

Live Stock.

Cross-Breeding Sheep.

EDITOR CANADA FARMER:—Has the cross-breeding of sheep proved a success in Canada? This is a question which every breeder in the country should examine closely before he tries the experiment. It has been principally and most extensively practised in the long-woolled breeds. Are these cross-bred sheep then superior to their pure bred parents, such as Leicesters, Cotswolds and Lincolns? The first and most important fact to be kept in view in pursuing a system of breeding is that result of a fixed natural law which is expressed by the phrase "Like produces like," but, in order that the progeny may resemble the parents to any degree of certainty, the parents themselves must have a very strong family likeness to one another in symmetry, constitution, quality and style of wool, &c., and this resemblance must have extended over several preceding generations; otherwise there will be but a very slight probability of their transmitting these qualities with uniformity or force to their offspring. Now if such is the case, why cross different breeds having different individual traits of character, unless the offspring be intended directly for the butcher? Why attempt to obtain what can be got only through careful selection for several generations; or why destroy that individual and family likeness merely for the sake of crossing, when it is a well known fact that such crosses, if bred from again, will not produce progeny like themselves, but, as a general rule, inferior to the parents from which they spring? I will take an example: It was the fashion some years ago to cross the Leicester and Cotswold for the purpose of producing a sheep for the show ring, an animal which did indeed attain a greater size and a heavier fleece, and frequently carried off the prize from its more worthy ancestors. But did they succeed in breeding from these sheep a class having the same family likeness as themselves? I trow not. If any person will take the trouble to examine a flock bred after this fashion, they will find that their most prominent characteristics are long, legs, long slender necks, narrow chests, and a general flatness over the ribs, all of which points are infallible indications of constitutional decline and a lack of any tendency to early maturity, or good feeding propensities. And now, the Leicester and Cotswold crosses having failed, an attempt is being made to put the Lincoln through a similar mill, but I have no doubt the attempt will be followed by equally unsuccessful results, for the same law governs in all cases; there is no such thing as luck or magic in breeding sheep, as many of our American cousins know by this time to their cost. Two or three years ago quite a fever for long-woolled sheep raged across the lines, and the longer the wool and larger and coarser the sheep, so much the better, blood and quality being of little, if any, consequence. But the unalterable, fixed law was found as stable over there as among other Christians, and I doubt not but ere this many of them have fully realized their disappointment in the off-spring produced.

CANADIAN.

N. Dumfries.

Can Sex be Produced at Will?

It has for a long time been a subject of much discussion among scientific men in the medical profession, to establish definitely whether in the higher order of animals, there could be any rule introduced whereby the production of the sexes could be regulated at will. The importance of such a discovery may be better understood, and its value more thoroughly appreciated, when application is made, and trustworthy results obtained in the reproduction of the domestic animals. For example, nearly every breeder desires sometimes that the offspring resulting from the intercourse of certain animals which he may possess, shall be males, while of others, females. Their pecuniary value may be greatly enhanced, at times, by such a regulation.

It appears that science has at last, with analytical research and scrutinising care, unlocked the door to these mysteries, and laid bare the simple means by which these ends may be accomplished. Prof. Thury, of Geneva, has shown how males and females may be produced in accordance with our wishes. He says, 'if you wish to produce females, give the male at the first signs of heat, if you

wish males, give him at the end of the heat.' The truth of this law has been sustained in practice, and Geo. H. Napheys, A.M., M.D., of Philadelphia, in one of his recent works, says on the subject, that he has now in his possession the certificate of a Swiss stock-grower, son of the President of the Swiss Agricultural Society, Canton de Vaud, under date of February, 1876, which says: 'In the first place, on 21 successive occasions I desired to have heifers. My cows were of the Schurtz breed, and my bull a pure Durham. I succeeded in these cases. Having bought a pure Durham cow, it was very important for me to have a new bull to supersede the one I had bought at great expense, without leaving to chance the production of a male. So I followed, accordingly, the prescription of Prof. Thury, and the success has proved once more the truth of the law. I have obtained from my Durham bull, six more bulls, (Schurtz-Durham cross), for field work, and having chosen cows of the same color and height, I obtained perfect matches of oxen. My herd amounted to 40 cows, of every age. In short, I have made in all, 29 experiments after the new method, and in every one I succeeded in the production of what I was looking for—male and female. I had not one single failure. All the experiments have been made by myself, without any other person's intervention, and consequently, I do declare that I consider as real and certainly perfect the method of Prof. Thury.'

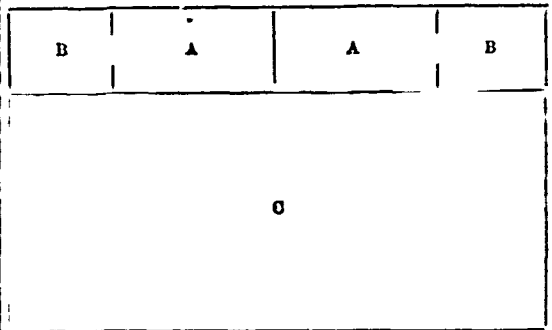
The same plan has been tried on the farm of the Emperor of France, with it is ascertained, the most unvarying success, and we believe it has also been tested, to some extent, by parties in this country.

There is a theory among agriculturists to the effect that the weather influences and determines the sex; dry and cold, with northerly winds, producing among mares, ewes and heifers, more males, while seasons of an opposite meteorological condition, more females. The truth of this latter theory is difficult to prove, and is, besides, based upon the conditions that are beyond the control of human agencies, and therefore, of little avail to mankind; but the former statement is susceptible of demonstration, and is so simple in its operation, that the experiment may be easily tried and adjudged by any one.

