds. The foods to be made into pork all through the Maritime Provinces are, I take it, pretty much the same, viz., skim milk, whey, small potatoes, roots, and kitchen slops. Home-raised grain, cornmeal, shorts and middlings might, indeed, be used; but at the present prices here for these and for pork, *all breeds would be bad*. The latter foods can, however, be used with profit sometimes to a small extent. Much depends on whether the manure is to be saved and used *intelligently* or not. The other way they could come to be profitably fed, is when they would be used to prevent the *loss from scant feeding*, when the first class of foods are not, for a fraction of the year, sufficient for full feeding—as they ought to be, for the most of the time—for the number of pigs kept.

The Maine Experiment Station compared the gains of Berkshires, Chester Whites, Cheshires, Poland-Chinas, and Yorkshires: "In general, no striking differences are observed in the rate of growth, or in the relation of the amount of food to growth, with these several breeds of swine." At the Michigan Agricultural College, Duroc-Jerseys, Berkshires and Poland-Chinas were compared in two separate trials (in 1888 and in 1889): "The results were so irregular as to lead to no definite conclusions." Berkshires, Chester Whites and Yorkshires were compared at the Vermont Station: "The results of the comparison showed but little difference, whatever difference there was being in favor of the Chester Whites." In a later trial at the same station, the Chester Whites and the Poland-Chinas grew the fastest, but the gain of the Large Yorkshires cost slightly less per lb. The Massachusetts State Station found the Chester Whites to make a cheaper per lb. gain than the Yorkshires. So until further accurate experiments

will establish the fact that some one breed will, as a general thing, make a cheaper gain than all others, while I am working for a market where quality is not regarded I shall not trouble myself about what breed to get. But the detailed accounts of the above and other experiments in feeding pigs show a most striking difference in individuals of all the breeds. As there are poor individuals as well as good individuals in all the breeds, it is well for the farmer, when getting pigs, to attend to this matter. If buying them, as is done by the majority of small farmers in many parts of the Maritime Provinces, it is well to buy only from reliable breeders, and then only individuals that appear thrifty and well-developed for their age. If breeding them, perhaps the best thing that can be done is to be sure that the sire and sow are really good pigs. By far the most important difference between pig and pig, as brought out by accurate experimenting, I leave to the last. Here is what I believe to be a fair sample experiment on the matter. It was made at the Vermont Station, by Prof. Cooke, in 1890.

Cost of grain at different stages of growth:

Period	Average weight at end of period.	Average cost of food per pound of gain.	Average profit per lb. of gain (live weight) and selling at 5 cents per lb. (live weight.)
	Lbs.	Cents.	Cents.
Period I.	51	2.47	2.53
" II.	103	3.70	1.30
" III.	160	4.89	0.11
" IV.	202	5.82	Loss 0.82

I believe it would pay many farmers to have this table written in large letters, and hung above the door of their pig house. *The two hundred pound pig is poor "breed," whatever breed it is, and the twenty to one hundred and fifty pound pig, if a good individual, is good "breed" every time.*

**FARM.**

**Sheep Husbandry as a Means of Soil Restoration.**

BY JAMES MILLER.

(Continued from page 11.)

I have already mentioned the raising of all kinds of animals and the raising of less grain as a means of building up the farm. Time will only permit me to refer to sheep breeding. In the first place, the real cost of keeping sheep is much less, comparatively, than that of any other farm stock. To make pork, for example, a great proportion of the food consumed must be cash grain; to grow sheep and place them on the market requires the least grain of all farm animals. Their living consists largely of nibbles here and there that other animals would never find, much less make use of, and which otherwise would go to waste. The farmer's richest returns come in an indirect way, for if through the agency of sheep on grain-impooverished lands we can so recuperate them within the space of a few years that their producing capacity is nearly or quite doubled, and in the meantime harvest a good crop of mutton and wool, I look upon the renovating effects of the sheep on those lands as an indirect income, and at the same time the most satisfactory. After thinking carefully about the ups and downs of the raising of other kinds of stock, I turn to the sheep. They, with unanimous bleat, remind us that even if our direct income from them has not been satisfactory, we must remember that we pastured them most of the summer on that hilly land that we did not want to plow; in that wood lot full of wild plants and second growth timber, on which nothing else would subsist; on that lot we bought and seeded, where grain would not profitably grow, and finally turned them into a pasture where the cattle could not thrive any longer; and yet throughout the whole season they served us with the choicest of fresh meat. In the spring the greater part presented us with lambs that did not require to be taught to drink skimmed milk, and when we turned them out to pasture in the spring we did not see them again until washing or shearing time, when they each gave us their coats that sold for \$1.25 and \$2 per coat, at a season when there was very little else coming into the farmer's pocket.

I can safely say that I have yet to become acquainted with the man who has intelligently pursued the business of keeping and breeding sheep, who is not to-day in comfortable circumstances, with clean, fertile fields, and a look of contentment about the family indicative of prosperity. Starting with a small capital invested at first in a little flock of ewes, the thrifty shepherd finds himself to-day the possessor of a large and valuable flock.

The hail-storm, while it may cut the farmer's wheat, cannot destroy his wool crop. The golden hoofs tread on in their diligent search over hillsides and vales for the tender weeds and odd blades of grass, to supply us with wool and mutton, while at the same time spreading evenly their rich top-dressing over the poorest land on the farm. By sprinkling salt over these patches of burrs and thistles, how quickly the unprofitable nuisances will disappear before the sheep.

In conclusion: Upon Western States farms, where, because of successive bad crops, mortgages have been foreclosed, the loan companies, in order to get back their own and set the farmer upon his feet, have resorted to the plan of purchasing for him a flock of sheep.