

mened, and had had an abundance of exercise previous to the experiment. It is fairly safe to assume, however, that there is little likelihood that either corn or rape will injure hogs that have been reared in the manner that these hogs were.

Passing on to Groups IV., V. and VI., which all received the same treatment previous to the experiment, we find that tenderness is evinced in only one group, namely, that receiving peas, barley, and shorts, with rape. A logical conclusion would be that the tenderness is due to the rape, but a difficulty is encountered when we refer back to Group I., where rape produced no injurious results. Possibly the hogs in this group, having had no exercise, were more susceptible to injury from rape than those in Group I. There is need of further investigation on this point.

But the most striking comparisons are yet to be made. A glance at the condition of Group A shows it to be very bad indeed, while that of Group B may be called very satisfactory. The only difference in the treatment of these two groups consisted in feeding whey to Group B along with the meal ration and giving Group A only water and meal. The difference in firmness is so striking that we are forced to the conclusion that whey tends to produce firm bacon.

Again, Group C, though it can hardly be called satisfactory, is decidedly superior to Group A in point of firmness. Both groups received the same ration, but Group C had the run of a half-acre lot, while Group A had only the small yards outside the pens.

One more comparison remains. Until Sept. 12th, Groups IV., V. and VI. were fed practically the same meal ration as Group A, and were confined in pens with even less liberty than Group A. Previous to Sept. 12th, however, Groups IV., V. and VI. received skim milk with their meal ration, but after that date the ration of Group VI. was exactly the same as that of Group A, while those of IV. and V. were different. If Groups IV., V. and VI. are compared with Group A, it will be seen that their firmness is much superior to that of Group A, a condition of affairs which is difficult to account for on any other basis than that the superior firmness of these three groups is due to the skim milk which was fed previous to Sept. 12th.

A peculiar feature of the experiment is the greater development of softness among Cumberlands as compared with the Wiltshires. From this it would appear that softness is more likely to result from underfeeding and from marketing hogs too light and thin than from marketing more matured and heavier hogs, even though they may be too fat. If the comparison of Groups A and C is made on the basis of Wiltshire sides, there is a marked difference in favor of Group C, while in Cumberlands Group A has the advantage. In justice to Group C, it must be borne in mind that the most unthrifty pure-breds were purposely put into this group because it was not used in comparing the gains made by the different breeds, and at the time of marketing there were at least four hogs in this group decidedly too thin for slaughtering. For this reason it would be fairer to base the comparison of Groups A and C on the condition of the Wiltshire sides.

The principal things indicated by these experiments may be summarized as follows:—

1. That corn is not likely to produce soft bacon when used simply for finishing well-grown, fleshy hogs which have had plenty of exercise or have been fed skim milk and a mixed meal ration previous to the fattening period.
2. That the same probably applies to rape, though the evidence is not clear on this point.
3. That whey and skim milk appear to have a marked influence on the firmness of bacon, tending to produce bacon of very desirable quality.
4. That hogs fed in outside lots which afford plenty of exercise make firmer bacon than those confined in pens, when whey and skim milk are not fed.
5. That firm bacon may be made from hogs confined in pens, when whey and skim milk are fed with a mixed meal ration.
6. That well-finished hogs, weighing from 170 to 200 pounds live weight, are less likely to produce soft bacon than lean, unthrifty hogs.

The points mentioned above are not offered as definite conclusions, as the investigation is only well begun. On the whole, however, there seems to be little contained in the results which might not reasonably be expected, a fact which adds to their value in no slight degree.

G. E. DAY.  
Ontario Agricultural College.

**Keep Up with the Times.**

MR. HARPER McCLUNG, Simcoe Co., Ont., writes:—"The FARMER'S ADVOCATE is a welcome guest to my home. I would not like to be without it. In many cases one number is worth the year's subscription. Any farmer who does not take it is many years behind the times."

**The Cross-bred Bacon Pig and How to Feed Him.**

*A Word for the First Cross*—In these days of keen competition the one great factor is to obtain the best results at the least possible cost. In dealing with the above subject there are two all-important points to be considered: (1) to obtain the most suitable animal to convert into bacon; (2) to convert that animal in the quickest time and at least cost into flesh of finest quality.

No doubt each breeder of pigs has his special breed of animal to which he more or less pins his faith, but I will endeavor, as far as possible, to avoid bias, and try to explain to my readers what I think the best lines to adopt in order to meet the public fancy.

