

OKLAHOMA  
AGRICULTURAL AND MECHANICAL COLLEGE  
STILLWATER, OKLAHOMA

---

**EXTENSION DIVISION**  
IN COOPERATION WITH  
**UNITED STATES DEPARTMENT OF AGRICULTURE**  
STATES RELATIONS SERVICE  
JAS. A. WILSON, DIRECTOR

---

**HOG CHOLERA CONTROL IN OKLAHOMA**

BY DR. L. L. LEWIS

An enormous yearly loss from hog cholera occurs in Oklahoma. Much of this can be prevented if cooperation can be had between farmers and those who are in a position to help in the matter of preventing and controlling this disease.

Much of the trouble from hog cholera comes from delay in recognizing the disease at the beginning, and often by the time the stockmen of a community come to believe they have hog cholera to deal with, the disease has caused a large loss and has spread over a considerable section of the country. The last Legislature passed a law with reference to hog cholera, the object of which is to prevent the disease from spreading unrestrictedly from any point of infection, and to impose some restrictions on the use of hog cholera vaccine and virus by parties not familiar with this work. Farms where the disease exists are to be quarantined and notices posted to give warning to the public. This is intended to give information to the public that will prevent them from going about infected premises. Cholera is very easily spread from farm to farm by stock, exchange of farm implements, streams of water, etc. Information of this kind concerning hog cholera will give others some opportunity to protect their stock either by vaccination or the adoption of such sanitary methods as they may think advisable. Any farmer with hogs at home should stay away from farms where hog cholera is present. By cooperating along these lines it is possible to accomplish something in this work, and not very much will be done in any other way.

**Sanitation.**—Keeping the feed lots, sleeping quarters and water troughs clean will be a big factor in keeping hogs healthy. The unthrifty, wormy pig is a sort of standing invitation to any and all kinds of disease. Such a pig is not only unprofitable in itself, but is an actual menace to better hogs. Clean quarters and well kept stock is very good insurance against disease. Keep a good tonic powder before the pigs at all times. The following will be good:

Charcoal .....	1	bushel
Wood ashes .....	1	bushel
Salt .....	10	pounds
Copperas .....	2½	pounds

Mix the charcoal, salt and wood ashes. Dissolve the copperas in a small amount of hot water and sprinkle over the mixture of ashes, charcoal and salt, and stir until all is well mixed. Keep a little of this in boxes in a dry place at all times.

**Symptoms of Cholera.**—Usually the owner of sick hogs has to be convinced, almost against his will, that a certain trouble is cholera. It is not always an easy matter to be positive that a certain disease is cholera, although any one who is familiar with the symptoms and postmortem indications will feel reasonably sure of their diagnosis. The pigs may be sick from four or five days to a couple of weeks; they stay away from the herd, lie in their beds; sometimes chill; eyes get gummy; and after a few days get very weak in their hind legs. Red patches often appear on the skin of the belly and inside of the hind legs. The bowels may be either constipated or loose, but usually diarrhoea appears after a few days of sickness. When examining the internal organs of a suspected cholera case, look for the small, red spots (turkey egg kidney) on the kidneys, inflamed lining of the bladder, ulcers on the inside of the intestine in the region where the small and large intestines join, and congested lymph glands. One may not find all of these present in one case, but if the trouble is cholera a few of the above indications, combined with the symptoms seen in the sick pig, will help to know the trouble.

**Vaccination.**—If one is to vaccinate at all, the work should be done early. Take the temperature of every pig treated. The normal temperature of the pig will usually be 102° F. to 103° F., but may read some higher if you have to excite and run them around the pen to catch them. The double treatment (serum and virus) may be used on pigs with a normal temperature, but virus should not be given when the temperature is higher than 104° F. Some sick hogs may be saved by giving large doses of serum if this is done on the first rise of temperature, but if given later when other complications (secondary infections) have set in, there is little chance to save sick hogs by vaccination.

If hogs are to be vaccinated, see that the following rules are observed:

1. Have the hogs clean and in a clean, dry pen.
2. Use a 3% solution of a good disinfectant to clean the site of injection.
3. If virus is used, have it in a separate syringe, and disinfect the skin before and after injecting the virus.
4. Do not use virus if vaccinating sows near farrowing time.
5. Do not expect simultaneous method to permanently immunize young pigs. They will outgrow immunity.
6. Do not expect that the use of serum alone will protect longer than a few weeks.
7. Do not use dirty syringes or vessels of any kind, but thoroughly disinfect all syringes and vessels that the vaccine comes in contact with. Be careful with the work. All instruments and vessels should be boiled and allowed to cool before using.
8. If you use the double treatment, keep the hogs on a light, sloppy diet for at least twenty days after vaccination. This is important.

