

Agriculture



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August 2018

AG/4HLivestock/2018-03pr

Proper Care and Management of Common Health Concerns with 4-H Hogs

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Abstract

The 4-H livestock program is designed for youth interested in raising livestock. It teaches them how to be leaders, builds self-esteem, citizenship, social and livestock skills. The program allows for youth from all backgrounds the opportunity to raise and care for an animal. It is not uncommon for participants in the program to be the first in the family to raise livestock. However, this does present some challenges. Recognizing and understanding animal behavior and signs of illness will help the 4-H program participants and their parents to become better animal caretakers when problems arise.

The purpose of this fact sheet is to give youth and their parents a basic guide of what signs and symptoms to watch for to prevent illness or death. It includes instructions on how to take vitals, how to assist the veterinarian when called, the compiling of materials for a first aid kit, proper antibiotic administration, vaccinations, and preventive practices that the youth can implement while caring for their animal.

Primary Veterinarian Information

It is extremely important that anyone with any type of an animal, has both the contact and emergency contact information for their local veterinarian. It is

also a good idea to have the information for more than one veterinarian, in case you are not able to reach the first contact. It is recommended that you have the information written down and located with your first aid kit. We recommend using the [Swine First Aid, Basic Care, and Common Diseases flip book](#) to keep track of your contacts and your list of first aid supplies.

Emergency Contact

Another important bit of information to keep on hand is contact information for one or two people from the community that know about hogs that can give you advice or assistance when issues arise. This is also valuable to have available when you have to leave town and have someone else watching over your animal. It gives them a great contact if something were to happen.



First Aid on Hand

For cleaning the wound	For dressing the wound	Bandage materials	Equipment	Additional equipment	Other
Disposable latex gloves	Hoof dressing	Adhesive tape	Safety scissors	Pocket knife	Isopropyl (rubbing) alcohol
Antiseptic scrub	Nonsteroidal eye ointment	Duct tape	Scissors	Flash light	Lubricant for the thermometer
Water/ hose	Udder ointment	Gauze dressing pads	Tweezers	Wire cutters	
	Wound ointment/spray	Roll gauze	Oral syringe		
	Epsom salt	Vet wrap	Rectal thermometer		
			Disposable razor		

How to Check Your Hogs' Vitals:

It is important for youth and their parents to have a basic guide of what signs and symptoms to watch for to prevent illness or death. When they know how to take vitals, they will be able to assist the veterinarian when called.

CHECKING VITALS:

Temperature (degrees in f)

Adult- average 102.5°

How to take the temperature- (Lane & Coffey, 2006)

- Put animal in a chute/restraint where you can guarantee that the animal will not be able to harm you.
- Lubricate the end of the thermometer.
- Lift the tail and gently insert the thermometer into the animal's rectum. Make sure the tip of the thermometer rests against the rectal wall (i.e., make sure it is not inserted into dung).
- Hold the end of the thermometer to stop it from disappearing up the rectum.
- Electronic thermometers will "beep" when an accurate reading is obtained.

Pulse Rate

(Heartbeats per minute)

Adult- 60 to 100

How and where to take pulse-(Lane & Coffey, 2006)

1. Locate an artery (the femoral artery is most common in pigs, but it is very rarely used and is most difficult) and apply gentle pressure against it with your fingers.
2. Count the number of pulses for 1 full minute, or for 30 seconds, and multiply the number by 2, or for 15 seconds and multiply by 4.
**Auscultation (listening to the heart with a stethoscope) is more commonly used and usually more accurate.

Respiration

(Breaths per minute)

Adults- 8-18-

Watch flank of animal for inhale and exhale.

