PUBLIC HEALTH

# Quarantine for Anthrax

**An outbreak of anthrax in livestock in Oklahoma and Kansas has alerted the Department of Agriculture and the Public Health Service to protect both animals and people.**

➤ ANTHRAX STRIKES and can kill in less than a week. It is disastrous to livestock as well as man, Dr. Francis J. Mulhern of the U. S. Department of Agriculture's animal disease eradication branch, told SCIENCE SERVICE, when questioned about the current outbreak of the deadly disease in livestock in Oklahoma and Kansas.

So far only one case of anthrax infection, the skin lesion type, in a human has been reported by the U. S. Public Health Service.

Since it can be spread by biting flies, however, Federal Government and state officials have been alerted. Death can result so quickly—within three to five days for the external or skin type and within 18 to 48 hours for the pulmonary variety—that it is necessary to have a program set up in advance to protect against the disease.

This program consists of a system for immediate reporting of the anthrax outbreak among livestock and maintaining a strict quarantine of infected areas.

Four counties in northeastern Oklahoma, hit by the disease in late July, have been enforcing a quarantine on the sale of milk and livestock. The state has vaccinated some 117,000 head of livestock. Livestock shipments into Oklahoma from some counties in southeast Kansas have also been halted in an effort to keep the anthrax from being introduced into new areas.

The significance of the present outbreak is the large number of cases reported in a limited area compared with the extensive outbreak of the disease in 1951-52. At that time there were a large number of cases of anthrax, caused by infected bone meal from Belgium, in many counties in a wide area which included Missouri, Illinois, Kansas and Indiana.

There is always danger that the disease will break out in flooded bottom lands because of the amazingly resistant nature of the disease-causing organism.

*Bacillus anthracis* forms spores which resist heat—ten minutes' boiling will not kill them—and chemical disinfectants. These spores can live as long as 25 to 30 years in the soil. When land is flooded or intense rains wash earth down, the anthrax spores may be brought to the surface and carried to farm ponds which supply livestock with drinking water. Pasture lands may be infected in the same way. It is mostly through water and feed, rather than contact between diseased animals, that anthrax is spread.

Because of the anthrax organism's association with low-lying marshy lands, it is described as endemic, or native, in such areas. Incidence of the disease is always possible there. This is one reason for the USDA's position concerning aid to stricken areas.

Oklahoma's governor Raymond Gary has petitioned to the Federal Government for relief to help pay farmers for losses resulting from the anthrax outbreak. The Government has never paid indemnity for these losses. To start now, the USDA said, would set a precedent—besides involving considerable expense — with questionable results. There is a possibility, under investigation by the Department, that the Oklahoma counties may receive aid under flood relief. Approximately $2,660 a day in milk purchases have been lost, farmers report, because quarantine regulations required milk be poured out.

There is no record of humans getting anthrax by drinking contaminated milk or eating contaminated meat.

Most human cases result from exposure to infected animals or from handling infected hides, skin, or animal furs and hair. Anthrax is most prevalent in the northeastern states where imported hides and related animal products are processed. In the seven-year period 1945-51, 372 cases of human anthrax were reported in the United States. Fatality for the more common anthrax, which affects the skin, generally is about 20%, although it may run as high as 40% for cases resulting from animal contact.

The arsenical drugs, and, more recently, Aureomycin and Terramycin, have been used effectively in treating the disease in humans. Of prime importance, however, is early recognition since the disease can kill within a few days.

The external form of the disease is characterized by the appearance of a reddened area on the neck, arm or face which shows a fleabite-like patch. After about one to three days this becomes a "painless, insensitive papule." Scratching can spread the infection. Tissues around the papule become swollen. Later the typical carbuncle—anthrax means carbuncle in Latin — forms. Headache, joint pains, nausea and fever may accompany the disease.

Science News Letter, August 24, 1957

INVENTION

## Pigs Get Sprinkling On Way to Market

➤ TRAVELING accommodations that include a built-in shower are in store for the little pig that goes to market tomorrow.

Transportation specialists with the U. S. Department of Agriculture's agricultural marketing service say that giving pigs showers while they are enroute to market could mean many more pigs arriving fat, healthy—and alive. Each year more than $4,000,000 worth of hogs now arrive dead at U. S. markets, reports the USDA.

Tests made of one water sprinkler cooling system showed a cool pig is a happy one. Pigs that were showered appeared more comfortable, were quieter, and reclined more than pigs that traveled dry.

Altogether the pigs received five showers during their trip: a 21-minute shower before starting off and four 10-minute showers along the way.

No pigs died in the trailers that had the sprinkler systems while six of those shipped in regular trailers did die. Sprinkled pigs weighed in at nearly one-half pound more per trailer, with plastic lawn soaker hose value.

Installing the sprinkler system costs $35 per animal, thus adding to their market used as the "pipe" system.

Science News Letter, August 24, 1957

**SCIENCE NEWS LETTER**

VOL. 72 AUGUST 24, 1957 NO. 8

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., NOrth 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., $5.50; 2 yrs., $10.00; 3 yrs., $14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.



Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Manager: Fred A. Moulton, 1719 N St., N. W., Washington 6, D. C., ME. 8-2562.