

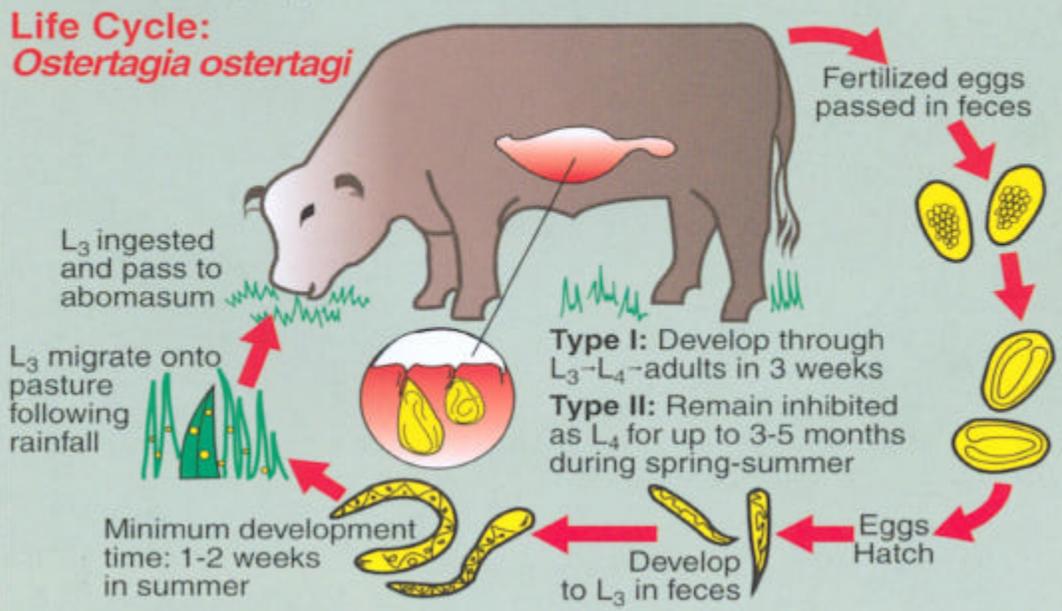
Deworming Cattle for Profit
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The purpose of deworming is to increase the income of the producer and decrease the suffering of cattle caused by worms. If we are spending more money on parasite control than we benefit from doing it, we need to examine our methods. The questions that are usually asked about cattle deworming are when to deworm and what is the best product to use. To answer these questions we need to look at how cattle are managed on the farm. Cattle are continuously exposed to worms as they graze forage. Our abundant forages in the southeast are a two edge sword and one of the reasons our cattle experience more of a worm problem is they are able to graze most of the year. Roundworms, especially the brown stomach worm, are the main cause of parasitic losses in cattle. Most of our deworming effort should be directed at this worm. Young animals and bulls are more susceptible to clinical infestation with parasites than mature cows because of their lack of immunity to worms.

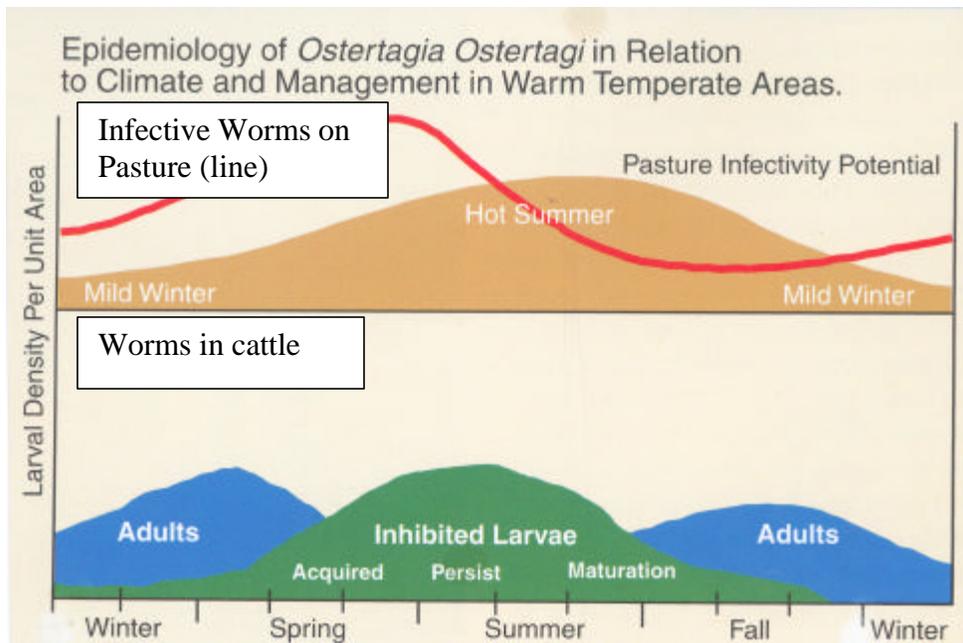
The affect of worms on a mature cow is usually sub-clinical; poor milk production, reduced reproductive efficiency and more feed to maintain body condition. More severe clinical signs are often seen in young calves as they begin to graze. The consumed infective larva attaches to the gut lining and suck blood from the calf. To complicate the situation, the irritation produced in the gut lining decreases the appetite of the calf depleting the calf's energy and protein reserves. Decreased weight gains of 60+ pounds are commonly observed with severe worm burdens in young calves.

