

# LIVE STOCK

## DISINFECTION IS NECESSARY

Invisible Organisms or Disease Germs Spread Rapidly and Live for a Long Time.

(Prepared by the United States Department of Agriculture.)

In dealing with infectious diseases of live stock, the average stockman and farmer does not sufficiently realize the importance of thoroughly disinfecting his premises following an outbreak of contagious disease on his farm or in his locality. Unless the germs which cause the disease are destroyed, they have the power to maintain themselves on premises for indefinite periods. So long as they thus remain they are a constant menace and may at any time be the cause of an outbreak.

It is but natural to acknowledge the presence of only such objects as can be seen with the unaided eye. Science, however, by means of the high-power microscope, has clearly proved the existence of numerous minute animal and vegetable organisms—micro-organisms—and it is a matter of common knowledge that many of these organisms frequently find their way into the animal body and produce disease. It is also well known that these micro-organisms, or germs, vary in form and other characteristics and that for each disease of an infectious nature there is a specific germ.

If these germs could be confined to the animal body and die with it there would be no such thing as an infectious disease. Unfortunately, however, they are thrown off by the animal through the excretions and lie in the soil, in the litter of stables, upon the floor and walls, and in cracks and crevices. Here they may remain and maintain their virulence for an indefinite period, ready at any time to be gathered up by an animal in its feed or to be blown about in dust and drawn into the lungs.

For example, we have tuberculosis in cattle and glanders in the horse. In the former disease the causative agent is a rod-shaped germ which averages about one ten-thousandth of an inch in length. Cattle affected with tuberculosis pass myriads of these germs with the manure, and it is not difficult to understand how in the average stable they would have little difficulty in finding many lodging places.

In glanders the causative agent is another rod-shaped germ, about the same length as the tuberculosis germ, but somewhat thicker. A character-



Cattle Affected With Tuberculosis.

istic of this disease is the formation of ulcers in the nostrils and other portions of the body, from which there is more or less discharge laden with the glanders germ. And here, again, it is not difficult to understand how one diseased animal may contaminate extensive premises.

As has been stated, some of these minute forms are vegetable organisms. In fact, these vegetable parasites are the cause of some of the most destructive diseases, and some of them are very difficult to destroy, for the reason that they contain spores. A spore may be likened to the seed of a plant, for it bears about the same relation to the bacillus that a grain of wheat does to the plant proper. As the plant may be destroyed and the seed remain latent for an indefinite time, so destruction of the bacillus may be accomplished while the spores remain unharmed and retain life for weeks, months or years.

An example of this class of organisms is seen in the agent which causes anthrax. Ordinary methods for the destruction of the bacillus will not destroy the spore as well, and thus anthrax becomes a most difficult disease to eradicate. Upon farms where animals have died from anthrax and the carcasses have been buried instead of destroyed, repeated outbreaks of the disease may occur from time to time, possibly extending over a period of several years. This condition is due to the existence of the very resistant spores, which under favorable circumstances are carried to the surface of the earth, and become infecting organisms—much as the seed of a noxious weed, after remaining in the soil during the winter, finds the conditions favorable in the spring and develops into a plant—except that these minute forms of life multiply with the most wonderful rapidity.

Thus it is that our increased knowledge regarding micro-organisms or bacteria as the cause of many animal diseases has emphasized the importance of disinfection.

Ventilation is very essential in a barn. Animals are much like human beings in that they need fresh air.

# POULTRY

## DESTROY LICE ON CHICKENS

Sodium Fluorid Rids Fowls Quickly of All Parasites—Dipping is Most Economical.

(Prepared by the United States Department of Agriculture.)

One application of sodium fluorid will kill all lice of chickens, entomologists of the department of agriculture have discovered. This inexpensive white powder, they find, will rid a flock of all the seven common species of chicken lice in a few days. One pound, costing only 40 or 50 cents at the time of this writing, is enough to treat 100 fowls, if dusted on. If dissolved in water and used as a dip, the same amount will go three times as far. It is easily applied, economical, gives immediate results, and does not injure the fowls or the poultryman.

The complete effectiveness of the sodium fluorid remedy and methods of using it are discussed in Farmers' Bulletin 801 of the United States department of agriculture, "Mites and Lice on Poultry," by F. C. Bishopp and H. P. Wood. The bulletin deals also with mites, the night pests of chickens, which require a different treatment. Lice are biting insects that work by day and are a serious foe in neglected small flocks of general farms and back yards.

Sodium fluorid—say it plainly to the druggist or you may get sodium chlorid, common salt, which it not only resembles in name but in appearance—may be obtained at most large drug stores. The finely powdered commercial form is cheaper and more easily applied by the dusting method than the fine, crystallized sodium fluorid.

To apply the material in dust form, place it in an open vessel on a table, and with one hand hold the fowl by the legs or wings. With the other hand place the chemical among the feathers next to the skin, according to what is known as the "pinch" method, which proceeds as follows: One pinch on the head, one on the neck, two on



Dusting a Hen With Fluorid, a Very Effective Lice Killer.

the back, one on the breast, one below the vent, one on the tail, one on either thigh, and one scattered on the under side of each wing when spread. Each pinch can be distributed by pushing the thumb and fingers among the feathers as the material is released. If the chicken is held over the vessel, the material which falls from the fowl during the operation is recovered.

The material also may be applied by means of a shaker, but this method has some disadvantages as compared with the "pinch" method. When this method is used the amount of sodium fluorid may be reduced by adding four parts of some finely powdered material, such as road dust or flour, to each part of fluorid. The dust, while not poisonous, is somewhat irritating to the nose and throat. If allowed to remain on the skin in any quantity for any great length of time, it may cause slight local irritation. For these reasons, those dusting a large number of chickens would do well to cover nose and mouth with a dust guard or damp cloth and to wash their hands occasionally.

The dipping method is more economical, but among many poultry raisers there is a general sentiment against the practice of dipping fowls, largely because most of the dips contain materials which discolor the feathers. The sodium fluorid dip, however, is harmless, and as compared with dusting is more easily done. As it is necessary that the fowls dry quickly, dipping is most applicable in the Southern states and to summer treatments in the North. For lice on young chickens, young turkeys, and, in fact, all newly hatched or sick fowls, the application of sodium fluorid in the dust form is recommended.

## POULTRY NOTES

Most digestive disorders and ovarian troubles come from heavy feeding in winter without sufficient exercise.

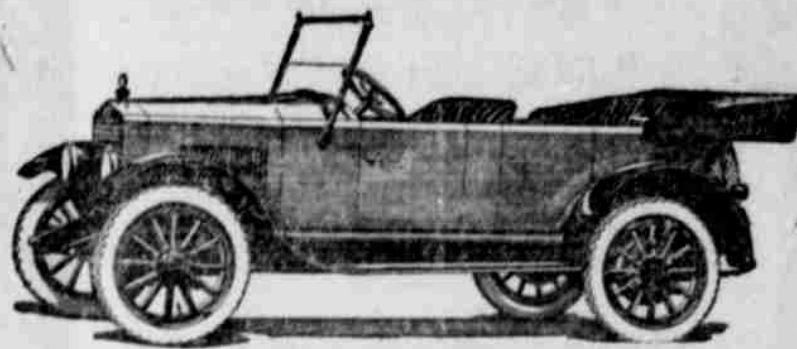
When eggs for table use or to sell in the market are the requirement, it is not only unnecessary but inadvisable to keep the males with the hens, and they may well be dispensed with.



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