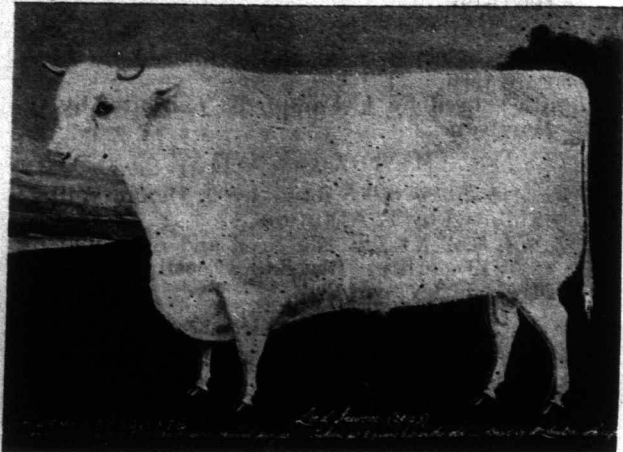


### The Relation of Disinfection to the Health of Live Stock.

#### ITS MODE OF APPLICATION AND ADVANTAGES.

The word disinfection to some means little, while to others it is of vast importance. By the term is meant the application of agents which prevent or destroy those living micro-organisms from which contagious and infectious diseases arise.

Disinfectants are placed under various classes, as those which kill the germ when brought in contact, those which change the material upon which its existence depends, those which absorb or encase the disease germs, rendering their existence harmless, etc.; but by the every-day busy man these distinctions may be left to the investigator to dictate to the world which is most suited to each and



LORD IRWIN (29123).

BRED BY MR. LINTON. FIRST AT THE ROYAL SHOW, 1874.

every particular necessity. There are, however, in common certain conditions necessary to each and every individual who has the responsibility of avoiding or combating diseases to which animals subjected to his care are or may be exposed; and perhaps the greatest of all responsibility rests with this class, for no place can be free from germs where there is absence of good sanitary arrangement, cleanliness, pure air, sunlight, perfect drainage, etc., in the presence of which artificial agents need be called very little into use. There are, however, conditions surrounding the live stock breeder to-day for which he is not entirely responsible, as, for instance, the outbreaks of hog cholera at different points, and the generally distributed outbreaks of contagious abortion among our Canadian herds of cattle, which in certain sections are becoming alarmingly prevalent and doing inestimable damage. Either of these may be brought entirely within control by the exercise of proper disinfecting treatment. No definite rule can be laid down to meet the requirements of each case; yet in the main, cleanliness and the absence of decomposition must be first considered under all circumstances, as the heaping of disinfectants on dirt cannot bring sweetness and purity. It must therefore be remembered that disinfectants should never be allowed to be made an excuse for habits of carelessness or uncleanness, but all refuse and dirt should be removed regularly, and no accumulation of such permitted. Sweetness is health; stench is disease. This being accomplished, we have many highly useful agents within our reach, and our object now must be to select those agents possessing the greatest antiseptic with the least objectionable properties. All disinfectants are more or less poisonous, and the more powerful in antiseptic properties the more destructive to all life. Therefore for our purpose much caution must be exercised in their selection and mode of application. Corrosive sublimate is perhaps the most powerful of all antiseptics, yet from its extremely poisonous action its application is attended with too great risk to the subjects we wish to protect. Carbolic acid ranks high, if not among the highest in this class, but its corrosive and death-dealing effects are so positive that its application demands the greatest of caution, and is therefore not safe in the hands of careless operators, and therefore should not be employed in concentrated form. It is, however, highly useful when protected in dry substances, which render their liability to be taken in overdoses impossible. Chloride of lime, although yielding germ-destroying gases, while reasonably safe, is highly undesirable on account of its unpleasant odor. The coal-tar series yield, perhaps, as safe, and desirable agents as have yet been produced, being positive in their action, attended with very little danger to human or animal life when reasonable care is exercised in their application, and give off little or no objectionable odors. These are highly destructive to the lower forms of germ life when brought in contact with it. Of this class, creolin is perhaps the basis of many of the best and most desirable products now on the market under different names and offered for disinfecting purposes. Many of the advertised sheep dips and cattle washes owe their virtues largely to this class of products, and are perhaps the most valuable yet known, as they contain many desirable and few objectionable and dangerous properties.

