

# What Causes Sterility in Cows?

How it May be Treated—By Dr. F. W. Caldwell, Missouri College of Agriculture

**S**TERILITY or barrenness is becoming alarmingly prevalent in dairy and beef cows and is particularly true with the higher bred herds. When occurring in grade cows sterility does not necessarily represent a serious loss, but when it occurs in pure-bred animals that have been developed for breeding purposes it assumes more serious proportions. Sterility may result from a variety of causes. Consideration will be given here only to the more common and more easily prevented or remedied conditions. Barrenness is most commonly due to a diseased or inflamed condition of either the vagina, the neck of the womb, of the womb or its horns, or of the ovaries, or of several of these conditions combined. Diseases of the ovaries may take the form of inflammation or degeneration with the formation of cysts or retained bodies (follicles called yellow bodies). When sterility occurs in a heifer that has never been pregnant the causes just mentioned may not be present. In these cases the causes are more often physiological rather than due to diseases.

## Bacteria are Responsible.

The causes that may operate to bring about the inflammation or diseased conditions mentioned may be various, but are essentially the same. Inflammation of the cervix or the uterus is due to infection with bacteria or germs. These bacteria in most all cases gain entrance to the organ or parts at the time the cow calves or aborts. They may be introduced by infected instruments or dirty hands, or more frequently as a result of the cow falling to "clean" and being decomposed in the retained afterbirth. It is commonly observed that sterility is more common in aborting herds than in healthy herds, and some have attributed this to the retention of the afterbirth. It is more probable that the rather transient inflammation produced by the contagious abortion presents a very favorable channel of infection by other bacteria which in turn produce a more serious as well as a more persistent inflammation. Also, it is observed that in outbreaks of contagious abortion, retained afterbirths of very much more frequent occurrence than in herds not infected with this disease. As has been mentioned, retained afterbirths are rapidly invaded with a great variety of bacteria which cause the afterbirth to decompose. This decomposing tissue in contact with the mucous membrane lining the cervix exerts a very irritating action and presents the best possible condition for infecting that organ and producing a more or less persistent inflammation.

During a normal parturition or an abortion, the neck of the womb is widely dilated. In a short time after, however, this neck begins to close and after a few days it again quite entirely closes. Should all a part of the afterbirth still remain in the womb at that time, or should there be discharges present, these may be introduced in the cervix and not only bring the death of the animal at once will prevent a condition very unfavorable for conception.

## Prevention of Sterility.

It is noted above that sterility in cows is largely due to disease of the organs of reproduction, that these diseased conditions are the result of inflammation, that the inflammation is in turn due to infection or "poisoning" with bacteria, and that the infecting bacteria make their appearance as a result of unclean or dirty conditions.

The problem then of preventing sterility is largely a matter of cleanliness, of sanitation and of good

way and also as applied directly to the function of parturition, and of sexual hygiene. In addition to these, as a part of the above we have also the control of contagious abortion or the exclusion of the disease from our herd if not already present.

Farm sanitation is a subject that has not been given as much consideration as its importance demands, and this is particularly true in regard to the function of reproduction. Sterility is but one of a number of conditions which may result from unsanitary surroundings. Contagious abortion is spread largely as a result of this neglect. Infection of the neck with the accompanying peritonitis, joint-ill, and scours have the same origin.

Sanitary precautions that should be observed as related to the prevention of sterility consist in providing a clean, well lighted, well bedded stall where cows may calve, and one that will permit of freedom of motion. It is next to impossible to disinfect some stables and the successful breeder is going to give this phase of his operations more consideration in the future. All dead animal matter, such as dead animals and "calf heads," should be destroyed by burning.

