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Omnium rerum, ex quibus aliquid acquiritur, nihil est agriculturâ melius, nihil uberius, nihil homine libero dignius.—Cicero: de Officiis, lib. I, cap. 42.

VOL. IV.

HALIFAX, N. S., MAY, 1884.

No. 45.

THE AMHERST EXHIBITION FOR DISTRICT No. FOUR.

MAY 9th, 1884.

1st. Dates for opening and closing Exhibition: Tuesday, 7th October, continuing three days.

2nd. Regulations for conducting Exhibition not perfected as yet.

3rd. Committee for carrying out Exhibition: "the Warden" and Councillors for the different districts, together with the following gentlemen:—Rev. A. B. Black, *Chairman*; Hon. Hiram Black, Wm. Holems, Seaman Lowe, C. R. Casey, D. T. Chipman, J. R. Lamy, J. T. Smith, R. P. Keillor, H. W. Baker, B. W. Balston, *Secy.*

In answer to enquiries respecting the cultivation of English Horse Beans, we may say that they can be planted in any of the various ways in which Indian corn is planted,—either as a cultivated drill crop, or sown broad cast or drilled like grain. In the latter case the soil must be well worked, or have been in roots the previous year. The quantity of seed required to the acre will be at least a third more than corn, as the seed is larger and the plants do not spread. We will give full details of the mode of harvesting before the season for that operation arrives. Those of our readers who have kept files of this *Journal* will find a very full account of the history and cultivation of Horse Beans in an early number (April 1865.)

THE DAIRY CONVENTION AT TRURO.

(From The Eastern Chronicle.)

A Dairy Convention, in which much interest was manifested, was held in Truro, on the 24th and 25th April. The meeting opened on the 24th at 2 o'clock, p.m., in a room kindly placed at the disposal of the Convention by the Y. M. C. A. Among those present were the Warden of the County of Colchester, and the Mayor of the town, Col. W. M. Blair, M. P. P., J. B. Calkin, Esq., Principal Normal School, C. P. Blanchard, E. Blanchard, Arthur F. Gurney, H. J. Townsend, New Glasgow, and others. The Convention elected Col. Blair as Chairman, and C. D. Anderton, Secretary.

The Rev. A. C. McDonald, Raysfield, was called upon and he narrated the steps taken to secure this meeting and read letters from the leading dairymen of the Province, indicating their hearty sympathy with the movement, and also read telegrams and letters expressive of regret for absence from Col. Starratt, Gen. Laurie, Prof. Lawson, C. E. Brown and others. He said that only six weeks had elapsed since the intention of holding such a meeting as this was seriously entertained, but that the subject was so evidently popular and the meeting so universally desired that nothing seemed wanting but some one to take the initiative. This, he said, he had taken at some sacrifice of time and labor, but he was pleased to find that his efforts had

resulted in this meeting, which he felt would not close its deliberations without tangible results.

During the time occupied in these preliminaries, Mr. W. H. Lynch, of Dunvill, so favorably known in the Upper Provinces and the author of a manual on "Butter Making," 10,000 copies of which have been distributed by the Government of Ontario among the dairymen of that Province, entered the room and was greeted with hearty applause.

The Rev. Mr. McDonald was next called upon to read the paper prepared by him, the subject of which was "The Cow; Her Care and Management, and Her Products." The reading of it occupied about forty-five minutes, and, after it closed, remarks were made by various members of the Convention highly eulogistic of its subject matter. It was determined to have it published at an early day in some of the Provincial papers and in the journal of the proceedings.

After some questions were put and answered, a resolution was duly moved and recorded that this Convention should merge itself into a Dairy Association, which, after an interesting discussion, was carried unanimously. A Committee was then appointed to draw up a code of rules and bye-laws for the association, and ordered to report the next day.

The Convention met the second day with much the same members as were present on the previous day. The

Committee appointed for that purpose reported, and laid before the Convention a code of rules and bye-laws, which was read clause by clause, and after discussion, with slight amendments, was adopted as a whole. All present then signed a declaration, and paid the fee of fifty cents which entitles to membership and proceeded to the election of officers. The following were duly elected officers, viz :

Rev. A. C. McDonald, President.
J. B. Calkin, Esq., Sec'y.-Treasurer.

And the following gentlemen from each of the agricultural districts of the Province, Vice-Presidents :

No. 1.—Gen. J. W. Laurie.
No. 2.—C. E. Brown.
No. 3.—C. H. R. Starr.
No. 4.—Col. W. M. Blair, M. P. P.
No. 5.—Adam C. Bell, M. P. P.
No. 6.—J. McKeen.

Also eighteen Directors, one from each County, who will constitute the executive of the Association. This organization embodies two grand principles seldom so judiciously blended, of centralization in regard to its executive, and a representative character, as its officers must be chosen by the people, for the people, and of the people. The intention is to form in every County of the Province affiliated branches, through the co-operation, assistance and advice of the directors, who are not necessarily to be looked upon as officials, but are authorized to summon those interested in dairying within their jurisdiction as soon as this can be conveniently done. Mr. Lynch declares that this organization is the most elastic and yet the most perfect one in the Dominion of Canada, if not in America, with most of which he is quite intimate. It is hoped and believed that the Association will have a prosperous career and fully justify the end of its establishment.

An interesting feature of the Convention was the public meeting on Friday evening at which Mr. McDonald's paper was read a second time, and was followed by the exhibition and description of more than half a dozen dairy utensils by Mr. Lynch. They appear to be complete as to their number and utility. Mr. R. K. Brace, of Charlottetown, has purchased the right of their sale in the Maritime Provinces, and is rapidly introducing them into P. E. I.

The Dairy Association of Nova Scotia, the name of the new society, will hold its first annual meeting in the town of Windsor, in December next, when it is expected that Mr. Barnard, Commissioner of Agriculture for Quebec, will be present.