Having selected our germicide, the next step is to consider the mode of application and conditions necessary to obtain the best results when applied. First remove all dust and filth, sweep down all cobwebs—and right here let us add that it is deplorable to walk into an expensively constructed stable and

find the ceilings hanging thick with cobwebs, when so little exertion is required to remove and destroy them. What owners neglect, herdsmen should see the necessity of doing, and the attendant who has to have his attention drawn to such details is lacking in the qualities which should bring him to the front. After all dirt is removed and due regard is placed upon cleanliness, light, drainage, ventilation, etc., the thorough application of the agent to floors, walls, ceilings and drains should follow. It should be evenly distributed if in powder, or if in liquid form the modern spray pump is a splendid and economical medium, some of which have special provision for this work. Among the more prevalent diseases to be combated by the use of disinfectants, we look upon contagious abortion as worthy of our first consideration, and to our mind this is one condition the eradication of which wholly depends upon proper, thorough and persistent effort; in fact, the disease could not gain access in the presence of proper disinfecting agents. Hog cholera, so prevalent and destructive in certain sections, can at least be held in check, if not altogether prevented or eradicated, by its thorough application. The germs of lump jaw, so prevalent in cattle in certain sections, are given off in abundance in the saliva in feeding-trough, there to remain to attack the first victim accepting it, and may be destroyed by proper application of disinfecting substances. Ringworm may easily be eradicated from the premises, as its presence depends upon a vegetable parasite. Lice and other vermin on horses, cattle, sheep, pigs and poultry require direct applications to the skin of the animal, yet much valuable assistance would be added by thoroughly disinfecting their places of abode. Even worms in sheep, pigs and calves would find far greater difficulty of existence during their transitory stage in disinfected quarters. Much may also be done to reduce the risk and danger of exposure to many of the deadly diseases which have worked destruction in many parts of the earth during the past, which might at least have been held in check had they not been regarded as mysterious. The advance made can scarcely be referred to better than in the following extract from the pen of an English pharmacist in a London journal:

"The useful science of bacteriology is indeed full of surprises, and every year bears witness to the astounding strides with which it grows, whilst day by day it is being more widely recognized of what stupendous importance to man is the message which it has to deliver. During the earlier childhood and adolescence of this new science, it was generally believed that this message was of a gloomy character, and one which it would be better to leave untold, for to the public it seemed as though it had nothing but death and destruction to reveal as lurking where danger was hitherto unsuspected. For many years bacteriologists had apparently nothing to announce but the discovery of new and subtle enemies to mankind, and to produce poisons possessing such a degree of malignity that beside them the venom of snakes and the most potent drugs of the apothecary appeared as comparatively harmless and even friendly. In reality, however, these deadly foes and poisons have always existed before, and have wrought their lethal work in the dark until exposed and branded by men of science, who after years of patient labor are now teaching the world how these foes may be vanquished and how these old but until recently undiscovered poisons may be counteracted and rendered innocuous by the administration of new antidotes."

### The Old Messenger Stock.

Many of the older generation of Canadian horse breeders and farmers generally have pleasant recollections of the excellence and endurance of the good old Messenger stock of horses which were popular some fifty years ago, and will be interested in the following account of the celebrated stallion, Messenger, and his importation to the United States, given by Mr. George Blodgett in the *Rider and Driver* (New York): "Unquestionably, from a fashionable standpoint, the earlier of the superior families of driving horses in this country, and which for a long time commanded attention, was the Messenger stock. A high impression of the superiority of the head of that family grew out of a well-known and impressive incident connected with his importation. The story grew, as all good stories do, and travelled all over the country. Messenger came to this continent in a sailing vessel. It was a long and perilous voyage, lasting many weeks. Several of the horses died on the way over from the terrible strain and exposure. The few that lasted had to be helped and steadied down the gang plank on their arrival by three or four men bracing them on each side. The one exception was the horse called Messenger, a resolute gray. He was a marvel to all beholders. At sight of the shore he became furious and his attendant, with the help of the groom, could not suppress him. Another groom came to their aid, but it was no use, he carried them off their feet in spite of all their strength, nor did he stop until an eighth of a mile away from the landing. Such was the volume of forcefulness said to be at the foundation of the great Messenger family. But as his offspring became mixed and intermixed with the common stock of the country the family features were more or less lost, although an occasional characteristic would, through certain dams, crop out in unmistakable expression. One of his descendants, in a fairly direct line of excellence, was crossed with an unusually good Bel-founder mare, known as the Charles Kent mare, and

from this combination came impressive results in a large degree of sturdiness and speed. Scientific breeders claim most of the credit for the dam. But there were certain tributaries which have added strength, brilliancy, and quickness, and which have contributed to the more extreme speed and staying qualities of a few of the descendants of this union, and which were unattainable without these contributions. They were exceptions from the families of Morgans, Clays and certain high and rapid running thoroughbreds. In these, the better results were confined to certain types and tendencies. For not all of the Morgans were sturdy and quick. Not all of the Clays were forceful and brilliant. Not all of the thoroughbreds are rapid and enduring."