Determine if your animal's respiration is normal or abnormal:

Respiration can be increased by recent exercise, excitement, stress, hot weather or stuffy buildings. Respiration can be accelerated if the animal is in pain or has a fever. (Lane & Coffey, 2006)

Antibiotic Introduction

The introduction and use of antimicrobials in animals has brought major benefits to both animals and humans. Some of these benefits are:

1. Reduction of animal pain and suffering due to reduction in illness symptoms;
2. Protection of livelihood and animal resources;
3. Assurance of continuous production of foods of animal origin;

4. Prevention or minimizing shedding of zoonotic bacteria into the environment and the food chain;
5. Containment of potentially large-scale epidemics that could result in severe loss of animal and human lives.

Withdrawal

Although the benefits are numerous, it is also essential that individuals administering antibiotics be aware of proper administration and withdrawal periods associated with antibiotic use. All antibiotics will have a “withdrawal period” on the label. Be sure to refer to that before administering the drug. A withdrawal period is the time necessary for an animal to metabolize the drug administered to a safe, acceptable level. All antibiotics are labeled with instructions on withdrawal time, dosage, and method of injection. If followed, the risk of antibiotic residues is greatly reduced. The FDA’s Center for Veterinary Medicine (CVM) sets slaughter withdrawal times for approved food animal drugs. This will be located on every bottle of vaccination and antibiotic. Be sure to read and follow all labels before use.

Prevention of Disease through Management Vaccination Programs

Overview

Protect pigs against disease by minimizing their exposure to strange pigs, reducing stress by providing nutritious feed, clean water, and comfortable housing, and by boosting immunity through vaccination and regular de-worming. Vaccinations should be given at multiple time points in an animal’s life to decrease the probability of infection later in the production process. For example, animals should be vaccinated prior to weaning as this is a stressful time in their lives and can suppress the immune system. Furthermore, animals remaining in the herd should be vaccinated annually and animals transitioning to a new phase or environment of the swine production system should be vaccinated to prevent becoming infected themselves or infecting new animals that they might be exposed to. Although there are multiple vaccinations available on the market to prevent disease, it is always a good idea to consult a veterinarian on the best type of vaccine for your herd/area and how to properly administer the

vaccine so that it will be effective at preventing disease.

Common Diseases and Disorders in Swine

Overview

Although prevention and management are the best ways to decrease the probability of infection in our animals, there are still instances where animals become infected. This may be due to exposure to a strain of the disease that was not covered in the vaccine, genetic predisposition or just plain bad luck. As such, the following information is necessary to be able to identify these diseases early and obtain the proper treatment for the animal so that the infection does not progress and create a much larger issue.

Erysipelas

Overview

Erysipelas, sometimes called Diamond Skin Disease, is an infectious disease caused by the bacterium *Erysipelothrix rhusiopathiae*. The bacteria is present in up to half of the swine in the U.S. and is among the leading causes of carcass condemnations at slaughter facilities. The disease is spread by nose to nose contact, and in feces from infected swine or wild birds. Erysipelas is rarely seen in pigs younger than 8 weeks of age because they are protected by antibodies in the sow’s colostrum. It is most often seen in growing pigs near market weight, and young breeding stock. Erysipelas can affect the pig’s joints, leading to chronic arthritis. (Bender & Madson, 2009)

Signs and Symptoms

- Pigs may die suddenly without showing any symptoms (rare).
- Pigs have a high fever.
- Pigs may develop diamond-shaped welts or rash on their back.
- Pigs sit on haunches like a dog and are reluctant to move because of joint pain.
- Pigs may shift weight from foot to foot while standing because of joint pain. (Opresnig, 2018)

Prevention

- When buying pigs, ask the breeder if they have been vaccinated against Erysipelas.

- Avoid mixing pigs from different sources.
- Keep pens clean.
- Minimize stress by providing comfortable living conditions, clean drinking water, etc.
- Vaccinate pigs that have not been vaccinated, following label directions.
- Erysipelas vaccines often include protection against Rhinitis and Mycoplasma, and are administered intramuscularly or subcutaneously.
- Oral Erysipelas vaccine is administered in drinking water, and provides 4 months of protection. (Opressnig, 2018)

Treatment

When you notice your animal has any of the above symptoms, contact your veterinarian immediately to determine the cause so that a treatment plan can be started.