Horses, like men, suffer much from IDLENESS. How many IDLE HORSES are there standing at this moment, in the stables of gentlemen, in the city of Halifax. These horses are apparently all well cared for, they have constant attendance, good hay, clean oats, occasional washes, and thorough grooming. And yet, when the spring comes round, how often is it found necessary to send for Jukeman to put them on their feet again. The following paper, from the *Quebec Journal of Agriculture*, has been written by Dr. McEachern for the farmers of that Province, but may be read with profit by Halifax horse owners as well as country farmers.

At this season of the year, when but little work can be done on the farm, the horses which are idle require more care than is usually bestowed on them. They should never be allowed to remain in the stable during the entire twenty-four hours; they should be turned out into the barn-yard for several hours daily, unless they can be exercised at light work. Over-feeding of idle horses, on the whole, produces more injurious effects than under feeding, yet both extremes are to be avoided. Young colts will winter well on good hay, with an occasional feed of ground oats, carrots, or bran mash to prevent costiveness. They should, if possible, be kept in loose boxes,—not more than two together. The feet require a good deal of care, they should be regularly pared down, made perfectly level and prevented from getting long at the toe. Working horses whose feet have suffered from shoeing and hard roads can be very much benefited by having the shoes removed, and letting them run for the winter unshod. Unless the bone is diseased, corns and weak heels will recover, and the feet, with a little care and sensible management, will improve in every way.

Care should be taken that when a horse is only to be temporarily idle, the feed should be lessened, and soft diet substituted for the stimulating oats or corn.

DANGER FROM HIGH FEEDING IN IDLE HORSES.

(*Hæmoglobinæmia*.) Our readers are aware that for the maintenance of the animal body a regular supply of nutrient material must be supplied which is utilized by the digestive system of organs, and converted into such a fluid form as admits of its being absorbed and assimilated by the tissues.

In this way, growth and waste of tissue are provided for, and the size and vigour of the body maintained. It will readily be understood that there is a maximum and minimum limit to the quantity of nutrient material thus required and consumed.

This quantity and kind of food is usually well known to those whose business it is to feed horses—taught by experience—but it is a department of management which is not sufficiently studied by our agriculturists. Yet it is well known that those who are experts in feeding are the most successful. It must be borne in mind, that the more work a horse has to perform, the more nutrient material he will consume; and that horses at hard, regular, daily work, require a liberal allowance of nitrogenous food to compensate for loss of substance in the performance of their work. On the other hand, when idle, the demand is lessened, and capability of consumption is also decreased—consequently, if a horse in vigorous health is, from some cause or other, kept idle for several consecutive days, no change being made in the allowance of nitrogenous food, an accumulation of unabsorbed or unassimilated nitrogenous elements takes place, the blood is surcharged with nutriment, and a plethoric condition is the result.

In such cases the animal spirits are buoyant; when he is taken out, he is playful and inclined to go fast. However, this false animation does not last long—he goes probably half-a-mile, then he stops, perspiration covers his body, he becomes stiff and unable to progress, the loss of power being most apparent in the hind quarters. Sometimes it becomes complete, and he falls down, unable to get up. The muscles of the quarter are swollen and hard, the pulse and breathing quickened, and the urine becomes thick and black, like porter or coffee, is rich in nitrogenous substance and the colouring matter of the blood; and, even under the best of treatment, it often proves fatal.

It is thus evident, that we cannot with impunity continue to feed idle horses as high as when at work.

It should be a rule, never to be deviated from, in every stable, to lessen the quantity of oats or other nitrogenous food when working horses have to be kept idle even for a day or two; not only so, but they should never remain twenty-four hours without exercise.

OTHER EFFECTS OF HIGH FEEDING IN IDLE HORSES.

Swollen legs.—In addition to the system of vessels which carry the blood to and from the tissues, we have a system of absorbent vessels and lymphatic glands whose duty it is to convey the lymph fluids of the body. Under high feeding and want of exercise, these glands, particularly in the hind leg, are apt to become inflamed, producing swelling and intense pain in the groin, and down the leg. It is usually called a *weed*. The swelling is due to interrupted circulations in the vessels which often burst, and the

cellular tissues of the leg become infiltrated, the swelling diffused and pitty. With a change of feed, the action of a purgative followed by diuretic, hot fomentations, bandaging, and when the pain abates, moderate exercise, the swelling usually disappears; but it leaves the vessels weak, dilated, and prone to subsequent attacks.

Cracked Heels.—Debility of the absorbents of the legs tends to induce congestion and inflammation of the sebaceous glands of the legs, particularly in the thick skin covering the hollow of the heels. The tendency, of course, is aggravated by exposure to wet and cold, and the reaction induced by leaving the heels wet to dry spontaneously by evaporation in the stable; but in most cases the direct cause is the plethoric condition owing to high feeding and insufficient exercise.

Thrush is, in many cases, another cause of dietetic errors, although in some it is due to neglect or mismanagement of the feet themselves.

It consists of a subacute inflammation of the sensitive frog, whereby, instead of the tough, elastic horn, a soft pulvaceous substance is formed, and discharged from the clefts of the frog, which gives off a most offensive odour. It is attended by tenderness, and not by positive lameness, and may, if neglected, lead to more extensive disease.

We have had frequent enquiries of late respecting pigs, and there is evidently a desire for improvement in many parts of Nova Scotia. The following article from the *Thoroughbred Stock Journal* may be read with profit:

All breeders who desire to improve their pig stock or keep up their herd to a high state of excellence, must be careful in the selection of a sire. A certain amount of laxity may be permissible in the females of a herd, when the sole object is to breed for slaughter, but even then a high-class boar is of prime importance, and much more so when the formation or maintenance of a pedigree herd is the breeder's aim.

