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FENCE OUT ANIMAL DISEASES

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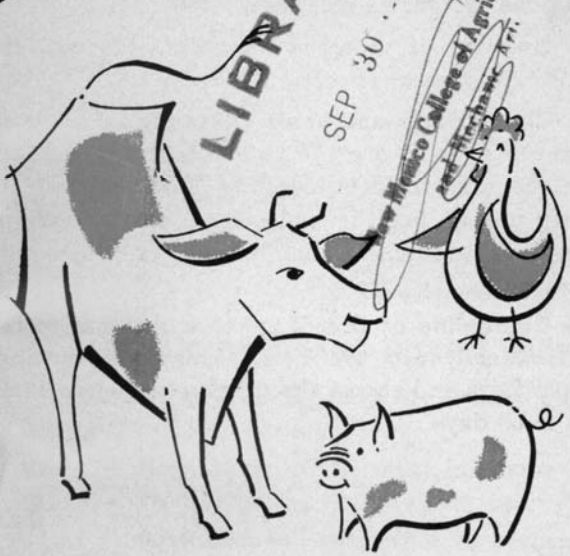

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DISINFECTION

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UNIVERSITY OF ILLINOIS CIRCULAR 798
COLLEGES OF AGRICULTURE AND VETERINARY MEDICINE
EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS

A FENCE AGAINST ANIMAL DISEASES

IT IS MUCH CHEAPER TO KEEP DISease out of a flock or herd than to try to eliminate it after it enters. By following the rules of good herd management and sanitation, you can "fence out" disease.

The main parts of the "disease-exclusion" fence are:

Sanitation. Provide clean, well-ventilated quarters. Avoid crowding, which interferes with ventilation and reduces resistance while increasing the danger of infection.

Isolation of diseased animals. This will reduce chances of infection.

Closed flocks and herds. Actively infected or carrier animals are the chief source of disease. Select disease-free breeding stock. Bring in only young, healthy males from clean herds or rely on artificial insemination or Caesarean section.

Quarantine of breeding stock that has to be introduced into the herd. Animals returning from fairs and shows should also be quarantined 30 to 60 days.

Disinfection. This may be done naturally by rotation, alternating pasture crops with crops requiring frequent tillage. If done artificially, the disinfection must be thorough, with an agent that is both economical and suitable for the particular infection (*see* back of this folder).

Balanced diet. Adequate nutrition is essential for maximum resistance to disease.

Preventive vaccination and preventive treatment furnish supports or braces for the fence. The use of supports, however, is an admission that our fence is basically weak. If they are used to help "fence out" diseases, we must be sure that they are properly applied. Don't guess about when, or how much, or how often. Ask your local veterinarian. His business is to make and keep livestock healthy.

VACCINATION SOMETIMES HELPS

Biological products, such as bacterins, toxoids, anti-toxins, and anti-serums, can protect healthy animals against some infectious diseases. The length and degree of protection vary, however, both with the disease and with the individual animal. Very young animals and those weakened by improper feeding and handling, insanitation, infections, and other causes seldom develop immunity. Also, biological products may not protect animals against massive and repeated exposure to infection. Immunity is never perfect in all animals even for limited periods.

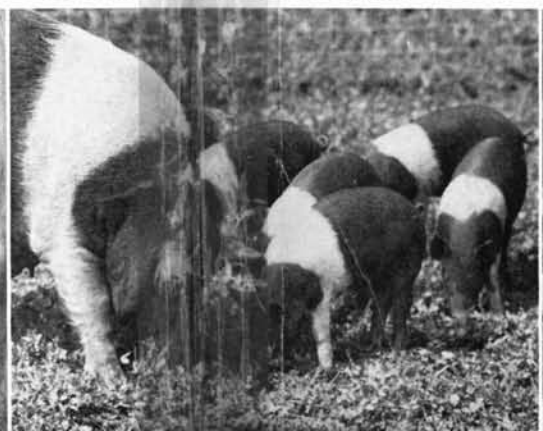
Some diseases can be controlled by vaccination in conjunction with sanitary measures. Hog cholera, blackleg, and Newcastle disease are examples. To control such diseases as tuberculosis and brucellosis, animals must not only be vaccinated but they must also be given blood or skin tests; reactors must be slaughtered; and, finally, contaminated areas must be thoroughly cleaned and disinfected.