Likely a veterinarian will prescribe penicillin, *Erysipelothrix rhusiopathiae* is very sensitive to penicillin. Treat affected pigs with injectable penicillin at 12 hour intervals for 4 consecutive days, or administer two doses of long-lasting penicillin 48 hours apart. Follow label directions and note pre-slaughter withdrawal times when using any medication or antibiotic.

It is much easier to prevent Erysipelas by vaccinating small pigs than to give multiple antibiotic injections to large pigs. (Bender & Madson, 2009)

Atrophic Rhinitis

Overview

Atrophic Rhinitis, commonly called Rhinitis, is caused by *Bordetella and Pasteurella* bacteria that are present in most swine herds. Toxins from moldy bedding and ammonia from wet bedding are thought to predispose pigs to Rhinitis. The disease can affect pigs as young as 1 week old, but is more common on newly-weaned pigs. Rhinitis is usually not fatal, but pigs gain weight more slowly while the illness runs its course. Some infected pigs develop a permanently distorted, crooked snout that hinders eating and drinking and is unsightly in the show ring. (Iowa State Universtiy, 2018)

Signs and Symptoms

- Sneezing, snorting, and nasal discharge.

- Bloody nose (occasional).
- Watery eyes, resulting in a patch of dirty hair below the corner of each eye.
- Crooked snout.

Prevention

- When buying pigs, ask the breeder if they have been vaccinated against Rhinitis.
- Vaccinate pigs that have not been vaccinated, following label directions.
- Atrophic Rhinitis vaccines often include protection against Erysipelas and Mycoplasma.
- Avoid mixing pigs from different sources.
- Minimize dust in living quarters through good ventilation.
- Keep bedding clean; remove moldy or urine-soaked bedding.

Treatment

None. The goal should be to prevent pigs from getting the disease by vaccinating and providing a well-ventilated environment. (Iowa State University, 2018).

Sunburn

Overview

White pigs, or pigs with areas of white hair may suffer sunburn. This often occurs when young pigs are moved out of the nursery into a sunlit pen for the first time, or after pigs have been washed and/or clipped in preparation for showing. While seldom fatal, sunburn is very painful and can restrict a pig's movement. Scabs or peeling skin following a sunburn are unsightly in the show ring. Pregnant sows may abort if severely sunburned.

Signs and Symptoms

- Red or pink skin.
- Pigs squeal in pain when touched.
- Rear legs of pigs collapse; animals fall belly-down on the ground with rear legs splayed out behind.
- Scabs and oozing sores develop on affected areas.
- Parallel lines of scabs or sores running crosswise on the loin are common after sunburn.

Prevention

- Red or black pigmented pigs are less likely than white pigs to suffer sunburn.
- Provide adequate shade for pigs.
- Provide complete shade after pigs have been washed or clipped, OR
- Apply sunscreen or sunblock to pigs after each washing and clipping, making sure to cover the back, ears and tail.
- Wash pigs in the evening.
- Postpone clipping until just before loading the animals for the show.
- A mud wallow can provide protection, but is not recommended for show pigs since muddy, stained pigs are difficult to clean and fit for exhibition.

Treatment

Aloe Vera is sometimes used, but avoid medicated human sunburn remedies since they are not registered for use in swine, and may show up if a drug test is performed. It is best to anticipate situations that may lead to sunburn and take steps to prevent it.

Scours

Overview

The stool of the normal pig should be firm and well formed. When a normal show pig is on free-choice feed and water, the stool tends to loosen to the consistency of a cow patty as feed consumption increases. When feces are totally liquid with no solid form, diarrhea is occurring. A pig with diarrhea caused by infectious agents and/or parasites usually has a reduced appetite or is anorexic, but is still drinking. Weight loss accompanies diarrheal disease and is usually obvious due to regularly monitoring them for weight gain.