It is to the male in a very considerable degree we must look to the good qualities of the future herd; and were it for no other reason than the comparative ease with which a common herd is improved by the judicious use of a few well-bred males, this would be of paramount consideration. It must be remembered, however, that a faulty or undersized sire has as much, or even greater, prepotency to deteriorate the progeny of a herd of, say, twenty well-bred sows as a high-class one has to improve those of twenty under-bred ones. Consequently, while the introduction of an inferior dam to a herd may result in comparatively small

loss, the selection of a faulty boar may do almost irreparable injury. The boar should be of perfect symmetry, and show in a marked degree all the attributes of the most improved types; carrying, with a masculine appearance, a head far removed from coarseness, and whose broad jaw and sharp face betoken great aptitude to fatten. He need not necessarily be upon an extra large scale. Indeed, the short, level-backed animal, of equal thickness at shoulders, loins and hams, and generally a compact form, is very choice. Fine in bone, with hams and shoulders almost down to the ground, well covered with long silky hair, betoken good constitution, resisting both the extremes of heat and cold, and whose fine quality is a guarantee of their careful breeding. Such is the typical sire.

Coarse bristles are the accompaniments of coarse hides, and *vice versa*; and it is a matter of importance, though frequently overlooked, whether the breakfast rasher is, as sometimes, nearly one-fourth rind, or whether the latter is almost as thin as parchment. In addition, the quality of the meat is always finer in the latter case than in the former. Most of the improved Essex I have met with have had, in a marked degree, this high excellence alike of skin and quality of meat.

Having found an animal that individually combines the essential good qualities, it is necessary to enquire about his progenitors, and especially his dam. I have found, that, as a rule, the young male perpetuates in marked degree the characteristics of his dam, and the young female of her sire. It follows, then, that, however expedient it may be for the pork-producer to breed from inferior or faulty female specimens of the family, the boar-breeder must only rear from not only a well-bred but a good shaped sow of the highest quality and characteristics; not only so, but her nursing powers must be duly considered, as they are of the greatest importance. It is as requisite that the pig should be able to nurture her offspring, and be gifted with a plentiful supply of milk, as it is for the dairy cow to be so, while there is as much difference in this respect between individuals of the one tribe as the other. Yet it is only from a dam so constituted that a young boar should be selected, as this milking gift is to a very large extent inherited.

The difference between a sow whose milk is plentiful and one who has but a scanty supply is very apparent in their offspring. Those of the former grow with rapidity, and lay a foundation for future thrift and early profit, whilst the latter's never fully recover their early stint. I strongly advise, then, that boars should be selected from dams pos-

sessing good milking properties. As fecundity is a matter of great importance in the pig, and the capability of nursing a numerous litter of quite equal importance, it is well to see that the sow has a full complement of teats, for Master Piggy does not brook any partnership in the one he has selected. Therefore a sow should have from twelve to fourteen well developed teats, and then she has a chance of rearing a good litter. In like manner I prefer a boar selected from large litters and from a prolific sow.

In selecting sows for the general stock, breadth and depth of frame are of paramount importance. With this should be allied as many of the characteristics of high quality as can be obtained, when a breeding herd is intended; coarseness, either of hide, hair, or head, should never be condoned, and though it is not absolutely necessary to adhere to the compactness of form, as in the boar, still the sow should be built upon level lines, and be quite even and symmetrical. When it is desirable to increase the size of a herd, a boar upon a larger scale may be selected or introduced; but, as a rule, the symmetry and quality should be the prominent features of the boar, and frame, united to as much symmetry and quality as possible, be those of the sow. Taking the White breeds as examples: to improve the quality of the Middle breed or give greater scale to the Small, select a Middle sow and Small boar; and, in the same way, when it is desired to increase the size of the Middle take a well-bred sow of the Large breed, and a good Little boar, and from these, with careful breeding, a class of pigs with all the frame and fine growth of the Large, with the feeding qualities and hair of the Middle, might be obtained. This, it appears to me, is not sufficiently appreciated; at least, the great majority of the Large White pigs I see lack early and profitable aptitude to fatten. When pork or bacon is the sole aim of the breeder, I am free to confess that the produce of what may be designed Medium-bred sows are as profitable as any, and perhaps crosses, as between the Large Middle White, and the Berkshires, are most profitable of all; but after the first cross these are comparatively valueless for breeding purposes. Some breeders of White pigs, when grazing is resorted to, find it more economical to keep thickset sows of Middle type and a lengthy large-framed boar. They say that the Middle class of animals are kept more economically than the Large, consequently it is cheaper to keep twenty small eaters, and one large eater, than *vice versa*. Their reasoning is correct, and when all the young are consigned to the butcher it is a plan that has its advantages. But the sows should be the selected ones out of litters having a

tendency to free growth, while the boar should, though following the type of the large, have Middle blood in his veins. Nevertheless, under such circumstances it is rarely we find uniformity in the herd, and it should only be resorted to in exceptional cases, and with the utmost care and consideration when high-class stock is kept for breeding purposes.

HENDERSON SETTLEMENT,

WENTWORTH, May 2, 1884.

Secretary Central Board:

DEAR SIR,—On May 1st, 1884, the inhabitants of Wentworth met and formed themselves into an Agricultural Society, under provisions of Chapter 37, Revised Statutes, to be known as the Wentworth Agricultural Society, with forty chartered members, subscribing \$100 each. The following are the officers for the coming year: William Swotton, *President*; Joseph Ogilvie, *Vice-President*; W. R. Henderson *Secretary*; Hibbard Purdy, *Treasurer*. *Directors*: R. A. McLearn, William Swan, David Teed, Ernest Higgins, and Herbert Ogilvie, with a Committee to frame bye-laws, and place the same on the table at next meeting. Adjourned to 22nd day May, inst., at 7 o'clock, p. m., and wish to be recognized or recorded by the Central Board of Agriculture of N. S., with all information as regards perfecting of Society.

Yours, &c.,
W. R. HENDERSON,
Secretary.