No animal disease has ever been completely eradicated by vaccination alone. For this reason, vaccination against foot-and-mouth disease, fowl plague, and other rapidly spreading, devastating foreign diseases is not used in the United States and certain other countries. Vaccination may serve only to mask the infection and delay eradication. Past experience has shown that the prompt use of the slaughter method is much more effective and less costly.

Some Ways to Help Keep Animals Healthy

Wash udder and teats of dairy cattle with disinfectant solution before putting on the milker. This is especially important in the control of mastitis.

As part of the disease-control program, keep pigs on good legume pasture or raise them in confinement on concrete feeding floors. Between pig crops, steam-clean and disinfect concrete drylots.



Make sure your flocks and herds are well fed. Nutritional deficiencies cut down production, cause unthriftiness, and may reduce an animal's resistance to infection.

Preventive vaccination furnishes a support for the disease-exclusion fence. The length and degree of protection vary with the disease and with the individual animal.

Disinfectants for Various Diseases

Disinfectant	Percent solution	Mixture	Disease
Cresylic disinfectant or phenol (permitted by the U.S. Department of Agriculture for official disinfection); do not use in dairy barns	4	1 cup to 2 gal. water	Anaplasmosis Brucellosis Newcastle disease Vesicular stomatitis Hog cholera Pullorum disease Shipping fever Swine erysipelas Tuberculosis
Sodium hydroxide (lye)	2	Thirteen ½-oz. cans to 5 gal. water	Equine encephalomyelitis Foot-and-mouth disease Hog cholera Infectious anemia Rinderpest Scrapie Shipping fever Vesicular exanthema
Sodium carbonate	4	1 lb. to 3 gal. water	
Sal soda (washing soda)	10.5	13 half-oz. cans to 1 gal. water	
Sodium hydroxide (lye)	3	Five 13½-oz. cans to 10 gal. hot water	Anthrax Blackleg Glanders Malignant edema
Sodium orthophenylphenate (sold as BTC disinfectant, safety disinfectant, sofenate, and orthol powder)	2	2 lb. to 12 gal. water	Brucellosis Johne's disease Tuberculosis Mastitis

CAUTION

When using lye disinfectant of any strength, wear protective goggles, rubber gloves, and coveralls. Wash areas of the body exposed to lye and treat with vinegar. If a lye solution is used in a truck or trailer, let it remain in the vehicle 8 hours, then wash it away before reloading with animals. Lye should be left on premises a full 24 hours.

STEAM AS A DISINFECTANT

Steam under pressure is perhaps the most effective of all disinfecting agents. When desirable, detergents and disinfectants may be mixed in the water stream in the desired concentration.

The so-called steam jenny vapor spray units are commonly used. They are not only adapted to a variety of cleaning operations, but also make excellent fire-fighting equipment.

LESS DISEASE MEANS HIGHER PROFITS

Here is what the records from some north-central Illinois livestock farms show about the effects of disease on profits:

Hogs. One of the most important reasons why some farmers make more money than others from growing hogs is that their herds are healthier.

Beef. Death losses were 70 percent smaller in herds with highest returns than in those with lowest returns.

Sheep. The ten flocks with the highest returns suffered only about half as heavy death loss as the nine flocks with the lowest returns.

Dairy cattle. Low death losses in dairy herds were more closely related to high dairy cattle earnings than any other factor.

Other effects of disease may be even more costly than death losses. Mastitis in dairy cattle, for example, decreases milk production and involves the expense of replacing cows which have had to be disposed of because of the disease.

(This circular was prepared by G. T. Woods, Assistant Professor of Veterinary Extension; and C. A. Brandly, Dean of the College of Veterinary Medicine and Professor of Veterinary Microbiology.)

Urbana, Illinois July, 1958

Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. L. B. HOWARD, *Director*. Acts approved by Congress May 8 and June 30, 1914.

20M—7-58—65742