Signs and Symptoms

There are many causes of scours in show pigs, blow are a few:

- Dietary causes: Nutritional causes are relatively easy to detect and correct. Show pigs are typically fed high protein rations to develop maximum muscling. Overfeeding protein can, in itself, cause loose stools or diarrhea. If a pig is growing well but has a chronically loose stool, reduce the protein and/or increase fiber in the diet. If the stool

does not firm up, there are probably other causes of diarrhea.

- Parasitic Causes: Parasites will be covered later in the booklet.
- Bacterial causes: Swine dysentery or “bloody dysentery,” Salmonella typhimurium, salmonella choleraesuis are all common bacterial causes of scours in show hogs. All require treatment from a veterinarian.

Treatment

Prevention is the best way to avoid scours with your show hog, a few ways to prevent include, but are not limited to:

- Know who you are buying your hog from.
- Try to buy directly from a farm to ensure that the animal came from a clean, healthy environment.
- Keep pigs from different farms separate for 60 days.
- Do not over feed proteins or fats.
- Routinely deworm.

As soon as the pig develops diarrhea, the cause or causes need to be determined. Consult a veterinarian to diagnose infectious and/or parasite-caused diarrheal disease because death is often a result of undiagnosed, chronic diarrheal disease in show pigs.

Internal Parasites

Round worms

Overview

Very common.

Can reach lengths of 6-12 inches, and are stout, pinkish worms.

Eggs become infective after being outside the pig for 1 month. When another pig swallows them, they hatch in the stomach or small intestine. The tiny larva that emerges penetrates the gut wall and is carried to the liver through the bloodstream. In the liver, larvae migrate for one-half to 1 week and then move through the bloodstream to the lungs. From there, the larvae are coughed up, swallowed and returned to the small intestine, where they grow and mature within 2 months..Infective eggs can remain in soil for 10 or more years. (Corwin & Tubbs, 2018)

Signs and Symptoms

- Often observe a cough as one of the first clinical signs.
- Inflammation of the liver.
- An allergic reaction occurs in the lungs as larvae move through the air spaces- causing the pig to cough.
- The lung tissue becomes thick and wet, leading to heavy breathing and “thumps.” This process is made worse by dust, ammonia and bacteria.
- Colic or gut pain.
- An impaction and even tearing of the gut may occur.
- Set back in weight gain and appear unthrifty.
- Feed conversion may be depressed.

Treatment

Your veterinarian can diagnose this infection by taking fecal samples for microscopic examination. Routinely deworm pigs to prevent infection, and to kill any living round worms. (Corwin & Tubbs, 2018)

Whipworms

Overview

Are 2-2.5 inches long.

Infect the large intestine and cecum.

Common in 4-H pigs.

Infective eggs survive in the environment for 10-20 years.

Signs and Symptoms

- Can see a bloody scour.
- Depressed growth.
- Poor feed conversion.

Treatment

Your veterinarian can diagnose this infection by taking fecal samples for microscopic examination. Not all dewormers treat whipworms well; be sure to discuss with your veterinarian what treatment method to use. (Lawhorn, B.)

There are several other types of internal parasites, if you suspect that your hog could have parasites, contact your veterinarian to set up a deworming program. A few easy ways to prevent parasites are: practice good sanitation, maintain good nutrition in

your pig, keep facilities well-cleaned and traffic minimized.

External Parasites

Lice

Overview-

Lice are found on all parts of the body, but particularly in the folds of the skin around the neck, jowl, flanks, and on the inner surfaces of the legs. They often shelter inside the ears, where they are sometimes seen in “nests.” Lice are greyish-brown in color with black markings. The females are about 6 mm long and the males slightly smaller. (Teders)

Signs and Symptoms

- Skin irritation and rubbing.
- Can see lice visually.