BYE-LAWS OF BADDECK VALLEY AGRICULTURAL SOCIETY.

Approved by Central Board.

1st. This Society shall be called the Baddeck Valley Agricultural Society. It shall be organized in connection with the Central Board of Agriculture, and in accordance with the Act for the Encouragement of Agriculture.

2nd. That this Society be managed by a President, Vice-President, Secretary, Treasurer, and five Directors, to be chosen at the Annual Meeting on the first Tuesday of December, that the Officers and Directors be eligible for re-election.

3rd. That the Annual Subscription Fee be one dollar, to be paid at or before the Quarterly Meeting in September.

4th. That this Society hold four regular meetings during the year, on the first Tuesday in March, June, September and December, but special meetings may be called when necessary by the President on a requisition of any five members of the Society, after giving due notice thereof.

5th. The President shall preside at all meetings of the Society, keep strict order, regulate discussions, state and put questions, and shall not permit or allow any improper remarks of a personal character, sign orders on Treasurer and perform such other duties as belong to his office. In his absence the Vice shall take the chair, and in the absence of both the Society shall appoint a chairman pro-tem.

6th. The Secretary shall attend all meetings of the Society, keep a correct record of all transactions, collect all monies due and pay them over to the Treasurer, notify members of Society by card, delivered or mailed 5 days previously, or advertisement, or personally, of each meeting, giving time and place, submit a report annually of the proceedings of the Society, conduct all correspondence and perform such other duties as belong to his office.

7th. The Treasurer shall receive all monies paid him by the Secretary, and pay them over only by an order from the President and Secretary, he shall also submit annually a report of his proceedings.

8th. The duty of the Board of Directors shall be to take charge of and keep for the benefit of the Society all stock, &c., &c., belonging to the Society, and shall make such application of said property as a majority at any regular meeting may determine.

9th. The Society may at any time receive the name and annual fee of any person who may wish to become a member, subject to the approval of the Society, at the next regular meeting, under the provisions of the Act.

10. The members of this Society agree to be governed by a vote of the majority of the members present at any regular meeting.

11th. That no member shall be entitled to any of the privileges of the Society, nor shall be allowed to vote until all demands against him be paid.

12. All special meetings shall require five days notice from time of posting, and any resolution having passed the Society shall not be reconsidered, altered or repealed at such special meetings without previous notice having been given.

13. That nine members shall constitute a quorum to transact business at any of the meetings of the Society.

14th. At any regular meeting of the Society the foregoing Bye-Laws may be altered, or repealed, or amended by a two-thirds vote of the members present.

ORDER OF BUSINESS.

1st. Reading minutes of the previous meeting. 2nd. Collection of dues, etc. 3rd. Report of Secretary. 4th. Report of Directors. 5th. Report of Treasurer.

6th. Report of Finance Committee. 7th. Report of Special Committee. 8th. Discussion of Questions. 9th. Miscellaneous business. 10th. Election of officers.

SIR,—An Agricultural Society was organized here on the 3rd December, 1883, and the following officers appointed: John K. Knowles, *President*; Warren H. Doane, *Vice-President*; Albert H. Doane, *Treasurer*; E. H. Coffin, *Secretary*. *Directors*: James Gardner, Josiah Pike, Leslie Harding, Thos. H. Smith, Joshua Atwood. The Society was named Granite Society. The following [list] have subscribed, and the sum of \$100 paid with each name.

Yours truly,
E. H. COFFIN,
Secretary.

Barrington, Shelburne Co., Dec. 27, '83.

ANTIGONISH AGRICULTURAL SOCIETY.

ANTIGONISH, Dec. 4, 1883.

The annual meeting of the Antigonish Agricultural Society took place this day in the Court House, when the following business was transacted. Election of officers: C. B. Whidden, Esq., *President*; Alexander Chisholm, *Vice-President*; A. M. Cunningham, *Secy. & Treasurer*. *Directors*: John C. McDonald, Moses Somers, Edward Ronan, Thomas Trotter and William Crockett, Esquires. *Auditors*: Henry C. Smith and Rupert Cunningham. It was resolved after considerable discussion, and passed unanimously, that in future all bulls kept for the use of the Society be kept stabled at all times during the year. No further business before the meeting. Adjourned. The Officers and Directors to meet on Monday the 24th inst., to pass the accounts for the past year.

C. B. WHIDDEN,
President.
A. M. CUNNINGHAM,
Secy. & Treasurer.

WE are again asked by a correspondent why crossing, if continued, will not result in a full blooded animal. The simplest answer to that question is, that there can be no full-blood unless all the animal's ancestors were full-blood. We are not saying, let it be understood, that crossing cannot result in an animal that is just as good as a full-blood. On the contrary it can, and all our breeds have come in this way. There is no wild Hereford, Short-horn, Holstein or Jersey cow. They are the products of domestic breeding. They have been bred until they have fixed characteristics. Our correspondent can breed to Short-horn

bulls—the breed he is using—until he produces animals that will have characteristics as firmly fixed as the Short-horn or any other breed has. But they will not be full blooded Short-horns, for they will have other blood in them. He can call them by some other name, but they will always be grade Short-horns, so far as he may wish to call them Short-horn. —*Philadelphia Stock Journal.*

Probably the largest apple tree in the world is to be seen on the farm of Delos Hotchkiss, in Marion, Conn., U. S. A., the exact measurements of which are as follows:—

Circumference of trunk near the ground	15 ft. 3 in.
" " 3 ft. from ground	13 " 9 "
" " at the forks	10 " 2 "
" two main branches, from 10 ft. 4 in. and 8 " 8 "	
" of nine smaller branches, from 4 ft. to 6 ft. each.	
Height of tree	60 feet.
Diameter of tree-top	104 "

