

Keeping Your 4-H Market Animals Healthy



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4-H members have the same responsibility for growing a safe, wholesome product as the livestock producer who sells hundreds of animals—and you must abide by the same laws. This publication can help you produce healthy project animals and ensure a safe, wholesome product for the consumer.

Learning how to produce healthy animals also has an economic advantage. Most fairs around the country do not allow animals to enter if they exhibit signs of illness, internal or external parasites, or other health problems. Also, if market animals test positive for antibiotics in their system at the time of slaughter, the 4-H member who sold them is penalized.

The **Meat Animal Drug Withdrawal Interval** refers to the time that must elapse between administering a medicinal product and when the animal may be slaughtered. The Food and Drug Administration (FDA) determines what products require this interval and mandates that all labels for these products contain this information. Veterinary medicines that typically are required to provide this information include: antibiotics, parasite controls, vaccinations, and medicated feeds.

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Preventing Illness

Isolate new animals

When you buy and bring home new animals, place them in a facility or pen that is isolated from your other livestock for at least 2 weeks. **Isolated** means that your new animals do not come into direct contact with any animals you already have. This practice helps reduce any possible spread of disease from the new animals to the rest of your flock or herd.

Watch closely for signs of illness (coughing, diarrhea, nasal discharge) during this time. Animals may come down with “shipping fever,” a respiratory disease, when they are stressed. Contact your veterinarian if you think that your animal is ill.

Practice proper sanitation

You can avoid many animal health problems if you simply remember to KEEP IT CLEAN!

Clean water

Place water containers (troughs, buckets, tanks) where they are not likely to spill or get dirt and manure in them. If you use an automatic watering system, don't assume it is working properly. Make sure your animals have cool, clean, fresh water **every day!**

If your animal's water is contaminated or stale, then it will drink much less and eat less feed. This reduces your animal's rate of gain.

Clean pen

Keep your animal's pen clean and dry. Many disease organisms and parasites thrive in wet, dirty conditions.

Before bringing project animals home, thoroughly clean and disinfect their pen. Also clean pens thoroughly when moving animals from one pen to another and after you've sold all the animals within a pen. If you clean pens regularly and feed in clean feeders, your project animals are less susceptible to worms, Coccidiosis, and other internal parasites. Proper cleaning also helps control flies and mosquitoes around your animals, which reduces the potential spread of disease. Clean up any rodent or bird feces because they are a major source of infectious diseases.

There are commercial disinfectants made specifically for livestock facilities. But, if you have only a few animals, there are other—less expensive—options. For pens with concrete or wood surfaces, you can use a mixture of water and chlorine bleach (4:1). Agricultural lime spread on cleaned concrete or dirt floors helps sanitize a pen. Exposure to sunshine and fresh air helps kill many disease organisms.

You must remember that only a thorough cleaning destroys disease organisms. A disinfectant used on a dirty pen only kills the germs on the surface. Organisms below the surface are still alive.

Clean feed

Clean, fresh feed is essential to achieve efficient growth and gain. Use a feeder that prevents your animals from standing in the feed or contaminating it with feces or urine. Don't feed wet or moldy feed, or leave stale feed for your animal.

To help ensure that feed is fresh, it may be better to buy smaller quantities more often than to buy a large supply (for 3 months or more) at one time. Store feed in a cool, dry place that is free from mice and other rodents.

Clean air

Animals housed inside must be in a well-ventilated building to prevent exposure to high levels of ammonia or methane from urine and manure. Also, avoid exposing animals to a lot of dust. Poorly ventilated buildings and dusty environments can cause a variety of health and respiratory problems that reduce your project animal's growth and overall efficiency.

Practice good management

Nutrition

Nutrition is very important for your animal's health and growth. Be sure to read the feed label thoroughly. Are you feeding a **complete ration**? A complete ration has been formulated to meet your animal's nutritional needs at a specific stage of growth. If you feed a complete swine grower to your feeder pig, then you do not need to provide it anything else, except water. Vitamins and trace minerals have been included in the feed at the correct level for your animal.