Treatment

Easily treatable with Ivermectin. Be sure to follow the label directions. Be sure to honor withdrawal periods. (Teders)

Mange

Overview

Pigs with mange have small red bumps that are very itchy, are caused by the Sarcoptic Mange Mite. The mite is about 0.5mm in length and only visible to the naked eye when on a black background. The mites are spread by direct body contact or if pigs are moved into quarters recently infested. Mites only survive away from the host for a short period of time. Mites burrow under the skin and lay eggs, causing the skin to be very irritated and initiate severe scratching and rubbing. It will continue to get more severe as time goes on.

Signs and Symptoms

- The first site that is visible is usually in the ears, where lesions will form, and then they will spread over the entire body.
- Decreased rate of growth.
- Inefficient use of feed.

Treatment

Prevention should first start with sows before farrowing. Treating dams with external acaricide sprays or with an injectable avermectin a few days before farrowing will reduce the risk of transmission to piglets at birth. It might be beneficial to treat growing pigs at 8 to 10 weeks of

age. If you notice signs of mites, contact your local veterinarian to discuss the best eradication program for you. (Iowa State University, 2018)

Ulcers

Overview

Refers to the destruction of parts or all of the parts esophagea (non-glandular stomach) with the formation of single or multiple bleeding ulcers. The lesions occur in pigs from weaning onward. Signs are only noticed in pigs 8 weeks of age or older, and are more common in pigs weighing 120 lbs. to market weight. (Iowa State University, 2018)

Signs and Symptoms

- Black tarry feces, anemia, a unhealthy pale appearance, anorexia, grinding of the teeth, or un-thriftiness.

Treatment

Prevention or reduction of the following risk factors will reduce the risk for ulcers dramatically:

- The feeding of finely ground feed.
- Pelleted rations, perhaps because of the finely ground feed used in making pellets.
- Concentrated, nutrient dense diets that are low in fiber.
- Stress factors (e.g., anxiety, fear, pain, fatigue, crowding, fasting, prolonged transportation, social stress from mixing with unfamiliar pigs, poor air quality, etc.).
- Greater occurrence in hot, summer months may be related to inconsistent feeding behavior or stress associated with access to water.
- Out of feed events. This may be a result of inconsistent feed availability from plugged or empty feeding systems or be the result of disease-induced anorexia.
- Greater occurrence reported in barrows (versus gilts) and in high-lean genotypes.
- Feeding rations with copper as a growth promoter, perhaps without adequate zinc.
- Ad libitum feeding of cheese whey or skimmed milk has resulted in increased prevalence.
- Diets high in wheat or cornstarch, compared to barley or milo, and/or low in protein.
- High levels of unsaturated fats in the diet, often with inadequate vitamin E.

If a pig is suspected of having ulcers, it should be separated from the herd and you should contact your veterinarian immediately. The veterinarian will prescribe the necessary medication along with dosage and the number of days to administer. (Iowa State University, 2018)

Lameness

Overview

Four common causes of lameness are: infectious arthritis, nutritional deficiencies or imbalances, trauma or injury, and genetics. (Hogg, A.)

Signs and Symptoms

- Most of the arthritis that occurs is caused by bacterial infections.
- Labored breathing, temperature of 104°-107°, inflamed testicles, lameness, “puffiness” in hocks, picking up infected leg, larger pigs might be unable to stand, are all signs of arthritis.

Nutritional lameness is due to calcium-phosphorus imbalances or deficiencies, also known as Rickets, signs include: deformity, and bending of bones in younger pigs, and fractures and posterior paralysis in older pigs.

Lameness due to injuries is common, especially when pigs are in confinement. Can be caused by fighting at the feeder, slipping during transport, extreme exercise, etc. If not addressed, can become chronic.

Genetics also play a role in lameness, if the animal is not structurally sound as a small piglet, chance of the problem worsening with age and weight is extremely high.

Treatment-

When you notice that your animal is favoring a leg or refuses to move due to pain, contact your veterinarian immediately to determine the cause so that a treatment plan can be started. (Hogg, A.)

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