## Assistance at Calving.

Should the cow require assistance in calving it will usually be found desirable to depend upon a veterinarian. Irreparable injury is often done at this time by misdirected efforts, and unless one has a wide and varied experience it very often proves very expensive to the owner. In no case should assistance be offered without due regard to cleanliness. The tail, vulva, and quarters should be thoroughly washed in disinfectant. Any solution or other disinfectant, the vagina should be washed out with a two per cent. solution of table salt, and the same should be thoroughly washed in hot water and soap. The disinfectant with lysol solution before making an examination. Disinfectant solution in abundance should be available to maintain cleanliness in the case they become contaminated. Only clean, bright instruments that have been sterilized should be used, and in no case should one use rusty instruments or ropes that have been a previous case. Now cotton rope is preferable to harsh steel or hemp rope. Following parturition, either normal or when assistance is given, or following an abortion, the afterbirth should be removed as noted later and the womb thoroughly washed out to 3,000 grains, mild solution of potassium permanganate or a solution of potassium may be used or a two per cent. solution of table salt. This flushing of the womb should continue daily until all discharge has ceased and the womb has closed.

Objections may be raised to this procedure on the ground that it has not been followed in the past and in many cases the fact in the matter of case, no unfavorable conditions have resulted. While this fact is admitted attention is called to the loss of cows due to septic metritis, to the loss of flesh, and to the milk that often follows infection, to the cases of sterility, and to the fact that these conditions are largely due to the infection of the reproductive organs at this time, and the procedure as outlined above will do much to lessen the chances of infection and thus reduce the number of these cases.

In the retention of the afterbirth, however, we have the most frequent cause of infection of the womb with the resulting sterility. Its removal should properly be left to the veterinarian as he is specially trained in the character of work and is able to make use of a wider, more varied experience and to adopt special methods with which the

farmer is not familiar. Also, an understanding of the anatomy of the parts involved is a great assistance and the importance of having the operation completely and thoroughly done as well as the after treatment that may be indicated, can not be over emphasized. Likewise some common practices in connection with the removal of the afterbirth should be vigorously condemned.

## Treatment of Sterility.

It has been the common practice in the past in cases where cows fail to breed to simply sell the animal for beef. When the value of the animal or the hope of improvement does not justify incurring considerable additional expense, this is probably the best practice. However, in cases of pure-bred animals kept for breeding purposes, no such sacrifice should be made. Most cases of sterility are amenable to treatment and the earlier treatment is instituted the better are the chances of success. Since a thorough knowledge of the anatomy of the parts involved and the possession of a highly developed sense of touch are required for a thorough knowledge of the possible pathology of the disease and its amenability to treatment, it is not wise to attempt treatment without the assistance of fully qualified veterinary aid. Attempted treatment otherwise usually means misdirected effort and a postponement of treatment under a qualified veterinarian, as has been said, treatment should be commenced early.

It is fully as important in this connection to have reliable professional advice in regard to the possibilities of treatment, in order to dispose of the animal if not amenable to treatment, as to have the animal treated.

## Live Stock at the Calgary Fair

### The Greatest Show Ever Staged in Alberta

**F**ROM a live stock standpoint, Calgary's 1918 exhibition surpasses anything ever attempted in the Western Province, and in some cases was laid, particularly in beef cattle, it is doubtful if a better showing has ever been made at an exhibition in Canada. The entries in the classes were well filled and uniform high quality throughout was remarkable. In the dairy classes three breeds, the Holsteins, Ayrshires, and Jerseys, were well represented, although there was nothing like the stiff competition that was characteristic of the beef classes. In point of numbers the Shorthorns excelled, the exhibitors being as follows: J. J. Elliott, of Guelph; J. Chas. Yule, of Carstairs; A. W. Latimer, Bowden; H. Duncan Marshall, Olds; H. A. Bowden, of St. Bern. Ram Ralphs, Calgary; J. G. Barron, Carberry, Man.; W. C. Short, Gwynne; R. A. Wright, Drinkwater, Sask.; Chas. G. Beeching, DeWinton; George Walters, Delacour; Dr. O. H. Patrick, Calgary and others. Mr. Yule's Craven Knight succeeded in winning what was perhaps the most notable prize of the whole show—the Shorthorn bull grand champion, Collynie Best, owned by Mr. Bowes, won the championship in a strong female field.