If you are feeding something other than a complete ration (for example: corn, oats, and barley, also known as **C.O.B.**), consult someone who can confirm that the ration meets all the animal's nutritional requirements. You may need to feed supplements to balance your animal's ration. Most ruminants (cattle, sheep, and goats) do better if they are fed some long-stemmed roughage (hay) along with their grain to keep their rumen functioning properly.

Your animal may develop ailments if its ration is not properly balanced. The animal's growth may be stunted. In extreme cases, an animal may even die due to poor feeding.

Don't forget water, and plenty of it! An inadequate water supply reduces your animal's feed intake. On average, your animal will drink the following amounts of water:

Swine	1½ to 3 gallons per day
Sheep/goats	1 to 3 gallons per day
Cattle (not milking)	10 to 14 gallons per day

Your animal needs more water during hot or humid weather, when it is milking, and/or if it is gaining weight rapidly. Animals may get some of the water they need in their feed (such as sheep grazing on lush pasture).

Stress

Good livestock managers know that if you expose animals to stressful conditions, then productivity and gain decrease, and health problems increase. It is unlikely that you can protect your project animals from every kind of stress, but

you can strive to minimize stress whenever possible. Make sure pens and fences are in good repair, and that there is adequate shade and shelter. Protect your project animal from potential predators, including domestic dogs.

Begin working with your project animals daily after they arrive at your home. Move slowly and calmly when working around animals, and speak in a soft, reassuring manner. These practices help animals relax.

One technique that often decreases stress and increases the animal's level of comfort around its new owner is hand-feeding (instead of using automatic or self feeders). Animals quickly learn to associate your presence with a positive experience (food), and this reduces their stress.

Parasites

A **parasite** is an organism that lives off another organism (**host**). It is generally classified as either **internal** (living inside the host) or **external** (living on the host's outer surface).

Over time, your market animal will get parasites. Your job is to handle the parasite problem in a way that maintains good animal health and production. Animals infested with parasites usually are less productive (lower rates of gain and feed efficiency) and do not appear as thrifty.

If you are unsure about the level of infestation and type of parasite(s) your animal might have, be sure to consult your local veterinarian. He or she can help you decide on the best course of treatment, if needed.

If you have diagnosed the problem and are giving treatment, remember to read the medication label **carefully** to be sure that the product you choose is the right one for the job. Not all products are equally effective for all parasites. Also, how long the products provide control of specific parasites can vary. Some products have to be administered more frequently than others.

No matter what, when using parasite control products, **always**:

- READ THE LABEL.
- Carefully follow all directions.
- Avoid drug residues by following the Meat Animal Drug Withdrawal Interval.

Internal parasites

If you suspect that your animal has internal parasites, you can take a fecal sample to a veterinarian. He or she can look at the sample under a microscope and advise you about treatment.

To take a sample: place some of the animal's fresh manure in a plastic bag, seal it, and take it to be examined.

WORMS

There are many different types of "worms" that affect animals (stomach worms, lung worms, flat worms, round worms, etc.). Some symptoms of internal parasite infestations are a rough hair coat, weight loss or slow weight gain, and diarrhea.

When should you deworm your animal?

- Deworm your animal soon after you buy it (if the animal is healthy and if it has not been dewormed recently).
- Repeat deworming as directed on the product label (or as needed).

- Check the Meat Animal Drug Withdrawal Interval on the product label. Do not deworm the animal if the time between treatment and slaughter is less than the required interval.

It is best to set up a regular program to control these parasites. Consult your veterinarian for a deworming schedule for your area.

Dewormers are usually administered according to the animal's weight. Use a scale or a weight tape to determine your animal's weight so that you use the correct dose.

If you are using a dewormer that is administered in the water or feed:

- Separate animals, so that each animal gets a full dose.
- Make sure that each animal consumes the entire dose.

COCCIDIOSIS

Mammalian Coccidiosis is a protozoa that invades and destroys the intestinal mucosa. Signs include diarrhea (often with blood in the loose, watery stool), weakness, and weight loss. It is a serious disease of cattle, sheep, and goats, and is less common in swine. It is more of a problem in young animals than older animals.

The organism is passed in the manure of infected animals that may be sick, or animals that appear healthy but are carriers of the disease. Animals pick up the organism by eating dirty feed, drinking dirty water, or licking themselves after lying on dirty ground or bedding.