We must all admit that at the present time the tastes and appetites of the British public are far different to what they were even a few years back, and the consumer is becoming more fastidious day by day. Years ago it used to be

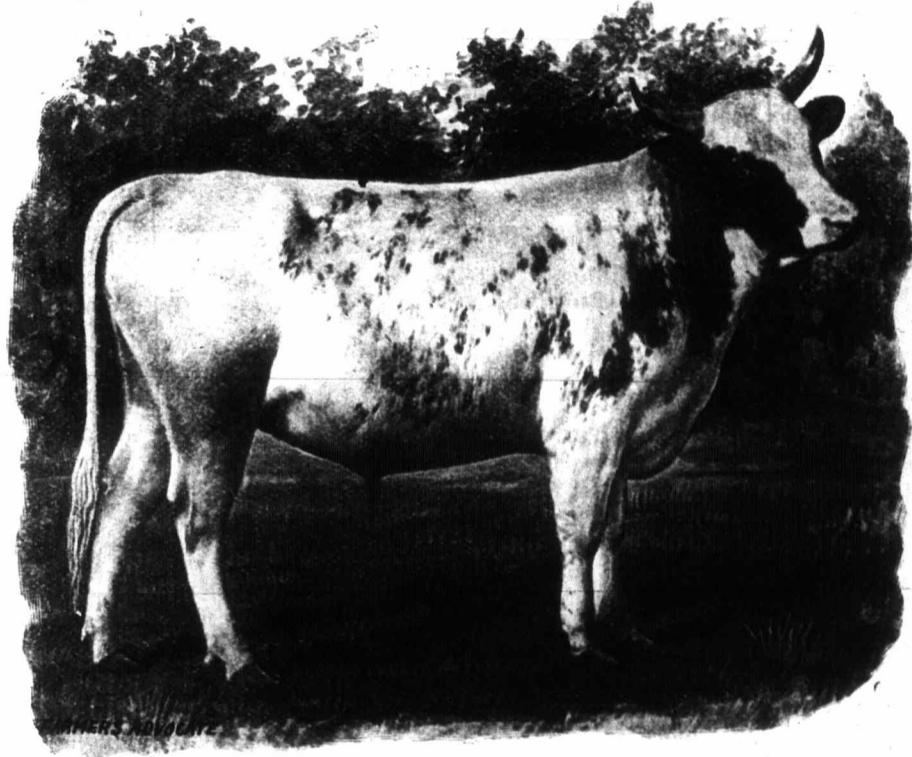
*The Great Aim of the Producer of Bacon* to grow large, fat pigs, and in order to attain this end he would run his pigs as stores until ten or twelve months old, and then commence to finish them off for the butcher. When so finished they would probably weigh twenty scores and upwards. You would find, when these animals were slaughtered and split down, there would be on the back something like six or eight inches of solid fat. This our forefathers would boil and eat cold, and consider it a most delicate, sweet, and mellow dish. This taste has quite—or nearly so—gone, and the great object now is to provide sides of bacon and hams containing as much lean flesh as possible. In order to attain this object experience has taught us that

also seen very good results by crossing a Middle White boar with a Tamworth sow. The animals I am now suggesting are those best adapted to produce the quality sides of bacon and hams.

*To Produce Porkers.*—If it is your object to produce porkers, say five to six scores each, and which are intended to be consumed principally in their green and uncured state, then you must somewhat vary your cross in order to produce the requisite animal. I think the premier honors for this purpose must be given to the Berk. boar and Middle White sow. In using this word "Middle," I would wish to indicate that I mean the pure typical Middle White, of which there seems to be very few at the present day; many of the so-called Middle bred ones, in my humble opinion, look very much as though their ancestors had been nearly related to animals of the Large breed. I have also seen a nicely-selected Berk. boar and Tamworth sow produce animals that come to very early maturity and the best of quality.

Possibly some of my readers will wonder why I have made no suggestion as to cross with the Small White. Well, my reason for this is that I always consider them what I may term "toy pigs," and quite useless as a rent-paying animal. Before leaving this subject of cross-bred animals I must, with very great emphasis, point out that only the first cross is of any real advantage. I have known many instances where a man has produced an exceptionally fine animal by this crossing process, and will say to himself, "I will breed from this animal," and so he falls into a very grievous error; for as sure as possible he will find out to his cost that he has made a great mistake. You will therefore see that it is absolutely necessary that pure breeds should be maintained in order to produce the requisite material for crossing purposes.