John G. Barron's record won him some notable successes, especially in the female classes. In a strong class of cows three years and over with Fairview Baronesse Queen, was also first with senior yearling heifer and senior heifer calf. Finally, against strong competition, he secured junior championship for Shorthorn cow with Oakland Baronesse. In the herd of Mr. Yule was Craven Knight, a bull which won a first prize at a Shorthorn Congress at Chicago last week and was the chief stock bull at Meadow Lawn Stock Farm, St. Cloud, Minn. This animal was wonderfully deep, thick and smooth, and his legs were winning consistently at leading state fairs across the land. The herd of Mr.

W. Latimer was headed by Gairford cow, the son of the famous Gairford Marcus. The herd of L. A. Bowes was also headed by another son of Gairford Marcus called Village Baronesse.

Hereafter have enjoyed a wonderful boom in Alberta, and some of the best representatives of the breed on the continent will be shown at Calgary. Classes in this breed were so strong that to get even close to the money was an honor. Frank Collicutt, of Calgary, who has been known to be the largest herd of pure bred Herefords in America, had a strong showing. The Curtis Cattle Company had many splendid bred animals among them a calf that won at the Chicago International last year. The aged bull class created a great deal of interest, there being five animals in this class and the value represented was \$55,000. In this class the top-war was between Frank Collicutt's Day Red 14th and Beau Perfection owned by the Curtis Cattle Company, the red ribbon going to the Collicutt bull. This bull later won the senior grand champion, while Beau Perfection won the junior championship. In Hereford females Collicutt won first, senior and grand champion, while the senior cow Sally and first in the class for three years old heifer, two years old and senior heifer calf. L. O. Clifford, of New Westminster, won first and junior championship with Lady Armor of Fairfax. Other exhibitors were, A. B. Cook, Helena, Montana and Geo. E. Puller.

The principal exhibitors of Aberdeen Angus cattle were J. D. McGregor, of Brandon; Jas. Bowman, A. E. and E. S. Clemens, S. C. Pritchard, and A. E. Nod, and with such herds as these coming up in competition, the interest was keen. J. D. McGregor's senior yearling, Blackcap McGregor, came in first in this class, won the junior championship and finally was awarded the grand champion of the breed. This bull is regarded as good enough to go to Chicago this fall and win the grand champion, Majesty Queen, also owned by J. D. McGregor, won first place in the aged cow class, being grand champion at Calgary last year.

## Dairy Division.

In the dairy division there was plenty to attract, Holsteins being the strongest in numbers. Several fine milking herds were in evidence, some of the best producing strains being represented. The chief exhibitors of Holsteins were: J. E. Laycock, Okotoks; P. F. Pallen, Calgary; Geo. Bevington, Winterton, and Clark & Sims, Stonewall, Man. In Ayrshires, Laycock and McDonald, Rowland, Wess, DeWinton, and W. L. Barker, Calgary, were the strongest exhibitors. In Jerseys, the chief exhibitors were the Western Stock Ranches of Clinton, B. C., who were imported from Washington, representing the breeding of Hood Farm, Massachusetts.

In Holsteins, J. H. Laycock won the grand championship with his Kordyke Posch Pontiac, while Geo. Bevington's Colony Major Posch Teusen, was made reserve. First prize for Holstein heifer was won by J. H. Laycock. The grand champion female was Princess DeKol Queen, owned by P. F. Pallen.

We have found partitions in managers a nuisance and have removed them from the stables of the Experimental. They make the managers difficult to clean, and obstruct light, and anything that obstructs light needlessly in the dairy stable should be removed.—Geo. W. Hull, Assistant Animal Husbandman, C.E.F.

"Remember, my son," said the father, "that politeness costs nothing." "Oh, I don't know," returned his boy, "I've never seen a man putting 'very respectfully yours' at the end of a telegram."