A peculiarity of this tree is that it is what is termed "an alternate bearer," five limbs bearing one year and four the next. The usual yield from the five limbs is about 85 bushels, although in a single instance it reached 110 bushels; and the four limbs vary from 35 to 40 bushels. The fruit is said to be excellent for winter use, though on this point I can only speak from hearsay. The age of this venerable Apple tree is estimated at about 175 to 180 years. Curiously enough the patriotic old tree marked the centennial year by bearing fruit on all its branches, the first time it has been known to do so in its life, and it has continued to do so down to the present time. Some of the limbs are now dying, others are broken down, signs of decay appear in many places, and it is thought that this noble specimen of *Pyrus communis* will soon be numbered among the things of the past.—*Rev. C. H. Hovey, in "Scientific American."*

[There must be some large and historically interesting apple and pear trees, and cherry trees too, in Nova Scotia. We hope some of our readers, especially in Kings and Annapolis, will take the trouble to look around their neighborhood, and send us an account of such trees, and the stories they have to tell. The writing of a short essay, embracing the history and description of an antique apple tree, is about as good a literary exercise as a young man can get at an agricultural college.—Ed. J. A.]

THE following excellent hints on the care of cows at calving time are from the *Country Gentleman*, and are well worthy the consideration of breeders:

In a state of nature cows give milk only for a limited time, and this time has been much extended by man's art. But by forcing nature we have produced an animal which is more liable to disease and accidents, and as a result the care

and treatment must be improved in proportion. In nature few if any accidents or diseases are attendant upon parturition. If we have improved upon nature in some respects, we must see to it that we make like improvements in all essential connecting points. Different animals of the same breed give milk for different lengths of time naturally, and just how near to parturition a cow should be milked before drying off is an unsettled question. We keep cows for profit, and the longer we can induce them, limitedly, to hold out in their milk the better we are satisfied. In order that the cow may give milk, and at the same time support an increasing foetus, the feed and care must be proportionately generous. My own practice and opinion is that a cow to be profitable should hold out her milk, and be milked to within six weeks, or two months at most, of calving. I have had them give milk to within four weeks without apparent detriment to dam or offspring, and with only ordinary treatment and care. A cow which is kept in good but not high condition will hold out in milk longer than one in poor condition, and will pass parturition with much less risk.

Commencing say six weeks before time for calving a change in feed should generally be adopted, slight at first and greater at the approach of parturition. It is natural for pregnant animals to become costive as the period of delivery approaches, and the feed should be given with reference to such tendency. The object is to keep the bowels open and in a normal state; this result is attained by feeding a few roots—potatoes are the best, I think—commencing with about one quart per day, and gradually increasing to ten, twelve, or even more. Other roots may be substituted, or even a pail of slops—bran, middlings or the like, in water, say one to three quarts in a pail of scalding hot water—in the absence of roots. Most of the roots may be omitted if the cow runs in pasture with flush feed, or can have a good feed once or twice a day of green succulent food, like ensilage, if sweet and good. All these are preventatives of constipation.

About a week before calving, the cow, if kept up, should have a box stall or pen sufficiently large for convenience, so that she may not be worried by other stock. She should not be disturbed any more than is necessary for feeding and watering; still one should keep an eye over her as the time approaches for calving. I have never yet seen the necessity for administering any medicine before calving; neither do I believe there is any, where the cow is healthy and properly cared for. The cow should have moderate exercise daily, and should never be worried. If at pasture she will get

natural exercise. Her stall should be always dry and kept well cleaned. I do not recommend any interference, or the presence of any individual in her sight at calving, but the herdsman may be in proximity, unseen by the cow, but where he can observe her movements. I consider even this as unnecessary, where previous conditions are normal. Where one foot or leg only appears, and the other is doubled back, often a little assistance by pushing the calf back just at the right time and straightening out the other leg will result in good, and may be done by any one of good judgment. Anything further than this belongs to the veterinary surgeon.

If the cow is in health, the placenta will come away naturally, in the course of a few hours at most. Let the cow get at and lick the calf all she wishes. If the placenta comes away immediately put it out of sight. After the cow has licked the calf, let it suck what it will, and when satisfied strip out any remaining milk and give it to the cow to drink, adding a little (say an equal quantity, if the whole does not make over a pailful) warm water, stirring in about one quart of rye meal or shorts. Such a mess will be all the medicine necessary in ordinary cases. Let the calf and cow remain together for twenty-four or forty-eight hours, giving the cow water slightly warmed. Then they may be separated—the cow in her stall or to pasture, and the calf put into a small, clean and dry pen. After the calf is twenty-four or forty-eight hours old, if the cow's bag is caked or hard, twice a day is sufficient for the calf to suck. When the cow feels inclined to eat, she should be given some sweet, fine rowen, or, if at grass, may graze as usual. She is better if fed as long as she and the calf are together. Her drink for a few days should be slightly warmed. What she needs is quiet and rest with nourishing food—not stimulating drugs and medicines.

Should the cow's bag be caked or hard, fomenting with warm water and working thoroughly but carefully, by hand, will very likely soon reduce it to normal conditions. Feed the cow generously with good hay or grass, giving nothing of a heating nature like corn or oil meal for two weeks after calving, after which she may be gradually returned to her usual feed with the herd. There is nothing gained by "coddling;" natural food, treatment and conditions are better, while nature restores and asserts itself. If the cow receives the foregoing treatment and care, with no undue exposure to cold and storms, there is no apprehension of future trouble from any natural cause. When the calf is 48 to 72 hours old it may be taught to drink from a pail, instead of sucking.

Give it say two quarts of new, first drawn milk at a feed at first, increasing the quantity as the calf grows. Four quarts a day is sufficient for the first week, fed three times a day at equal intervals, in equal quantities. Let the calf take two of the fingers at first, as it would the natural teat. After feeding once or twice thus, the fingers may be gradually withdrawn while the calf is taking the milk, and the calf soon learns to drink without the fingers. A leather strap or artificial teat fastened to the pail so that the calf will suck in the milk slowly, will be the most natural, allowing the saliva to flow and mix with the milk to a greater degree.

