

# Ask the VMD

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If you have a question you would like answered by the team from Valley Animal Hospital, send it to Ask the VMD, Box 366, Lititz, Pa. 17543. Questions will be kept anonymous on request.

**Atrophic rhinitis got your pig's nose out of shape?**

**A reader asks:**

I have recently had a diagnosis of atrophic rhinitis in my swine herd. What exactly is this disease?

**Dr. Trayer comments:**

Atrophic rhinitis is a very common infection problem in swine herds in the Midwest, and it is becoming more of a problem in Pennsylvania.

This disease is thought to be caused by a bacterial infection of the nasal passages of the young pig, usually from one to three weeks of age.

The bacteria, *Bordetella bronchiseptica*, invades the nasal passages and begins to invade the scrolls. These are the very circular portions of the upper airways of the nasal passage of the pig.

The bacteria distort the scrolls and cause inflammation, eventually destroying the cartilage material. This causes the nose to bleed and/or deviate to the right or left.

In the most severe cases where both right and left nasal passages are destroyed, the deviation to the left and right tend to balance one another.

If you see any of your young animals with the classical clinical signs of blood dripping from their noses or nose deviations to the left or right, you have atrophic rhinitis problems no matter what the percentage afflicted.

This disease can be a 'sleeping' disease. You can start out with what you consider to be a fairly clean herd, free of any signs of atrophic rhinitis. Then over a period of four to five years, you begin to have clinical cases.

What causes this outbreak? In your breeding program, there may be a sow that did not have enough contamination as a young animal to affect her nasal passages. But, the infection may have set up a residual bacterial growth that is now being passed on to the baby pigs in the farrowing house.

How does this happen? A baby pig can be sniffing around its mother's nose, the sow sneezes, politely infecting the baby pig as it snorts up the infection into its little nostrils.

Over several years of selection, you build up higher and higher levels of contamination in the breeding stock, eventually overwhelming the natural defenses.

That's when cases of atrophic rhinitis begin to crop up on the finishing floor or in the breeding stock with its diagnostic signs of bent and bloody noses.

Another sign that is a good indicator of the possibility of atrophic rhinitis (especially in feeder pigs or on the finishing floor) is a crescent-shaped, black 'mascara' below the pig's eyelid.

This smear of dirt between the nose and eye is an indication of an unusual amount of tears shed by the pig. The tear tracks are actually caused by dust clinging to the moist skin under the eye.

Why is this a sign of

atrophic rhinitis? As the inflammation of the upper nasal passages occurs, the swelling blocks off the duct that normally drains the fluid that lubricates the eye. This duct normally carries the fluid from the eyelid to the nose, and out the end of the nostrils.

As a result of the blockage, the tears flow over the rim of the eyelid, and the dust begins to collect under the eye.

Another tell-tale clue may be a constant sneezing when the pigs are stirred up after they've been sleeping. This, linked with other clinical signs, points to atrophic rhinitis rather than pneumonia, the other possibility.

If farm records show that over the years there has been an increase in time (over 110 days) to finish hogs from 40-220 pounds, or a decrease in feed efficiency, it may be a hint of an underlying health problem— atrophic rhinitis.

How can you be sure your herd definitely has atrophic

rhinitis? The only sure way to know is to have someone who knows what to look for examine the head of the slaughtered animal. The state diagnostic laboratory or your local veterinarian will do the examinations for you.

Twenty to thirty percent of the heads should be checked. If you have clinical signs of atrophic rhinitis active in the herd, you need to consider either depopulation of the herd or a vaccination program.

The vaccination program uses a killed bacteria so that you cannot introduce the infection into your herd.

Be sure your supplier has handled the vaccine carefully. It cannot be frozen or too warm, or it is worthless. The vaccine costs between \$18 to \$20 per vial, so you want to be sure you're not wasting your time and money.

Be sure to use good aseptic technique when administering the vaccine or you will cause abscesses to develop.

Try to set up a vaccination program where you will use an entire vial of vaccine, not having any partial vials leftover.

Follow label directions. Some companies recommend that you vaccinate the sow prior to breeding, then again two weeks prior to farrowing, and follow by vaccinating the baby pigs 7

and 28 days after they're born.

It's easy to see where a vaccination program will mean an increase in labor and vaccination cost for at least 2 to 4 years.

Once the vaccination program has been in effect those 2 to 4 years, you will be able to stop the vaccination program. In that time period the baby pigs that have been produced under the vaccination program will have developed an immunity to the disease, and the old contaminated sows in the

breeding stock should have been eliminated.

If you are starting out new or have gone the route of depopulation, you can be sure of a clean herd by buying your stock from an SPF producer, specific pathogen free hog producer.

The only disadvantage of buying from an SPF herd is that these animals must be kept in strict isolation. They do not have the same levels of immunity as other animals and are just as susceptible to all diseases affecting breeding stock.

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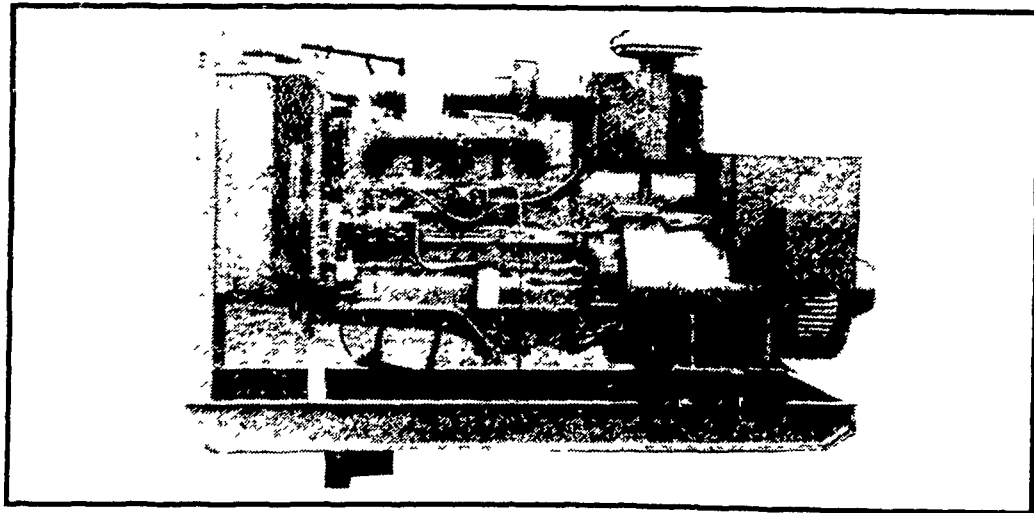
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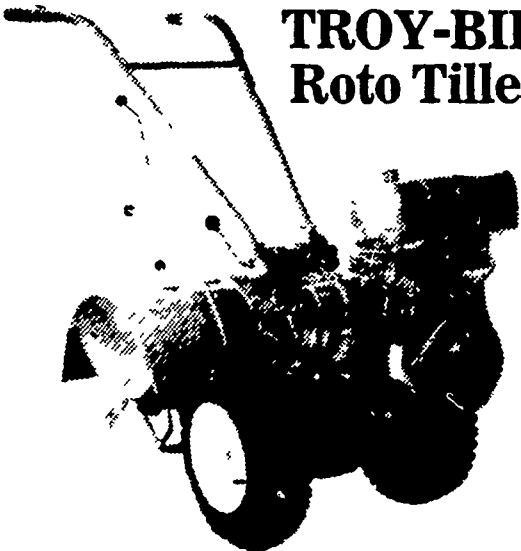
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