*As to Feeding.*—I think all will agree that if we are to produce the best flesh in the shortest time, the animal must always be going forward. When on the sow, at about six or eight weeks old, the little grunters should be allowed a trough, and have fed to them a little milk or milk and water (warm). They will then soon learn to do without their mother, so that when they are weaned they do not receive any check. Their food should be gradually improved by addition, in the first instance, of a little sharps, and then on to meals of various kinds. Barley meal is, to my mind, the safest and most reliable you can use, and certainly it produces the primest and sweetest flesh. But as you require your animal to arrive at maturity as soon as possible, it is necessary to tempt the appetite, and in order to do this you must vary the food, for if you continue feeding on one food alone you will certainly find the animal get tired of it. He will not clean up his trough, and by this you will know at once that he has either had too much given him at one time—an error into which many feeders fall—or that the food has become distasteful to him. It is beneficial to give a little whole corn now and again—maize, peas or oats are all good for this purpose—and I like to give just a little green food, say a cabbage, mangel or lucerne, about twice a week. I think it has a beneficial effect on the blood, and keeps them in a healthy and thriving condition. When your animal is really on the high way for fattening he does not require much exercise; his quarters should be warm, with plenty of overhead air, and he should be allowed to rest quietly. Under these circumstances I think we shall find our rent-paying friend will lie and sleep as a contented feeding animal should do.—J. Norman, in *Farmer and Stock Breeder* (Eng).



YEARLING AYRSHIRE BULL, MATCHLESS 2ND, WINNER OF FIRST PRIZE AND SWEEPSTAKES AT THE PROVINCIAL EXHIBITIONS AT ST. JOHN, N. B., AND HALIFAX, N. S., 1898; THE PROPERTY OF F. S. BLACK, AMHERST, N. S.

results depend in a great measure upon the breed of the pig we feed. As I have before intimated, each breeder has his special fancy, and it is quite right that this should be so, for there is no doubt that without pure and carefully-bred animals it would be next to impossible for the stamina and symmetry of our herds to be maintained.

*The First Cross*—I am one of those who will admit, and give it as my opinion, that the first cross is the best animal for feeding purposes. In selecting your cross you should attempt to obtain the breeds of animals which, what I may term, "nick in together." From minute observation, I find that the Berkshire pig is a quick feeder, light in bone, and full of quality, but has a tendency to get too fat when pushed along to meet the butcher at an early age. This latter remark will also apply to the middle breed of White pigs, but in order to counteract or modify this fattening tendency it is requisite to introduce one of the larger breeds of pigs, either the Large Yorkshire or Tamworth. Both of these animals are longer in coming to maturity, but when they have arrived at the killing stage they will be found to contain more lean flesh than either of the former breeds. Now, what we actually require is the cross between one of the former and one of the latter breeds mentioned, and my experience has shown me that if you want an ideal bacon pig it is to be obtained by mating a Berk. boar and a Tamworth sow. They produce good litters, are strong and healthy from birth, grow to a large size, are light in offals, feed quickly, and the quality of the flesh is unsurpassed. I may almost apply the same remarks to the cross Berk. boar and a Large Yorkshire sow, with these two exceptions—they are rather coarser in bone, and take a little longer to reach maturity. At the same time I think they will attain to a slightly heavier weight. I have

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**Encouraging Milking Shorthorns.**

At a recent meeting of the English Shorthorn Society's Council, it was moved by Mr. R. Stratton, seconded by Mr. Herbert Loney, and unanimously resolved: "That the sum of £200 be given in prizes for pure-bred Shorthorn cows in milk, and that no prize be offered to any society which does not adopt this Council's resolution of 1897 respecting the milking capacity and form of udder, etc., in the Shorthorn cow and heifer classes; and that the General Purposes Committee draw up a scheme of prizes in accordance with this resolution."

**Ottawa Exhibition for 1899.**

MR. E. McMAHON, Secretary of the Canada Central Exhibition, writes us as follows: "For the information of your many subscribers, I have much pleasure in informing you that our Directors, at a meeting held a few days ago, unanimously decided to hold our exhibition next year for two weeks, instead of one, as heretofore. They also decided to open on the first Monday after the close of the Toronto fair, thus enabling the exhibition to open one week earlier in the season than heretofore."