

fied veterinarian is not at hand; and for the benefit of those who are not favorably situated, a good uterine injection will be found in the following: Corrosive sublimate, 10 grains; carbolic acid, 30 drops; warm soft water, 2 quarts; a fountain syringe being preferable. Keep the animal in comfortable quarters and allow none but a light diet, and chilled water to drink.

Regarding epizootic abortion, many baffling and conflicting statements have been set forth, but in European countries where it has been at times very prevalent, it has been noticed mostly in wet seasons, and I feel safe in stating that the majority of authorities have concluded that it is due to a specific germ which attacks the genital organs of possibly all females, pregnant and otherwise, and apart from washing the tail and vulva of pregnant cows with the foregoing antiseptic daily, I have nothing to suggest.

Parturient apoplexy.—Immediately following normal parturition we meet with one of the gravest and most dreaded diseases which attack cows, parturient apoplexy. Imagine a case. A fine seven-year-old cow—in fact, the choice of the herd—in pink of condition, is delivered of a calf and afterbirth as easily and normally as nature could intend. At the end of 24 hours or less she commences to become uneasy, gets unsteady on her feet, is restless, becomes rapidly worse, the secretion of milk stops, she loses the power of standing, and finally, all in the space of two or three hours, loses all consciousness, is unable to move or swallow, and dies without a struggle, or is left to die; but if more fortunate, may be on her feet taking care of her calf at the end of 24 or 36 hours, improving as rapidly as she was attacked. What is the meaning of all this. Here much has been said and written, and, to my mind, something has yet to be said. This malady has been known for a very long time, but the first accurate description of the symptoms was given by Skillet, in 1807, who named it milk fever or dropping after calving.

Causes.—The unanimous opinion with regard to this disease is that it is peculiar to the parturient condition, and that it has a close relation to the state of the cow previous to parturition. It is noticed most frequently in breeds which are heavy milkers, in which the secretion is abundant. Such cows in high condition are its subjects. Such are kept for their milking qualities and are fed with a view of obtaining the greatest quantity, regardless of consequences. It is unnecessary to enter further into details regarding the symptoms, and almost useless to suggest any of the various methods of treatment other than to state that those men who base their treatment on stimulants appear to have better success, yet no specific appears to have been found for it.

[TO BE CONTINUED]

The Pros and Cons of Dehorning.

BY A. B. CAMPBELL, V. S., WATERLOO CO., ONT.

When the idea of dehorning was first brought before me I was very much opposed to it, and, living in a large city (Toronto), was influenced to some extent by the views of humane societies. But after engaging in the veterinary profession, and coming in contact with the subjects of the operation (which most members of humane societies never do), I was convinced that dehorning was commendable on the score of humaneness. The operation itself is not a very painful one. When I first started to operate (using clippers) I invariably had the animals fed with coarse food immediately after, and a very small percentage refused to eat heartily. There are some animals, however, that have a nervous temperament, more highly developed than the majority, and show more effects of the operation, but nothing serious has followed in the case of any animal on which I have operated. When I began operating I used a wad of canvas and pine tar to control hemorrhage, but soon saw that there was too much blood turned into the cavities or sinuses of the head, which had to decompose before escaping, and when the owners would not remove these wads in time (and in some cases when the wad was removed the tar formed a covering to the opening), a gas was formed which caused pressure and severe headache. I have abandoned the practice altogether, allowing the hemorrhage to control itself, which, except in rare cases, I find takes place in from half an hour to two hours. In a few cases I have found excessive hemorrhage, which is generally controlled by simple methods; also, secondary hemorrhage from injury a couple of weeks after the operation. I also had some trouble by operating too late in the spring, the flies attacking the wound, causing maggots. Those are all the points that I have met that I would consider would score against the operation. In favor of it, I would consider it under two heads: 1. From a humane standpoint. 2. As a source of profit. Regarding the first, dehorning has been denounced as "murderous," "uncalled for," "sinful," "inhuman," and also that "if the Creator wanted the cattle without horns He would make them so." My answer is that I have proved to my satisfaction that it is not a very painful operation. Considering the small space into which our cattle are crowded during the winter months, which is the longest half of the year, the general method of watering, where one or two animals get plenty of drink for themselves and then use their beautiful ornaments to prevent the rest of the herd from having any, I now consider it very inhuman to allow them to have their horns. I have witnessed