### Breeding from Immature Sires.

#### SOME OF ITS ATTENDANT EVILS.

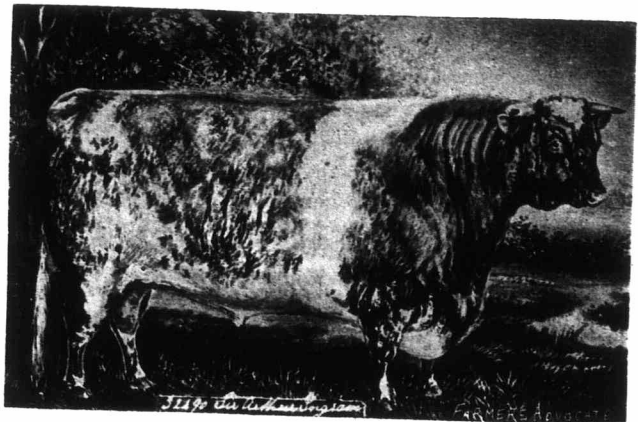
The extent to which breeding from immature sires has been practiced is not a little remarkable when we reflect that it has been done as a matter of choice, and not as a matter of necessity. It would not be incorrect to say that more than half the entire number of our domesticated animals are the offspring of immature sires, and this will hold true in every line, unless it be in the breeding of horses.

The plan most commonly adopted in breeding cattle is to purchase a sire when a calf, or at least when under one year old. He is put to service, to some extent at least, as soon as the procreative powers are sufficiently developed to admit of his becoming a sire. He is used too freely during the whole period of immaturity, and is more generally sent to the shambles when not more than four or five years old. Ram lambs are more frequently purchased than shearlings, and rams are usually not kept beyond the age of four years; and a similar course is pursued in the use of males in the breeding of swine.

The necessity for the disposal of sires at an age when they should still be able to render the best of service, to some extent at least, grows out of the practice of purchasing and using them at so early an age. They cannot be longer retained in the herd or flock, as the case may be, to be used as sires, without mating them in many instances with their own progeny. But why good males should have to be sent so frequently to the shambles while yet in the zenith of their usefulness, and because no one will purchase them for breeding uses, is, to put it mildly, unfortunate. To so great an extent does the desire prevail to get young sires that the door of further service is closed to those veterans that have done their work in one herd or flock; hence they must be sacrificed in the midst of their usefulness.

But there is not the same necessity for the purchase and use of immature sires. It is simply a matter of choice. There may be a necessity for purchasing sires when young, as matters stand at present, in order to obtain those possessed of good individual merit, but there is no imperative necessity for using them to anything like so great an extent as they are used while they are so far from being matured. It is one of those practices which seem to rest upon convenience and ease of management rather than upon intelligent consideration.

The great fundamental law of breeding tells us that, as a general principle, "like begets like." Apply this law to breeding from immature parents in the one case, and from those in the meridian of vigor in the other, and what does it tell us? It tells in the former instance that immature parents are incapable of producing progeny possessed of the highest excellence in every particular, and it tells us in the other that parents in the meridian of their vigor



SIR ARTHUR INGRAM (32490).

BRED BY WM. LINTON. FIRST AT THE ROYAL SHOW, 1877.

are capable of producing progeny in no sense inferior to themselves. When, therefore, we use immature sires, we choose to violate a law the observance of which would enable us to preserve the maximum of development if secured, and it would also be a potent factor in enabling us to secure it.

The extent of the injury from using immature sires could not be easily defined. It is only one of a number of factors, each of which, under one system of artificial management, is antagonistic to the highest degree of development, and more particularly antagonistic to the retention of robustness of constitution and bodily vigor. It would be impossible to say how much influence each of those factors exerts in the direction of deterioration, but there is