This disease can be prevented by good sanitary practices: keeping pens, feed, and water clean. If an animal does get Coccidiosis, treatment may help. There are a variety of **coccidiostats** (medicines to kill the coccidiosis organisms) available at most livestock feed and supply stores. **Read and follow the label instructions.** Be sure that you do not administer a coccidiostat to a type of animal that is not listed on the label. Read the label to find out if there is a drug withdrawal period before the animal can be slaughtered.

External parasites

These include flies, ticks, keds, lice, and mites. Symptoms may include loss of hair or wool, red sores, and animals rubbing more than normal.

Control for external parasites should be done on a similar schedule as deworming.

There are a variety of dust, spray, and pour-on treatments for controlling external parasites. Spray or dust the outside of the animal and its pen and bedding. Some spray and dust products are not effective on all external parasites. Some deworming products control external parasites as well as internal ones.

Carefully follow the directions on the label. Note the Meat Animal Drug Withdrawal Interval. Follow all precautions listed on the label. Be cautious: do not inhale the dust or spray, and avoid getting it on your skin.

Hoof care

Overgrown hooves can make walking difficult and increase the potential for **foot rot** (a disease that damages the hoof and causes lameness). Trim overgrown hooves as needed. You might need to hire a professional to trim a large animal's hooves.

WARNING

DO NOT use parasite dust or spray at the same time that you use injectable dewormers and certain vaccines. The combination may make your animal very ill.

The type of surface your pen has can reduce the need to trim your animal's hooves. Hard, abrasive surfaces tend to wear down excessive hoof growth.

Shearing

Sheep must have their wool shorn each summer. In accelerated lambing programs, twice-a-year shearing is usually recommended. Sheep that are shorn in early summer are more comfortable, healthier, and gain better.

Occasionally, manure builds up around a sheep's tail. This unsanitary condition lures blowflies to deposit eggs there. When the maggots hatch, they feed on the sheep, causing painful wounds.

You can do away with this problem almost completely by **tagging** (shearing long wool from around the tail region). But, if infestations do occur, treat them with a screw-worm spray.

Vaccinate your animal

When you buy a project animal, be sure to get a health history from the seller that shows what vaccinations or other treatments have been given. Many producers will have already given the recommended vaccinations and treatments for your animal up to the date you buy it.

If you do need to give vaccinations, administer them a few days after you bring your animal(s) home. This gives the animal time to calm down and adjust to its new environment before it has to face more stress.

Many vaccinations need to be given twice to be effective. Normally, a second injection (often called a **booster shot**) is given about 2 weeks after the first.

If you must give your animal an injection, remember:

- Read and follow all label directions.
- When given a choice, give shots **subcutaneously** (under the skin) rather than **intramuscularly** (in the muscle).
- If the product label requires that a shot be given intramuscularly, give it in the neck.
- **Do** give shots in low-value meat cuts (such as the neck).
- **Do not** give shots in high-priced meat cuts (for example: ham, leg, or round).

When it comes to animal health, wise producers establish a good working relationship with their local veterinarian. He or she can advise you on the best local health care programs for your individual animal, herd, or flock.

Livestock vaccinations

The following vaccinations are commonly used by Oregon livestock producers who are raising feeder animals (animals that will become market animals). Their goal is to prevent the most common diseases that affect feeder animals. Check with your veterinarian to find out what vaccinations are recommended in your area. Additional vaccinations may be recommended if you are raising breeding animals.

Whenever you give an animal a vaccination or other treatment, always **read and follow label directions**. The label tells you what the product is designed for (species, condition, disease). It also instructs you how and when to administer the product.

Check for a Meat Animal Drug Withdrawal Interval (the minimum amount of time that must pass between administering the product and using the meat or milk from the animal). Be sure to follow these directions closely.

Beef

7-WAY *CLOSTRIDIUM* VACCINE

This is recommended to vaccinate healthy, susceptible cattle against clostridial diseases such as blackleg, malignant edema, black disease, and enterotoxemia (overeating disease). You may prefer to use one of the following:

- 7-way vaccine with *Haemophilus somnus* added
- 8-way vaccine that also protects against red water disease

4-WAY RESPIRATORY VACCINE

This is recommended to protect healthy cattle against IBR (infectious bovine rhinotracheitis), BVD (bovine viral diarrhea), PI-3 (parainfluenza-3), and BRSV (bovine respiratory syncytial virus). There are many combinations of respiratory vaccines. Some vaccinate for eight or more diseases.

