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### MARCH 1, 1906.

# THE FARMER'S ADVOCATE.

from the use in our country of selected imported stock.

But there is another phase of the question which should be briefly touched upon, and there is a biological principle involved that must not be forgotten. These much-to-be-desired characteristics are at best but artificially developed, and are possibly more easily acquired than retained. The variation of the animal organism has made possible, under the control of man, the improvement of our domestic animals through intelligent breeding and systematic selection. Further, the animal organism varies, naturally, under, and is influenced directly by changing conditions of climate, Contrast the Shetland pony food and habit. with our modern draft horse. Characteristics thus acquired, whether through artificial selection or natural adaptation, can only be successfully retained under like conditions and under similar treatment. Herein lies the danger of too great dependence upon imported stock. We may and should be able to continue the same systematic and intelligent selection that is practiced by the British stockman, but it is scarcely logical to expect a reproduction in our country of the environment and treatment that the animals have become accustomed to at home. The change is evidently not a marked one, but it is often great enough to disturb the equilibrium of the organism sufficiently to cause a modification in the offspring, to a greater or less degree, of form and character. Moreover, we sometimes find a distinct modification in an imported breed when bred pure in this country for some length of time. Contrast the St. Lambert and Island type of Jersey In this principle of natural adaptation there are problems of breeding to be solved.

It is not the purpose of this article to advocate the evolution of new breeds. We have breeds enough, perhaps too many. But may not this business of importation be encouraged too far is it not now too easy a way out of a difficulty? At one time imported stock was necessary to the country, and we honor the enterprise of those who brought it here. But now, choosing the best of what we have, might we not make greater progress if we imported less and bred better ? The independence of the Hereford breeders of the United States has won them an enviable reputa-Can Canadians not have a like courage tion. and a like resourcefulness? Selection is the vital principle of improvement. Patient and unwearied perservance is the price of success. Can Ontario, can Canada not mould and fashion animal form into a purely Canadian product, which shall at once be a monument to the energy and intelligence of our Canadian breeders, and a factor in establishing the reputation of Canadian stock ? H. S. ARKELL. O. A. C., Guelph.

## The Bacon Trade.

To the Editor " The Farmer's Advocate "

The discussion being carried on in your columns, anent the bacon trade, is certainly a very important and delicate consideration, especially at this period, when the industry is only in infancy. If it is properly cared for and managed now, it will undoubtedly continue to increase, and thereby prove a profitable investment to all concerned, and if proper attention and consid ration is not , it will deteriorate like anything else at

### Steers Tied or Loose?

We received a communication recently asking To the Editor "The Farmer's Advocate": for the experience of those who had tried feeding steers tied and loose. The following item from the 1904 annual report of J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, may help to answer the question : "The experiment of feeding lots of steers loose, as compared with feeding similar lots tied, has been continued, and is concluded. The results in 1903-4 are decidedly in favor of loose-box feeding. The loosebox-fed lots gained on the average 311 pounds per steer in 129 days, while the tied steers gained 275 pounds in 129 days. The loose-box steers put on flesh at a cost of \$4.76 per 100 pounds, while the tied steers cost \$5.39 per 100 pounds gain in live weight."

### Twenty-share Beef Ring.

We have been asked to publish a chart for a beef ring of 21 members. Unfortunately, we have no chart for 21 members, but we give the accompanying one for a 20-member ring, sent us by a Halton Co. subscriber, who says it has given good satisfaction in his neighborhood



Roast.		Boil.	Stea	eak.	
1		14		1	
2		13		2	
3		19		12	
4		16		4	
5		17		5	
6		18		6	
7		15		7	
8		12		8	
9		20		9	
10		11		10	

# THE FARM.

### Testing the Germination of Farm Seeds.

There are two reasons why it is desirable to test the percentage of germination of seeds it is proposed to sow. The first and most important object is to find out whether the seed is worth sowing at all. If the germination is tardy, and a considerable percentage of the seed does not germinate, it indicates that the average vitality of the seeds is low, and the result of sowing such would be weak plants and an inferior crop. If, however, it is decided to sow a seed of rather low germinating percentage, it is well to know the fact, so that allowance may be made, and a little more seed per acre used.

Making a germination test is very simple, and it is a good rule to test samples of every lot of seed it is intended to sow. The testing should be done early, before the rush of seeding. To make the test, take two common plates, and get two pieces of cotton cloth about the size of the Dip the cloths in warm water and spead plates. one of them on a plate. From the seed that is to be tested take a handful and place on the table. Count out 100 seeds just as they come from the edge of the pile. Scatter these 100 seeds upon the wet cloth on the plate. Spread the other cloth over the seed and press it down closely. Then turn the other plate upside down on the plate with the seeds, leaving the corners of the cloths sticking out between the plates. This makes a complete little tester, and is sufficient for all kinds of seeds. Place it where it will keep reasonably warm, and keep the cloths moist by sprinkling with water two or three times a day, if necessary. Count carefully, and keep a record of the number of seeds that have sprouted each day, until the test is complete, or until no more seeds show signs of life. A week is as long as this should take. Add the counts of the different days together. and the total number will be the per cent. of germination, or an indication of the value of the grain for seed. If 90 to 95 seeds grew, the germination is pretty good, but below 90 the value of the grain for seed begins to be doubtful, and another test should be made a little later to see if the grain is losing its power. If the seeds all sprout about the same time, it is a sign of good strength, but if a few sprout each day the vitality has been injured in some way.

