

Livestock Health: Choosing Animal Antibiotics & Vaccines



TSC stocks a wide range of **vaccines** and **medications** to treat and/or prevent illness in your livestock and pets – much more than we've listed here. Just call your local Tractor Supply Co. store. Our experienced staff will be happy to help you.

How to prevent and treat parasites

Livestock herds and individual animals should be **de-wormed** twice a year: once in the spring and once in the fall. This will help prevent parasites such as roundworm, flukes and tape worm from taking hold in your herd, causing illness.

Work with your veterinarian to develop a deworming schedule of your own, or refer to the following deworming schedule.

Spring season deworming

Cows, bulls and calves need to be treated with deworming medication 6 weeks after parasites are known to emerge in your area. Depending on where you live, the timing could be earlier in the spring or later. Contact your local ag extension agency to find out what time of year the most common parasites begin propagating and time your deworming schedule from there.

Sometimes a second treatment is needed to kill all of the parasites. Wait until 12 weeks after first exposure to parasites to administer the second parasite treatment.

Fall season deworming

Cows, bulls and calves need to be treated with deworming medication in the fall after the first big frost, or "killing" frost. A "killing" frost is defined here as one that would be cold enough to kill a tomato plant. If you live in an area where there is no frost, or rare frost events, time your second annual deworming around Thanksgiving.

As always, check with your veterinarian to make sure there are not additional actions you need to take to properly rid your herd of parasites.

Cattle vaccines and antibiotics

Every effort has been made to ensure the accuracy of the information published. However, it remains the responsibility of the readers to familiarize themselves with the product information contained on the product label or package insert.

Biologicals : Vaccines, bacterins, toxoids, and anti-Serums

Biologicals are products designed to stimulate an animal's immune system in response to an invasion of viruses or bacteria. Make sure to read product labels and avoid off-label use of products. Also be aware of the withdrawal time after administering animal biologicals, that is, the length of time you must wait after using a vaccine or antibiotic before you can safely use milk or meat from the animal.

Biologicals include vaccines, bacterins, toxoids and anti-serums. Read below for a list of common animal vaccines, bacterins, toxoids and anti-serums:

- **Modified Live Virus Vaccine:** These vaccines contain live virus that have been modified so that they can no longer cause the disease, but will still cause an immune response in the animal. Modified live vaccines must be reconstituted and used when first opened. The advantages of modified live virus vaccines are that they yield a quicker immune response and usually require only one dose. The disadvantage is that they can trigger some symptoms of the disease.
- **Killed Virus Vaccine:** These vaccines contain killed virus that can still cause an immune response in the animal. The advantage of killed virus vaccines is fewer side effects. The disadvantages are that they have a slower response time and are more expensive.
- **Bacterin:** These vaccines contain a preparation of killed bacteria and work similarly to killed virus vaccines.
- **Toxoids:** Toxoids contain inactive versions of toxins released by bacteria. The toxoid causes the body to create an anti-toxin to neutralize toxin in the system.
- **Antitoxin, Antiserums, Serums** – These are not technically vaccines, because they do not stimulate the animal's body to fight the infection itself. Instead, these products give immunity by fighting the infection directly. As a result, they provide only short-term prevention and are most often used when there has been exposure to a virus or bacteria, such as a puncture wound or cut in the case of tetanus.

- Bacterial infections are often secondary infections that take advantage of an initial viral infection. An example is "Shipping Fever" in cattle, where an initial infection by the IBR virus is followed by a pasteurella bacteria infection that causes pneumonia.

Antibiotics

An antibiotic is a drug that controls or kills bacteria in the animal's body. Antibiotics only work against bacteria and not against viruses. The numbers that appear in the names of injectable antibiotics refer to the amount (in milligrams) of drug in each milliliter of the product. Long- vs. Short-Acting Penicillin – Benzathine is an ingredient added to penicillin to make it last longer in an animal's system. Any penicillin product containing Benzathine will be a long-acting product and so will have a longer withdrawal time.

There are two varieties of antibiotics:

- Broad Spectrum – These antibiotics control a wide variety of bacteria. Examples: Liquamycin LA-200, Duramycin 72 200.
- Narrow Spectrum – These antibiotics control a narrower range of bacteria. Examples: Pen Aqueous, Combi-pen 48, and Tylan.
- Antibiotics can be administered in a variety of ways:
 - Injectable – Injected with a syringe.
 - Topical – Rubbed on the skin, as on a wound.
 - Oral – Taken through the mouth.

For specific questions about vaccines or antibiotics for livestock, dogs or cats, call your veterinarian.