9. If hog cholera virus is being used, see that not a drop of it is spilled in the pens or about the premises anywhere.

The most important phase of hog cholera control is the destruction of the disease organism on the infected premises. Disinfection means to destroy infection. Nature's means of disinfection is the sun's rays. When the ground is not protected this agent will disinfect it. Where premises are protected from the sun's rays we must depend on chemical agents that have the property of destroying organic life, hence we must use these agents in the form of a spray on the walls, ceilings and floors of buildings, fences, feed troughs, etc. A 3% solution of compound cresol is a dependable agent to use for destroying hog cholera virus. It should be forced into all cracks and crevices of buildings. If this is done, and all litter, manure, cobs, boards and rubbish is removed from the ground of pens and lots, and air-slaked lime scattered over the ground, the owner may feel reasonably safe in attempting to raise another bunch of pigs, but unless such precautions are taken on farms where the disease has developed, the chances are very great that the pigs will become infected.

The use of hog cholera vaccine under proper conditions is not an experiment, but is a remedy that may be depended upon, and if the stockman does not know how to use the vaccine, some one should be employed who does know how. There should be a number of men in each county who are qualified to administer the vaccine. Cooperation of the farmer and the men who have permits to use the vaccine, with the State and Federal men who are devoting their entire time to this and other agricultural work, will certainly accomplish good results.



**Vaccinated Hogs Remain Healthy and Hearty, While Susceptible Ones Die in the Same Pen**

In vaccinating hogs in a herd where infection is known to exist, there is a grave question as to whether virus should be used at all or not for this reason. Even though your thermometer reading indicates that the animal has no fever, yet at the same time it may be carrying infection, and as this disease has a period of incubation varying from four to eight or ten days, this particular animal might be sufficiently near the end of the period of incubation that the virus administered would only hasten the onset of the disease and thus cause a fatal result, whereas if only vaccine were given, it would counteract the effect of this virus already in the animal's system and no harm would result. Instances of this sort are often seen in human medicine where vaccine for smallpox or typhoid administered during the period of incubation of the disease hastens the onset.

Owing to the probability that where infection has been in the herd for some length of time, say three weeks to two months, and we have the slow type of cholera, the virus would be contra-indicated.

Some sick hogs may be saved by giving large doses of serum if this is done on the first rise of temperature, but if given later other complications ((secondary infections) have set in, there is little chance to save sick hogs by vaccination.

Do not place faith in the transmission of protection from an immune sow to her offspring, as it has been too often demonstrated that an immune sow may lose all of her pigs while they are suckling, if she be in infected quarters. Consequently when a litter is born from an immune mother, they should be guarded very carefully, and at the age of a week or ten days they can be given a dose of 10 cc. of serum with safety. This will protect them for two or three weeks, and by that time a larger dose can be administered.

It seems well at this time to give a literal interpretation of the recent laws passed in Oklahoma regarding hog cholera control and eradication, and the use of anti-hog cholera serum and virus. According to a decision by the Attorney General, the status is as follows:

A farmer may vaccinate his own herd, using either virus and serum or serum alone, but in order to do this, the Board of Agriculture has made an additional ruling requiring him to first secure a permit, which costs him nothing more than the mere application and postage. If a man, either farmer or veterinarian, wishes to do wholesale vaccinating, he must secure a permit and give bond to the extent of \$1,000.00 for faithful performance of his duty and to cover damages incurred when shown to be through his negligence or lack of precaution. This permit may be secured in either of the following ways:

1. By passing with a grade of 70% an examination given under the auspices of the Veterinary Department at the A. and M. College at times and places designated by them for such.
2. By an application bearing the signature of ten bona fide freeholders in the locality in which he proposes to work.

The possession of a permit for wholesale vaccination carries with it the necessity of reporting all outbreaks of hog cholera to the President of the State Board of Agriculture, and putting up quarantine signs. This applies only to conditions in which the holder of the license has been called.