A common sense view in discussing the subject of procreation suggests that it is not a matter of chance, but is, from the very character of its importance, governed and controlled by natural and fixed laws, the perfect understanding of which may, or may not, be within reach of human intelligence.—*Journal of Agriculture.*

A Convenient Piggery.

Let me give your readers a plan and description of a piggery, or hog-pen, which I recently saw in Southern Indiana. The general plan may be seen by the following:



The apartments A A are feeding pens, with troughs next to the large apartment, C, which is used as a slaughter house at killing time, and as a wagon-shed and tool-house at all other times. The parts marked B B are sleeping pens, with small entrances from feeding pens. The building is thirty feet long and twenty wide. The pens are eight feet wide, the sleeping pens five feet, and the feeding pens ten feet long. The large apartment is sixteen feet wide. It has hooks in the joists for hanging hogs, and a chimney is arranged so that a heater of some kind can be used in the building at butchering time. Above is a room for grain, with access by a stairway at one corner. In the building we visited, there was a brick furnace with pan for heating water, and the women were using it to heat wash water. It made a very comfortable wash-house in warm weather. I forgot to state in the proper place, that the pens were separated from the apartment C by a partition from floor to ceiling, with holes about five feet from the floor, for throwing in feed, and apouts piercing the partition and leading to the troughs for slops. The building cost about one hundred dollars, and was an ornament to the place.—*Cor. Ohio Farmer.*

Sheep in the Fall.

Old, experienced sheep men will not need the advice which follows, unless they have gone through life with their eyes shut; but young farmers, who are not yet too old to learn, may profit by it. Keep your sheep in good condition during the fall. If pasture has been good,

they will now be in good condition, generally, and the owner must keep them there if he would profit by the business of sheep raising. I know by experience, that after killing frosts come and wither the grass, sheep will decline unless fed a little something extra. The grass, after frost, is not nearly as nutritious as before. Give a little grain once a day, feed pumpkins, turnips, or any other green food at command—anything to keep up the growing thrifty state, all sheep should be in at the close of the vegetable season. I cannot impress this point too closely. Sheep must be kept up during the fall months, in order to winter well and easily, and become a source of profit to the owner. Especially does this advice apply to breeding ewes. If they are permitted to run down until they are coupled with the ram, they are hard to serve, and not by any means sure. Then the progeny are, evidently greatly influenced by the condition of the ewes at and succeeding impregnation. Every careful sheep owner will adopt such methods as will improve his flock. Some men, will spare no expense in procuring a ram, but at the same time pay no attention to improvement through the ewes. One is just as important as the other. Indeed, I prefer the sheep reared by a careful man who keeps them at all seasons in the most vigorous condition, even though the blood on the male side may be inferior.

Sheep do not pay very well now unless they are good. Poor sheep are a loss any time, and especially at this time. Common sense prompts every man, then, to cull his flock. Take out the poor, the maimed, the halt, and the blind, and Spartan-like, sacrifice them to the good of the commonwealth. Those that from some cause or other have dropped back a little in condition, should be separated from the flock and especial care given them. Dispose in some way of all that are not worth taking especial pains with, and thus have your flock, at the beginning of winter, composed only of the best, and they in the best possible condition. Take the word of an old sheep man, who assures you that the next crop of wool and the lambs will fully demonstrate the wisdom of such a course.—*Ohio Farmer.*

The Cotswold, or Long Wool Sheep Business.

The Cotswold or Leicester are the sheep to raise—sheep that will shear from 6 to 10 pounds per head,—that is wool that is not all gum, dirt and grease. We can raise sheep that when full grown will weight from 125 to 150 lbs. per head. Such sheep when fattened will bring 5 cts. per pound. With the experience I have had with them, they are more hardy than the fine wools, more prolific, better milkers. They need no more care than the fine wools; do not eat any more according to their size.

I have heard of many fleeces weighing from 10 to 25 lbs. per head, but I think they would come out as did a fleece that I knew; it weighed twenty lbs. before it was sheared, when it was cleansed it weighed 5 lbs. I don't think that kind of wool pays. I read in your valuable paper many accounts of heavy fleeces—they do not state whether they are washed or not. I think the result would be different if they had been washed. I prefer the long wools; there we have wool and mutton combined. I have a yearling ewe that raised a lamb and sheared 8½ lbs. clean washed wool, the staple was 6 inches long.—*Michigan Farmer.*

What is Pure Blood.

The following remarks were made by President Welch, of the Iowa Agricultural College, at the recent Short-horn Breeders' Convention:

"While coming here to-day, I was thinking of the important subject—How long shall a thoroughbred animal be bred by crossing with a scrub before becoming pure blood? The English rule is, to cross four times with the female and five times with the male. We take half-blood and cross with a pure-blood, and we have a quarter-blood, and at the fifth cross we will have an animal that has thirty-one parts pure blood to one part scrub—that is, if we compute the cross arithmetically—but when we take into consideration the fact that the pure blooded animal is prepotent over the scrub, then the animal has but a minute portion of scrub blood. When a pure blooded Short-horn bull is crossed with a scrub cow the result cannot be computed arithmetically, for the prepotence of the thoroughbred animal over the scrub, controls to a greater or less degree the value of the progeny. The future beef and butter of this country depend on the value of crossing. I crossed a common cow, a poor milker, with an Ayrshire bull, and the result was an Ayrshire calf, resembling his male parent, and with not one perceptible point in favor of its mother; thus the scrub was almost entirely lost. It is impossible to say that a certain number of crosses will produce arithmetical results. The Short-horn bull is the most prepotent animal on earth, not particularly but generally; and for example we will take the seventeens. Suppose there have been nineteen crosses since the importation of 1817, at the present time there would be one two-thousandth part of scrub blood in a straight seventeen; (that is if it was computed arithmetically); but when you