### A Choice of Three Rotations.

In reference to your editorial on "Crop Rotation," in the February 15th issue of "The Farmer's Ad.ocate ": The prevailing custom in the Maritime Provinces, particularly Nova Scotia, is to use what little manure there may be, supplemented with some fertilizer on a grain crop, get it down to hay of some kind, usually timothy, let it lie in hay as many years as it will cut enough to harvest, and then turn it out for pasture for another spell. Comparatively few carry on a systematic rotation of any kind, and fewer still a short

one. We are all more or less controlled by circumstances as to the rotation most suitable for us to adopt, and we on this Experimental Farm are no exception in this respect, as it is practically impossible for us to introduce pasture into our rotation, although I may say that, personally, I do not feel that that is any great disadvantage.

We practice three different short rotations.

(1) A three-year rotation : First year, hoed crop of some kind, with manure, and sometimes some complete fertilizer; never more than 500 pounds per acre. Second year, grain, with liberal clover and little timothy seed sown. Third year, clover hay, cut early, and second crop of clover turned under for roots the following year, being the first year of the second series. I may say here that this is my favorite rotation where practicable. We never put manure on any crop except the hoed crop; we do not cut hay crop more than once, and we get a fairly good crop of clover to turn under once every three years, and find that a decrease of f om 15% to 20% of amount of manure used can be made each series of three years.

(2) A four-year rotation: Fist year, grain on sod (no manure). Second year, hoed crop (roots or corn) with manure and fertilizer. Third year, grain, with clover and timothy seed sown. Fourth year, clover hay, with aftermath plowed under in the fall, for grain the first year of the second series of four years. In this rotation. also, we find that equal results can be obtained with somewhat reduced amounts of manure being used (10% to 15%).

(3) A five-year rotation: First year, roots or corn (hoed crop) with manure and fertilizer. Second year, grain (without any fertilizer) with clover and timothy seed sown. Third year, clover hay, second crop plowed under. Fourth year, grain. Fifth year, clover, second crop turned under. With this rotation we seem to need as much manure for the second series as for the first.

It must be borne in mind that this land referred to is in a very great deal poorer state of fertility than is usually met with in the other Provinces, and, as a rule, is particularly deficient in humus.

R. ROBERTSON,

Superintendent Maritime Experimental Farm. Nappan, N. S.

### Crop Rotation.

To the Editor " The Farmer's Advocate " :

There is no question, in the writer's mind, as to the good sense conveyed in your editorial which appeared in Feb. 15th issue of "The Farm-er's Advocate." The rotation of groups is a serie ous problem, and one that is somewhat difficult to work out in a practical and successful way for the average farmer. There are so many varying conditions of soil, size of farm, quantity of stock and location, that it is impossible to say that a certain rotation of four years or five years will inswer in all cases. It is also not impossible to grow one crop for a great many successive years on the same soil. I am thinking now of a small piece of land, close to barn, which has grown, corn or other such crop for green feed for summer use, for a great many years before I can re-But, of course, this land has received member. much manure, for, when there was an odd load of stable manure from box stall or some such place, and other farm work was pressing, it was usually put behind the barn. It is desirable and very beneficial to follow a rotation of some kind, and preferably one that is regular and systematic. On a farm near here, where the fields are of equal size, and a certain part of the farm which is difficult to work is kept in permanent pasture, a four-year rotation is practiced with great success. They maintain quite a large herd of dairy cows, and know exactly what feed they require in roots, grain and hay, so that they have no trouble in following the rotation Here, we find that it would be inconvenient to divide our farm into quarters, and some years have our roots and corn as far as possible on this place. We also desire to grow a considerable acreage of fall wheat, which produces a great quantity of straw, and we like fall wheat to follow reas, if possible. This system interferes somewhat with an even and systematic rotation. When such irregularities do occur, we try to bring that land back into regular rotation as soon as possible. Our preference is for a four-year rotation, where roots or corn follow sod, and after roots, grain, which is seeded down. It has been our custom to follow roots with harley, and we have found that on our land this produces a good yield of barley, and we usually get a good

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this stage of existence.

The question of great importance here is that of supply and demand. The supply is very limited, the demand for the ideal bacon product in the British market is unlimited. But here the cry goes out, as a result of the high prices recently being paid for Canadian live hogs, the farmers are going into bacon production on a large scale, and there is a probability of oversupplying the market. This is just where we are going to improve our bacon industry, by giving the pork-packing establishments employment, and also by helping to supply the British market. Now is the opportunity for Ontario farmers to help develop one of the most promising industries in the Do-

What has given our Canadian bacon such a high standing and reputation on the British market in the past ? It was not the American cornfed hog. nor was it the short, thick, lard hog of Canada, but it was the ideal bacon hog.

What are Canadian farmers to breed in the future? The ideal bacon type, which is most profitable to the producer, the most easily disposed of by the packer, and the most satisfactory and economical to the British consumer.

Waterloo Co., Ont. G. LORNE SMITH.

### To Destroy Lice on Cattle.

To the Editor " The Farmer's Advocate "

I tried the remedy, cement and hellibore, which has given in "The Farmer's Advocate" for lice on cattle, and found it the best remedy I ever FRED BODKIN. M. dellesex Co., Ont.

Received the premiums all O. K., and am delighted with them. Please accept thanks for J. H. HARRISON. Lincoln and Niagara, Ont.