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Ewes should be well fed before going out in the morning, in order to break their appetite. After the grass begins to improve, the appetite for hay will be slight, and only a little of the best hay will be necessary. If slops are fed they may be greatly lessened or discontinued, and likewise turnips, though English shepherds continue the feeding of roots after the grass forms the chief food of their flocks. Dry oats are the best kind of grain food at this time. They are tonic in their effect, and help to counteract the looseness caused by the grass. The flock should have plenty of salt. This itself is, indeed, both a preventive and cure for diarrhoea. If young lambs are affected with violent purging, a teaspoonful of powdered chalk given in milk, repeated, if necessary, after five or six hours, will generally cure them, though they generally right themselves.

On account of the closeness of the feeding of the sheep, they check the growth of the grass in the spring, with the result that the sun burns it out later in the season by getting at the roots. On this account a field that is to be pastured for cattle should be closed to the sheep, and they should be kept away from meadows. There are few farms, however, that have not a piece of broken land covered with natural grass, on which the sheep may be turned early in the season. Failing this, the lanes may be used, or such fields of sod as are to be broken up for crop in the spring or early summer.

### The Cost of Pork Production.

BY AN EXPERIMENTER.

The problem of profitable pork-production to suit our present markets is one difficult to solve, and too often results are anything but pleasing when the balance sheet is made out. It is possible that a discussion of the relative feeding values of a few of our more common and suitable feeding stuffs would be of some interest to feeders, and the following notes are accordingly submitted.

Most of the common feeding stuffs are rather high-priced at present, when we consider the price of the product in the shape of pork, and it is, therefore, the more imperative to select such feeds as will give the greatest weight of pork for the amount fed, as well as meat of the best quality. The wise feeder will always remember that there are two markets to be considered: the local and the foreign, or that catered to by the bacon manufacturer.

In feeding for the local market, the feeder can often pay much less attention to quality, and devote his energies to securing great daily gains. Great gains, as a rule, are economical gains when pigs are under 200 lbs., and small gains are expensive. The pig that increases at the rate of 2 lbs. per day does so at a much less relative cost than the one that does so at, say, 1½ lbs. per day. The 2-lb. per-day pig, however, is likely to make soft bacon, and will not command as high a price as the 1½-lb.-a-day hog. The difference in price will not offset the greater cost, but the market for the 2-lb.-a-day hog is limited, while the 1½-lb.-a-day hog is, practically speaking, master of the situation, for his market is the best in the world.

The feeds which seem to be, generally speaking, certain of producing good bacon are rather few in number—oats, peas and barley being the only cereals which are at all certain, if fed alone, of producing a No. 1 article.

A limited supply of skim milk or whey along with these grains materially increases the gains from a given quantity fed. The value of skim milk and whey when fed with grains varies inversely with the proportion fed. When a fair amount of it is fed, say 4 lbs. per day, it apparently adds to the fattening power of the grain, as well as exerting its own proper nutritive function. Experiments conducted at the Central Experimental Farm, Ottawa, and elsewhere, indicate that care must be exercised in using this feed, as a large quantity seems to affect the quality of the meat indirectly by causing rather rapid fattening.

The most important principle to be observed in feeding for bacon seems to be the development of the animal naturally. Let his weight come as far as possible by growth rather than increase of fat. To this end, therefore, it is necessary to feed a ration containing a high proportion of flesh-forming food, and peas, oats and barley fill the bill. Any one of these grains fed alone will not, as a rule, give such good gains as a mixture of them. Variety is usually a very important consideration in feeding animals, and the pig is no exception.

In feeding for bacon, it is found that the early rations in the feeding period are not so marked in their influence upon the quality as the later, and advantage may be taken of this to use some cheaper ration during the building-up of, say, the first 125 lbs. of his pigship, care being taken to keep in a good growing condition rather than to fatten. Shorts, bran, corn and pasture or roots may, therefore, very properly go to make up his early rations, and will materially lessen the ultimate cost. With corn, it is necessary to supply a liberal quantity of foods containing protein for muscle-building and ash for the bones.