Setting trouble aside, feeding instead of sucking is the better way, whether the calf is to be raised or fattened for the shambles. After the first week, a little oat or barley meal may be added to the milk, beginning with a tablespoonful at a feed and increasing to a pint a day at the end of six weeks. At the end of two weeks, two parts of skimmed to one of new milk may be fed with the meal instead of all new milk—the quantity being increased as the calf grows older. Judgment must be used here. If too much is given, the calf will grow pot-bellied; if not sufficient, the calf will be poor. After the calf is two weeks old, two feeds a day are sufficient, with a little clean water and a wisp of hay or grass within its reach. Hay tea may be substituted for milk, if the calf is raised, mixing a little larger portion of oat, barley or linseed meal than with the milk, gradually increasing its feed as the calf grows. Always give the calf a clean, dry bed and pen, with free air, without exposure to storms or the hot sun. The longer you feed the calf, the better the growth, up to six months or more; but usually the calf will gain its livelihood by grazing after reaching the age of 12 or 14 weeks. Water should be supplied so that they may drink at pleasure; and also, after the calf is two or three weeks old, a lump of chalk and one of rock salt for it to lick. If scours occur reduce the feed for a time; fasting is better than drugs or medicine.

TIME TO CUT GRASS.—The report of the analytical chemist of the Department of Agriculture, summing up the results of analyses of nearly all the cultivated grasses, says:—It is apparent, then, that in most cases the time of bloom or thereabouts is the fittest for cutting grasses in order to obtain the most nourishment and largest relatively profitable crops, and for the following reasons:—The amount of water has diminished, and the shrinkage will therefore be less. The weight of the crop will be largest in proportion to the nutritive value of its

constituents. The amount of nitrogen not present as albuminoids will be at its lowest point: fibre will not be so excessive as to prevent digestion, and the nutritive ratio will be more advantageous. If cut earlier the shrinkage is larger, although the fibre is less and albumen is a little larger. The palatability may be increased, but the total nutriment to the acre will not be so large, and the nutritive ratio will be more abnormal. The disadvantages of late cutting are evident in the increase of fibre, destroying the digestibility of the nutrients and the falling off of the albumen by conversion into amides. This is not made up by the larger crop cut.

ALTHOUGH the common horse bean of England has not been grown successfully either in the United States or Ontario, it has been proved by experiment to be well adapted to the cooler summer climate of Nova Scotia. The Board of Agriculture, being desirous of encouraging its cultivation, have imported a quantity of seed from England, which will be sold at cost and charges in limited quantities to agricultural societies and private persons.

SILAGE SANS SILO.

At a recent meeting of the Highland and Agricultural Society, a paper on the economical production of ensilage was read by Mr. J. Mackay, of Herriesdale, Dalbeattie, of which the following are the principal points:—

"Some years ago, when living abroad, I had a quantity of mangel leaves put into heaps and covered with earth in a way precisely similar to that adopted in covering potatoes. After standing about three months the heaps were opened, when the leaves were found to be sweet, and were eaten freely by cattle. Two years ago I tried a similar experiment here, and the result was equally satisfactory. As a further test I made another trial last season with lucerne. On July 17 I had two loads of this grass laid down in a heap. After being well trodden, some old bast matting was put over it, and then soil to the depth of from a foot to eighteen inches. The pit was opened on February 15 last. A layer of the lucerne next the matting was mouldy, and also a layer at the bottom; but the rest was perfectly sound. This experiment, I think, shows, first, that an expensively built silo is not necessary in order to get good ensilage; and second, that by pitting green food in the way I have mentioned, farmers may be able to get a supply of this valuable fodder at a minimum expense."

Mr. Mackay's experience beats even that of Dr. Foulis as related in his

pamphlet (*Ensilage, How to Make and How to Use it*. W. Blackwood & Sons) reviewed in the *Agricultural Gazette* of April 7. As the expense of constructing a silo has all along been one of the most serious obstacles to the tenant-farmer, the fact that silage can be made by simply pitting—like turnips or potatoes, with perhaps a little more care taken to exclude the air, would seem to bring it within the reach of all who wish to give it a trial. That it is a "valuable fodder," especially to the dairyman, seems to be pretty generally allowed, though a "critic" here and there may give an adverse opinion. "In multitude of counsellors there is safety," says the wise king, and as G. Gilbert remarks in the *Agricultural Gazette* of April 7, "I never recollect before seeing any process, agricultural or other, so thoroughly tested and sifted as the whole theory and practice of silo management."

Captain Carthew-Yorston, one of the earliest experimenters in Dumfriesshire, writes thus of ensilage:—"My own cows have been fed on grass silage since November 1 last, and the cream and butter is superior in quantity and quality to any I see elsewhere. My own experience is borne out by that of others. I have seen several byres in England where silage is used, and all report the same of its advantages. One large dairy of 300 cows, of which the milk is sent daily to London, is entirely fed on very inferior silage, and yet the report of the produce is the same—increased quantity and quality. I may mention that there is still considerable difference of opinion amongst silage users as to the proper quantity to give a milch cow every day. My own experience is that, when my cows get full feeding—i.e., from 72 lb. to 80 lb a day each—the cream and butter were perfection; and that when I reduced the quantity to about 50 lb. a day, with hay at night, and one ration of meal mash at mid-day, the quality became rather poorer, though still of a good class."

The quantity per day used by Captain Yorston thus tallies with Dr. Foulis' practice, who gave his "cow cattle" 70 lb. a piece daily, with a bran mash at night; "and the milk," he adds, "increased in quantity, and the butter was as good as the best summer butter."—A. L. O. S. in *Agricultural Gazette*.