a cow go all the way across the barnyard and chase another away from the water trough, when she had had all she wanted herself some time before. I dehorned a cow of this nature for a man who, some time previous, when vexed at her horning the others away from the trough, took a stick and struck her on the horn, separating the horn tissue from the sensitive structures within, thus causing more pain than if he had cut her horns off in inch pieces with the dehorning clipper. As to injury caused by goring, in my short practice I have witnessed more pain suffered by animals gored, but not killed, than the pain caused to all the thousand head I have dehorned, to say nothing of the numerous deaths which occur yearly in almost every township. To be gored severely enough to cause death must, to any sane mind, be more inhuman than to deprive every animal in the herd of their horns, when they will not lose one feed over the operation.

Referring to the creation of animals with horns on, they were certainly put there for a purpose, but that purpose has vanished with years of domestication. They are the cow's weapons of offence and defence. For defence when, after the creation, the cow was wild like other animals, and was provided with those powerful weapons to defend herself, and if they were used to attack a weaker of her own tribe that one had plenty of space to get out of the way. Besides, we have many tribes of cattle, like the Galloways and Angus, which are naturally hornless.

Taking up the question of profit from dehorning. In the first place it prevents the total loss incurred to the stock-owners yearly through goring to death, and also where death does not take place there is generally a nice little account sent in by the veterinarian. (I firmly believe that dehorning is a loss to the veterinarian.) The value of stock lost annually in each county by goring would run into the hundreds of dollars. It is an acknowledged fact that the animal is quieter after being deprived of the weapons of offence and defence. What effect has that on the milking cow? She will either give more milk or keep in better condition on the usual amount of nutrition, for every action of the body requires a certain amount of force to perform it, and that force requires nutrition to originate it. Consequently, if those unnecessary actions are prevented, the force and nutrition required to perform them are either stored up as muscle or fat cells or go to increase the flow of milk. The same argument applies to stockers. The quieter the animal the better he lays on flesh, which the above reasons prove. In this line the profit is greater than can be imagined without accurate figures.

There is one more strong point in favor of dehorning; that is the danger to which attendants are exposed continually when attending to cattle with horns, even by accident, to say nothing of ferocious attacks of the animals at times, of which not a few occurred in this very county. I may cite a few within a very short period: No. 1, loss of an eye by an accidental poke of a horn; No. 2, woman almost gored to death by a bull when gathering eggs; No. 3, woman and child knocked over and trampled on—the milk pail becoming fast on the horns prevented further injury until assistance arrived; No. 4, man attacked in woods by cow newly calved, who says but for the assistance of a collie dog he would have been seriously injured.

The Kent County Swine Disease Not Hog Cholera.

To the Editor FARMER'S ADVOCATE:

SIR,—Your letter of November 5th to hand, and in reply would say, in regard to the disease among hogs along Lake Erie, in the Ridgetown district, first, the disease is known to some as parasitic bronchitis, and is not an entirely new disease, as is claimed. The disease in question is of the family Nematodea, and is known as the St. Paradoxus. The undeveloped parasite is matured in the host in which it lives after having undergone a more or less lengthened period in the soil. This period is lengthened more or less by the quality of the land and amount of heat and moisture present. The spores are taken into the mouth, thence into the stomach, from where they pass into the blood, and thence into the lungs (where it has a habitat), and can be found in no other organ. The parasite, when fully developed, is from one to one and one-half inches in length, and about the thickness of a thread. It is found different in color, sometimes white and other times of rather a dark shade, the darker ones always being smaller. It is supposed to be caused from eating apples (which are very abundant in this locality), but I am of the opinion that apples have nothing to do with it, as I have visited farms where the hogs never got apples, and still found the disease. It has also been given out to have come from Walpole Island, as a number of hogs were brought here from there last summer; but I do not think it can be due to that, as quite a number from there were not affected at all. I have visited thirteen affected farms up to the present time, and have found that one hundred and eighty-three hogs have died, and that quite a number are suffering yet and likely to die. It is confined to a district of about five or six miles wide, and appears to be abating, as I have not heard of any new outbreaks.