The ration which gives the greatest gain in pork for amount fed is corn meal and milk, and is in most sections the cheapest ration as well, but great care must be used in feeding it, as it is very liable to give soft pork, or at least too fat to suit the best markets. On the average, 3 lbs. of corn and as much milk will produce a pound of pork in summer,

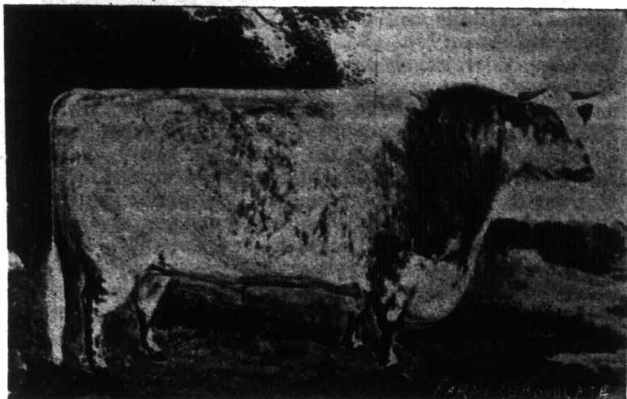
while the amount of every other grain required for a similar gain is considerably greater. Barley stands well up in rank as a rapid pork-producer, and a very high percentage of animals finished on this feeding may be expected to yield hard bacon. Peas and oats also give good results, and may be counted upon as economical and rather reliable finishing feeds.

With feed stuffs at present prices, and under usual winter conditions in Canada, a pound of gain in live weight may be estimated to cost, on the average: from corn, 2½c.; from barley, 3c.; from oats, 3½c.; from peas, 3½c.; from a mixture of oats, peas and barley, almost 3c. The above estimate takes into consideration the cost of a due proportion of milk.

[NOTE.—The question of the cost of producing a pound of pork, live weight, is one about which many are, no doubt, in the dark, and when feeds are high and hogs low it is a vital one to the feeder. We would be glad to publish the results of any careful experiments carried on by feeders the details of which will shed light upon this point.—EDITOR.]

### The Mare at Foaling.

As the period of parturition approaches, the mare should be carefully watched and when definite symptoms appear (with which all breeders are familiar and I need not enumerate) a careful and intelligent man should stop with the mare until delivery has taken place. In most cases the act will take place in a normal manner without extraneous interference, but in many cases this happy termination of this most important event does not occur and conditions present themselves that endanger the life of the offspring or the dam or both. In many cases of this kind the intelligent interference of an intelligent man (not in all cases necessarily an obstetrician) will bring to a successful termination the birth of the young, while without this interference there would certainly be the loss of the foal and sometimes also of the dam. Of course, the interference must be intelligent and opportune. Uncalled for or inopportune interfer-



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BRED BY T. C. BOOTH. FIRST AT THE ROYAL, 1888.

ence is as much to be condemned as neglect to render the necessary aid when required.

The attendant should remain quiet and out of the sight of the mare if possible, especially if the mare be a primipara (a mare bringing forth her first young). When the labor pains become frequent and long continued, if he observes that all things are proceeding in a normal manner, and birth will take place without aid, he should not interfere, but, on the contrary, if parturition is not advancing in proportion to the pains, he should, as carefully and quietly as possible, ascertain what is hindering the act. It may be due to some slight malpresentation of the foetus, such as a deviation of the nose or a foot, which can easily and quickly be rectified, or the cause may be more serious. Having, if possible, ascertained the condition, he must decide whether or not he can remedy it; if so, he must do so as promptly and quietly as possible, and if not, he must as quickly as possible secure more skilled assistance. Even though delivery may take place in an easy manner, conditions that require attention frequently occur. For instance, the foal is frequently born enclosed in the fetal membranes, which have not become ruptured, and it will quickly suffocate unless liberated. Instinct teaches the mare to tear the membranes with her teeth and thereby allow access of air to the young, but in the majority of cases the mare is more or less exhausted and will lie still for a few minutes after the foal is born, while in the meantime the young animal perishes. The attendant should at once liberate the young when this condition is present; should also attend to the naval cord, which, in these cases and in many others, is still intact and attached to the membranes. He should tie a soft, strong cord tightly around the cord, about an inch from the belly, and cut it off with a dull knife about an inch below the string; he should remove all mucus from the mouth, nostrils and eyes of the foal, and unless the dam is giving the necessary attention he should, with a wisp of straw or a cloth, apply brisk friction to the body in order to dry it and encourage circulation.