FALL CALVES.—If the farmer has warm and comfortable stabling for his stock he will certainly find that fall calves can be raised more cheaply and with less risk than those dropped at any other time. We took occasion to urge this idea in these columns some two years ago. Since then we have been forced by circumstances to raise a good many calves at

other seasons, and we have become more and more convinced that the ideas then advanced were correct. We prefer calves dropped in September to any other month, for the very reason that calves then escape the intense heats of summer, and during the winter season they can be "pushed" with grain, and in the spring are ready for the young grass as soon as it appears. The professional breeder likes fall calves, too, but for the additional reason that they "show" at the September fairs as "calves," when, in reality, they are only a few days short of a year old, and as "yearlings," when they are really close to two years old. It would seem that there are tricks even in the farmer's trade.—*Exchange.*

CATTLE DISEASE IN THE UNITED STATES.—Since the last issue of the *Indicator* the chief topic of conversation in the western country has been animal diseases, and especially foot-and-mouth disease as developed in Woodson and Coffey counties, Kansas. Owing to the fears, excitement, and utter lack of official authority for organized resistance to what appeared as threatening dire disaster, Governor Glick, last Thursday, in response to the practically unanimous desire of leading citizens throughout the stock-growing country, issued a call for a special session of the Legislature of Kansas, to convene in Topeka on Tuesday, March 18, and it is now in session promptly canvassing the best means of meeting the present and like emergencies.—*Kansas City Paper.*

THOROUGHBREDS.—The value of thoroughbred stock is very much underestimated by many persons. Long years (in some cases a century or more) of careful breeding has fixed certain characteristics in particular breeds to such a degree that the immediate offspring of pure blood males crossed with common females shows a marked improvement in every way. But in every case the best results can only be obtained from the thoroughbred male. While the half-bred female is valuable for the further improvement of the stock by the same process, the half-bred male seems to lack the prepotency of his sire; and the young of the latter instead of showing an advance, will generally show the contrary.—*Rural Canadian.*

A RECENT LECTURE, now printed in pamphlet form, by Hon. Donald Ferguson, Provincial Secretary of Prince Edward Island, reviews in a concise and ample manner what has been done in various countries in Europe and America in the way of agricultural education, and discusses the question of how far his own Province can move in the direction of agri-

cultural instruction. Mr. Ferguson exhibits perfect familiarity with his subject, and scarcely one of his conclusions could be questioned in any quarter, while the practical, common-sense way in which he very forcibly urges the importance of the kind of education referred to is very well calculated to make a deep impression on the farmers of the Province. Mr. Ferguson thinks that his Province cannot afford an Agricultural College, but that much might be done for agriculture in the higher departments of the schools and in the Provincial University. The view which is incidentally presented of Prince Edward Island agriculture is interesting and instructive.—*Globe.*

A DUTCH HEROINE.—The last "boom" in cattle in the United States has been the advance, in interest and price, of the Holstein breed—or, as we call them, Dutch cows. This has been stimulated by the remarkable record, as a butter cow, of a Dutch cow named Mercedes, which succeeded in wresting from all the Jerseys the position of the greatest butter producer, she having exceeded 3 lb. of butter per day for thirty-one consecutive days. Upon the publication of the results of this trial, there was a scramble for any animal of Holstein blood akin to Mercedes; and her next calving was looked for with keenest interest to see if this return, enormous as it was, could not be exceeded—for Mercedes was still under 6 years old. But, unhappily, Mercedes succumbed to milk fever, March 17; and her new born calf died too. It is said that \$10,000 had been offered for the pair.

"WINDSOR CASTLE April 14, 1884.

"I have on several previous occasions given personal expression to my deep sense of the loving sympathy and loyalty of my subjects in all parts of my Empire. I wish, therefore, in my present grievous bereavement, to thank them most warmly for the very gratifying manner in which they have shown not only their sympathy with me, and my dear, so deeply afflicted daughter-in-law, and my other children, but also their high appreciation of my beloved son's qualities of head and heart, and of the loss he is to the country and to me.

"The affectionate sympathy of my loyal people, which has never failed me in weal or woe, is very soothing to my heart. Though much shaken and sorely afflicted by the many sorrows and trials which have fallen upon me during these past years, I will not lose courage, and, with the help of Him who has never forsaken me, will strive to labour on for the sake of my children and for the good of the country I love so well, as long as I can.

"My dear daughter-in-law, the Duchess of Albany, who bears her terrible misfortune with the most admirable, touching and uncomplaining resignation to the will of God, is also deeply gratified by the universal sympathy and kind feelings evinced towards her.

"I would wish, in conclusion, to express my gratitude to all other countries for their sympathy, above all to the neighboring one, where my beloved son breathed his last, and for the great respect and kindness shown on that mournful occasion.

"VICTORIA R. & I."

FRUIT FARMING IN ENGLAND.

The district of Pershore (Worcestershire) is well known as a large plum-growing district; and there are about 1500 acres now under fruit culture, including old orcharding, in that locality. The principal enemy they have to contend with is the frost, which often does them some hundreds of pounds' damage in a single night. The Evesham district, in the same county, has about 3500 to 4000 acres now under fruit cultivation—principally composed of plums, damsons, and damoscenes, besides ordinary market garden produce. Being near to the River Avon, and much of their orcharding lying right on its banks, as at Pershore, they also suffer greatly from spring frosts. The sorts grown are the Pershore Egg plum, the Prune damson, the Victoria, and the Early Prolific. Black currants do not thrive in the district, and are greatly liable to be smothered with white insect blight the gardeners call hee.

There are abundant hands to do the cultivation, excepting at fruit time occasionally, when quantities of strawberries can scarcely be picked before they are over ripe. The bulk of the Evesham fruit is sent to London, Bilston, and Wolverhampton, and some farther north. The growers have but very unsatisfactory knowledge as to the state of the markets. In one case I heard of, on the best authority, fruit grown at Evesham was sold at a fashionable watering place on the north-west coast, the day after its consignment, at 40 per cent. profit.