Symptoms.—Animal dull, appetite gone, temperature increased (in some cases I found it as high as 107°, 106°, and 104°, showing considerable fever), generally a cough when made to move about, and

in some cases breath very foetid; after a while partial paralysis (sometimes of the hind and sometimes of the front quarters), and occasionally complete paralysis of all the limbs. The victim generally lasts from ten to twelve days. When animals have been treated in time they may get over it, but a large majority of affected animals die.

Treatment.—One bright V. S. reported curing nearly all cases by giving soda hyposulphate, but upon inspection I found the animals dying off rapidly after his prescribed treatment had been given. The line of treatment which I recommend is proper care in cleaning all runs, pig houses, troughs, etc.; a good supply of clean water; and closing the hogs in a house and fumigating it with sulphur, about a tablespoonful to a medium-sized house, letting the animals inhale the fumes. This treatment may be used as a preventive. The houses and troughs should be sprinkled with lime. I know of one case where a farmer used the lime alone and gave his hogs a good supply of charcoal, and he has not had any symptom of disease. There has been some difference of opinion as to the nature of the disease, some claiming it to be hog cholera; but I say emphatically that there is no hog cholera in the townships of Orford, Howard or Harwich. Post-mortem appearances of these diseases are entirely different. In hog cholera the cæcum and large intestines are ulcerated, which are the marked indications of the disease; but if an animal dies from the hemorrhagic or acute form there may not be time for the formation of ulcers—then you may only see the hemorrhagic condition of the parts. But by far the greater number of cases of hog cholera show the ulcerations. I have made numerous post-mortem examinations along with Dr. Cowan, of Galt, Government Inspector, and found none of these indications in the present disease, but found the lungs badly congested and full of parasites, the liver in most cases being diseased and of a light blue color; spleen and other organs normal. In conclusion, I may say that good, nourishing food and proper care as to cleanliness, etc., will do much to help nature throw off the disease. J. A. STEVENSON, V. S., Government Inspector.

POULTRY.

The Production of Winter Eggs.

From evidence given by Mr. A. G. Gilbert, manager of the Central Experimental Farm, before a committee of the House of Commons, on Agriculture, we glean a few points of practical value.

With regard to the treatment of hens to obtain winter eggs, Mr. Gilbert considers it important that they should be treated so as to get them over their moult early in the autumn. The next point to be remembered is that when the fowls get their new feathers they must not go into winter quarters overfat, or they will give an unsatisfactory yield of eggs. Of course, early-laying pullets must have been hatched early. As soon as the hens have their new feathers, the same generous feeding that should be given during the moulting season should be continued. Besides the regular feed, this may consist of soft food three times a week and cut bone twice a week. Then as the cold weather approaches stimulate them still more by feeding the green cut bone in small quantities every day and dropping the soft ration to twice a week.

Mr. Gilbert has found the best egg ration to consist (for morning) of warm mash composed of ground wheat, ground oats, ground barley or ground rye and bran—a little of all sometimes, and again only three of the ground grains. Enough of this feed to satisfy but not to gorge the hens. Noon—A little grain of some kind to keep the hens busy scratching. Afternoon—A liberal ration of wheat or buckwheat, mostly the former. The green bone may be fed in the morning, followed immediately by grain thrown among litter to start the layers scratching. At other times the green bone may be fed in the afternoon, with grain afterwards to entirely fill the crop before going to roost. They should be kept scratching for food from morning till night. The philosophy of this may be illustrated in this way: "Say a hen is running at large and there is a ton of wheat before her at a certain point. She won't fill her crop with the wheat at once. She will pick up a few grains, leave it, and run to probably catch a grasshopper; then she takes a ramble into your neighbor's flower garden in her search for worms. Then she will take three or four more kernels of wheat and a large amount of green stuff; then pieces of grit, lime, etc., and in this way she will fill up her crop gradually with all the essentials to make eggs and eggshells. Now, it is our object at the experimental farms to imitate the action of the hen while at large in our winter treatment of her."

With regard to green food, Mr. Gilbert speaks well of boiled roots and potatoes. Cabbages are also fed liberally by suspending them by a string, so that the hens have to jump for them.

Mr. Gilbert was questioned as to housing-space and yard-room, to which he claimed that twenty-five hens should have no less house space than fifteen by twelve feet. The roosting-room might be five or six feet high. The object is to conserve the animal heat of the fowls during the night, when the temperature is going down. The ceiling of the living and scratching room should be higher. These twenty-five hens should have twenty by fifty feet of yard-room.