Sheep and Goats

CLOSTRIDIUM PERFRINGENS TYPES C & D WITH TETANUS

This is used to immunize healthy sheep and goats against enterotoxemia (caused by *Clostridium perfringens* types C & D) and tetanus. There are combinations of vaccines that help protect against these plus other clostridial diseases, but these three are considered the most common.

RESPIRATORY VACCINES

Feeder lambs benefit from respiratory vaccines, according to research conducted by Dr. Don Hansen, Oregon Department of Agriculture (ODA) state veterinarian. Talk to your veterinarian if you are concerned about respiratory diseases in your sheep and goats.



Swine

3-WAY VACCINE

This immunizes healthy swine against atrophic rhinitis, pasteurellosis, and erysipelas. There are vaccine combinations available that immunize for other diseases also, but these three are generally considered the most common.

RESPIRATORY VACCINES

There are many vaccines for swine respiratory diseases. Check with your veterinarian and local producers to find out what diseases are common in your area.

TO IMPORT SWINE FROM ANOTHER STATE

Check with your State Department of Agriculture for regulations that you must abide by. There are specific swine entry requirements for Oregon. They are available from the Oregon Department of Agriculture Animal Health and Identification Division. Look for information on “entry requirements.”

When You Think Your Animal Is Sick...

Look for signs of illness, such as:

- Not eating or drinking
- Change in consistency or texture of manure (diarrhea, dry or hard stool, change in odor or color)
- Discharge from nose or mouth (mucous, froth)
- Discharge from eyes (watery, mucous)
- Abnormal swelling (left side of rumen—possible bloat, abscesses, swollen joints, or lumps)
- Lameness or unwillingness to stand
- Fever (shaking, shivering)
- Itching and hair loss in patches
- Rough, dull hair coat
- Depressed (droopy ears, listlessness, head down)
- Abnormal respiration (breathing)

What should you do first?

1. Examine your animal and note symptoms. Take the animal's temperature rectally.

Animal	Average Normal temp.*	General rule of thumb: call your vet if above
Beef	101.5°F	104°F
Sheep	102.3°F	103–104°F (If on a hot day, then 105°F)
Swine	102.6°F	103–104°F (If on a hot day, then 105°F)
Goat	102.0°F	105°F

* On hot days or after physical activity, your animal's temperature will be somewhat higher.

2. Call your veterinarian. Be sure to tell him or her that you have a 4-H market animal so he or she can choose a treatment that avoids any problems with the Meat Animal Drug Withdrawal Interval. If the vet prescribes a product that requires more time between its use and the intended slaughter date for the animal, the animal should not be slaughtered until the Meat Animal Drug Withdrawal Interval has elapsed.
4. **People who are not licensed veterinarians are not to diagnose or prescribe treatment for other people's animals.** This applies to your 4-H leaders, neighbors, and friends.
5. It is very important to follow through with the prescribed treatment. Do not discontinue prescribed treatments just because the animal's condition begins to improve.

What to do for specific problems

Warts

Warts are common, especially on market-weight cattle. They are caused by a virus and are contagious both to other animals of the same species and to humans. There is a vaccine for warts, but it may not give the level of control you need fast enough. Talk to your veterinarian about a treatment plan.

Many fairs do not allow animals with warts to enter.

Foot rot

Check sheep and goats often for foot rot. There may be an odor, soft spots, and/or maggots in the hoof. The animal limps and holds its foot up off the ground.

Sheep and goats may also get **foot scald**. The only symptom is that the animal does not put weight on the affected foot.

Foot rot and scald are caused by bacteria. You can prevent most foot problems by keeping your animal's pen clean and dry, and its feet trimmed.

If your animal has foot rot:

- Trim the affected area of the hoof.
- Treat it with an approved foot-rot medication.
- Kill maggots with an approved screw-worm spray.
- Use an approved antibiotic, if your veterinarian so advises.
- Remember to follow the Meat Animal Drug Withdrawal Interval for each product.