The parish of Toddington, where Lord Sudeley has lately made his great experiment as a fruit grower, is within 8 miles of my own parish. Mr. Randell, the agent, in his letter to me says:—"You will see we are not relying upon pears or apples, but plums, with bush fruit, viz., black currants, red currants, gooseberries, raspberries, and strawberries, and shall yet go in for blackberries. The market is on the spot. The factory is let on lease—the lessee taking all the fruit we grow; he will sell, or make it into jam, as suits him best." The fruit farm consists now of 325 acres; but Lord Sudeley is intending planting about 60 acres more next year, out of part of an old wood which is now being grubbed up. In all fields the different kinds of fruit trees are planted in rows together—an important mistake, so a Kent friend remarked who accompanied me, as much unnecessary labour and expense will be occasioned at picking time, especially of the strawberries and raspberries, and that these fruits should have been put in fields by themselves. Strawberries will only stand for five years; and then there should be a regular rotation of new ground to plant over. Raspberries will last for fourteen years, and can be planted again immediately, as hops. The following are the principal sorts of fruit trees planted at Toddington (since 1881, when the work was first commenced), on a stiff but moderately good soil on the limestone formation. Apples—Lord Suffield, Cox's Orange Pippin, Warner's King, Cellent, King of the Pippins. Pears—Marie Louise, Louis Bonne of Jersey, Beurré Diel, Easter Beurré. Raspberries—Fastolf, Carter's Prolific, Semper Fidelis. Plums—Victoria, Tershore, Early Orleans. Gooseberries—Warrington, Crown Bob, Lancashire Lad. Red Currants—Dutch Red, Ruby Castle. Black Currants—Baldwin, Naples, Lee's Prolific, Old Black, Prince of Wales. The

principal enemies they have had to contend with at present are the sawfly upon the gooseberries (of which Miss Ormerod gives a description in her excellent book on *Injurious Insects*), and the winter moth, which attacks the plums. Also Jack Frost has proved himself a serious enemy. Women earn very good wages in picking the fruit, all of which work is piecework. On the whole, I regard this undertaking as a courageous and great experiment, likely to prove profitable if followed up well, and the cultivation well attended to, but subject, as the fruit growers know, to unforeseen accidents and drawbacks, in the way of new forms of blight, bad seasons, competition, and the various risks which accompany every enterprise in the way of production.

The jam factory is very conveniently situated right in the middle of the fruit land, but the nearest railway station is four miles distant. It being impossible to convert all the preserving fruit as fast as it ripens, we found hundreds of stone jars, holding about three gallons each of scalded fruit, in the factory ready to be made into jam in the early spring; also some half hogshead spirit casks, containing a similar article, and as to which we were informed there was just a possibility of their blowing up at any time from fermentation. The only difference between the jams made from the fresh fruit and the scalded fruit was in the colour—the quality seemed equally good.

EARLY BEARING PEAR TREES.—Some inquiry, says the *Country Gentleman*, is made in the journals for those varieties of the pear which come into bearing while young. The first, doubtless, to be placed on this list, as well as for other good qualities, is the Bartlett, which is pretty sure to bear in three or four years from the graft or bud, if well taken care of. The Howell is nearly equal to it for early bearing, and sometimes outdoes it in heavy crops. The Winter Nelis often bears when quite young. Among the autumn sorts are Onondaga, Belle Lucrative and Beurre d'Amañlis, and the summer varieties, Washington, Giffard and Doyenné d'Été. The Julienne, a pear which succeeds well in the southern regions of the country, but is poor as far north as New York, exceeds any other variety, so far as we know, in bearing while the trees are quite young, the yellow pears often being seen hanging from the bending branches in the common nursery row.

GLASNEVIN: DUBLIN.—The Albert Model Farms, established by the Government in Ireland for educational purposes, are exceptionally prosperous. There are three farms—one of 5½ acres, cultivated as example for cottier holders; the second a farm of 25 acres, worked with inexpensive appliances on a scale suited to the great majority of Irish farmers; and, lastly, a farm of 140 acres, managed with a view to training large farmers. On the first the expenditure last year was

£126, and the receipts £248. On the second farm the expenditure was £375, and the receipts £527; while on the largest farm the profits were £482 on an expenditure of £2852.—So says the *Daily News*.

FOREIGN LIVE STOCK AND FRESH MEAT.

The number of steamers which arrived at Liverpool last week conveying live stock and fresh meat from American and Canadian ports was in excess of those during the preceding week, and consequently the arrivals of both live stock and fresh meat were larger. The Total imports amounted to 1336 cattle, 428 sheep, 2433 lbs. of beef, and 332 carcasses of mutton.—*Agricultural Gazette*, Apr. 21.

In some sections of Cape Breton the farmers have the most of their crops in the ground. In the Margaree Valley potatoes were planted as early as the 16th of April, and last week the grass fields were green.—*Herald*.

Advertisements.

Resolution of Provincial Board of Agriculture,
3rd March, 1882.

"No advertisements, except official notices from recognized Agricultural Societies, shall be inserted in the JOURNAL OF AGRICULTURE in future, unless PREPAID at rate of 50 cents each insertion for advertisements not exceeding ten lines, and five cents for each additional line."

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Central Board of Agriculture.

ENGLISH HORSE BEANS.

AGRICULTURAL Societies and Farmers desirous of obtaining seed of the English Horse Bean, (imported by the Board from England) are requested to send their orders immediately to PROFESSOR LAWSON, Halifax, Price, \$2 50 per bushel. May be seen at Jack & Bell's warehouse, Pickford & Black's Wh. f.

may

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A THREE-YEAR OLD, high pedigree JERSEY BULL. Color steel grey and white. Name "Glencairn of Lornedale," No. 33 N. S. Register. A sure Stock-getter.

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ISRAEL LONGWORTH,
mch March 14, 1884.

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