A strategic plan for roundworm control must include seasonal variation of infective larva on pastures and approaching control on a herd basis. **The pasture is the key to parasite control. About 90% of the worm population is on the pasture at any one time with only 10% in the cattle . If we spend our resources on deworming cattle and turning the herd back into the same pasture they came from at the wrong time of year, we are not making efficient use of our deworming dollar.** The primary objective of strategic deworming is to develop and maintain "worm safe" pastures throughout the entire grazing season. This goal is accomplished by preventing heavy pasture contamination through the shedding of worm eggs in the manure during the grazing season. Use a dewormer that will kill all stages of the worm (both mature and immature worms).

Figure 7(B). Life cycle of gastrointestinal nematodes in cattle. Life cycle of *Ostertagia ostertagi*, including notes on the inhibited larval phase that occurs in spring and summer in Louisiana.



Adult roundworms live in the stomachs and intestines of cattle and deposit their eggs in the intestine. These eggs pass into the environment in cattle manure. The eggs either hatch into larvae, molt and become infective roundworm larva or if environmental conditions are harsh they form an inhibited stage on the pasture. The moisture and warm temperatures of the southeastern climate increase the survival of the larva. Infective-larva then migrate up blades of grass and are eaten as cattle graze. The number of cattle per acre (population density) tends to be greater here in the southeast than in more arid areas of the west, so more manure is deposited per acre of pasture and more of the larva survive. The result is cattle in the southeast ingest large numbers of infective larva each day. It is not unusual for a cow to have 30 roundworm eggs per gram of manure or 13,000 eggs per pound of manure. Typically, a cow will eliminate over 31 pounds of manure per day so in one month one cow will deposit over 12 million eggs in the pasture. The following table shows the dynamics of these worms on pastures and in the cattle. An additional complication is that worms have the ability to form inhibited stages on the pasture during periods of hot dry or freezing weather. Then when the environment becomes non-hostile for the worm, it changes from an inhibited stage on the pasture to an infective larva. Inhibited stages are also formed in GI tract of cattle during hostile weather conditions. These are predictable events and we can use this information to develop a better deworming program. The chart below shows pasture and cattle infect ability.



You can see that the highest level of pasture infection is in the Winter and Spring with the lowest level of pasture infection occurring in the Summer. Adult worms in the cattle are lowest in the summer. **So if we deworm July 1, the worms on the pasture are at a low level and the number of adult worms in the cattle are at a low level. If you use a dewormer that kills adult worms and inhibited larva and you use a dewormer that has a residual killing affect you get the most out of the money and effort.** Products like Ivomec, Eprinex, Dectomax and Cydectin will kill adult worms and inhibited larva and have a residual killing effect. Some of the other products currently on the market have not been tested for effectiveness.

To get the most return on your deworming investment:

1. Always deworm cows, calves, replacement heifers, and bulls late June or early July with a dewormer that has been proven to kill inhibited larva.
2. If you deworm cows more than once each year include a dewormer at the beginning of the breeding season or about January 1.
3. If you wean after July 1 be sure to deworm your calves at weaning.

With the quality of deworming products we have at our disposal today, we can reduce the economic losses due to cattle parasites and do it cost effectively. **We need to have a strategic plan that controls both worms in the cattle and worms on the pasture.** Your local veterinarian can assist you in developing a strategic deworming program specific to your location and operation.