If your animal has scald:

- Use an appropriate antibiotic, if your veterinarian so advises.

Pinkeye

Pinkeye is an infectious disease of cattle, sheep, and goats that is caused by species-specific bacteria or viruses. The eyes appear pink or cloudy. If it is identified in the early stages (weeping eyes are an early sign), it can usually be treated with an approved antibiotic. If it has gotten to a more advanced stage (for example, the eye is misshapen) more serious treatment may be required.

There is a vaccine that helps prevent pinkeye if it is given before the onset of the disease. It is typically given in the springtime.

Ringworm

Ringworm appears as round patches on the skin with hair loss and scaliness. It is caused by a fungus and can spread to humans.

Ringworm usually clears up with exposure to sunshine. If it does not, ask your veterinarian.

Many fairs do not allow animals with ringworm to enter.

Diarrhea

Figure out the cause:

- Hot weather?
- Feed changed too quickly, or too much grain?
- Illness?

- Parasites?
- Chlorinated water?

Is the animal still drinking water? If so, provide lots of water.

To check for dehydration, pinch the skin of the upper eyelid and release it. If the skin does not return quickly to normal, then the animal may need electrolytes. Call your veterinarian immediately.

Not drinking

When an animal is moved to a new place (such as going to fair) or otherwise stressed, it may not drink enough water. The water at the fair may not taste the same as water at home. You may have to entice your animal to drink enough by bringing water from home or flavoring the water you get at the fair.

Pneumonia

Infectious pneumonia can be caused by either viruses or bacteria. It can be very serious. You must act quickly to identify the cause so that the correct treatment may begin as soon as possible. Consult your veterinarian to decide the best treatment.

Symptoms may include one or more of the following:

- Nasal discharge
- Heavy breathing
- Listlessness, droopy ears, head down
- Coughing
- Diarrhea
- Not eating enough feed and/or drinking enough water

The best defense against **viral pneumonia** is a good prevention program using vaccination and sound management practices. Viral pneumonia is not curable with antibiotics. **Bacterial pneumonia** may be treated with antibiotics.

Bloat

Bloat occurs in ruminants (most commonly in cattle, and less frequently in sheep and goats) when excess gas builds up in the stomach. Mild swelling of the stomach is usually not a serious problem. Serious bloat, when the left side of the animal's stomach is significantly swollen, can cause great discomfort and is frequently (sometimes rapidly) fatal. In serious cases of bloat, getting immediate medical assistance is critical.

Bloating lush legume pastures, consuming high levels of grain, or when they are overfed legume feeds such as alfalfa or clover hay. It is also very important to change your animal's diet gradually. Do not change feeds abruptly.

Medicated feeds

Antibiotics used at sub-therapeutic levels in feed can be an effective tool to increase weight gain. Be sure to **read and follow the label directions**. Comply with the listed Meat Animal Drug Withdrawal Interval on the label. Animals that are fed medicated feeds beyond the appropriate interval may test positive for antibiotics when they go to slaughter.

Medicated feeds should not be used as a substitute for good management.

Animal History

When you buy a new animal, ask the producer for the following information.

(You may complete a Market Health Record in place of this form. You'll find them on the Oregon state 4-H website at <http://oregon.4h.oregonstate.edu/resources/materials.html>)

1. Producer's name _____ Phone _____
Address _____
2. Weight of animal _____ Cost of animal _____
3. When was the animal born? _____
4. What breed is the animal? _____
5. What has the animal been fed? (Be specific: list the type of hay or grain, % protein, or other important information.) (Remember to change the animal's diet gradually.)

Feed	Amount (per day)

6. Has the animal been vaccinated? Yes ___ No ___

Vaccinations	Date of most recent vaccination	Does the animal need a booster shot?	When should the booster shot be given?

7. Has the animal been treated for internal parasites (dewormed)? Yes ___ No ___
What products were used most recently?

Products used	Most recent date

8. Has the animal been treated for external parasites? Yes ___ No ___

Products used	Most recent date

9. Has the animal been castrated and dehorned (if necessary)? Yes ___ No ___
When? _____