If the foal is unable to rise, he should assist it to its feet in about half an hour, and endeavor to get it to suck, and repeat this every half hour until it is able to help itself. He should ascertain whether all natural openings in the body are pervious, such as the anus for the passage of the faeces and the urethra for the passage of the urine, and also the eyes. A very frequent cause of death in the foal at from one to four or five days old is retention of the meconium (the matter that is present in the intestines at birth); this exists in small balls or pellets of a dark brown or black color and about the consistence of putty. These balls are often of such size that the little creature has not sufficient strength to expel them, and the practice of giving purgatives, as oil, aloes, melted butter, lard, honey, etc., in such cases cannot be too highly condemned. Purgatives in such cases do not act upon the parts in which the trouble exists, viz., the large intestines, and especially the rectum, and while they cause an increase of the peristaltic action of the bowels and a fluidity of the contents of the small intestines, they do not remove the existing trouble and often cause death from exhaustion. The index finger should be well oiled, first cutting the nail to avoid irritation to the parts, and carefully inserted into the rectum and all of the lumps that can be reached removed, after which an injection of a little raw linseed oil or a little soap and water should be given. This operation should be repeated every few hours until the faeces become yellow, which tells us that the meconium has all passed and that the milk taken after birth (or the faeces formed therefrom) are passing, when, with rare exceptions, all danger of constipation will be passed. Retention of the meconium more frequently occurs in cases in which the milk has been escaping from the mare for some time before her delivery. The first milk (the colostrum) is of a viscid, thickish nature, a sort of an amber color, and has a laxative action. When this has run away before birth, constipation is more likely to occur in the offspring than in other cases in which the young animal receives it. In some cases it is necessary to give a laxative to the foal, but where injections, etc., will effect the desired result they should be avoided, as superpurgation or diarrhea is very easily induced and frequently proves fatal in a short time. Where it occurs, probably the best remedy is laudanum—about one to two drams in a little of the mother's milk every two or three hours until the diarrhea ceases.

The attention to the dam will depend upon the complications that have arisen during parturition. In normal cases nothing is needed except to keep her warm. Give a warm drink and bran mash an hour or so after delivery, and feed sloppy food for a few days. If the afterbirth has not been expelled in six to eight hours it should be removed by hand. More serious complications should be attended to by a professional man.

If the mare is to be bred again she should be taken to the stallion during the second period of heat after delivery. We know that the practice of breeding her at nine or ten days after delivery is commonly followed and generally with success. The success of this practice is the only point that can possibly recommend it. I consider it irrational, as it is almost impossible that the generative organs can have regained their normal condition in so short a time, and if there be any discharge from the uterus or vulva, there is a danger of causing disease in the stallion and also aggravating the diseased condition of the mare. It would certainly be safer and more rational, and, I think, just as successful, if we would wait until the next period of oestrus before breeding. HORSEMAN.

### Teeth of Young Pigs.

Should the sow carry her pigs beyond the usual period of gestation, it frequently happens that the piglings' teeth will have made an abnormal growth, and in some instances the teeth will have become discolored to an extent which has led to the common saying that "pigs born with black teeth never do well." These little teeth are often very long and sharp, so that, when the little pigs attempt to suck, the teeth extend beyond the tongue of the pig and prick the inflamed and tender udder of the sow, giving her great pain, which frequently causes her to refuse to suckle the pigs, and sometimes she will attack the little ones with open mouth, when one grab from her powerful jaws seriously injures, if it does not at once kill the youngster. Unless immediate steps are taken to remove the cause of this trouble, the pigs soon die for want of food, and the sow's udder becomes distended with milk, and inflammation of it follows.

#### THE REMEDY.

This is simple, and easily applied by the attendant on the sow. He takes up each pig, tucks it under his left arm, opens its mouth with his left hand, and with his right hand and a small pair of piners he breaks off the erring teeth, and places the pig to the sow then by a little of both coaxing and scratching, the sow will turn onto her side; the little pigs, being unable to bite the udder and each other, will quickly relieve the distended udder of the sow and prove a source of pleasure to her, instead of an irritant and a cause of pain. Sometimes the sow will become impatient on hearing the shrieks of her little pigs whilst the operation of dentistry is progressing; if this does affect her, it is best to take the little pigs into an adjoining place, out of hearing of the sow. S.