

# SHOULD I DEWORM MY CATTLE BEFORE PASTURE?

The short answer? — yes

**I**nternal parasites (worms) and external parasites (flies, lice, and mites) are very common in cattle and at any one time, essentially all animals are infected to some degree. The type of parasites, the level of infection and the impact on health and performance does greatly vary upon the season. It is well recognized that severe infections with parasites can cause clinical disease such as rough hair coat, anemia, diarrhea, weakness, severe weight loss, loss of appetite and pneumonia. However, it is the subclinical infections that have the greatest impact on herd health and profitability to producers.

## What problems do they cause?

Many species of worms live in the digestive tract of cattle and some live in the lungs (lung worm) and around the eyes (eyeworm). Intestinal parasites reduce growth rates in calves and yearlings and cause weight loss in cows and bulls by impairing appetite and reducing the absorption of nutrients. Infected cows produce less milk, further affecting weight gain in nursing calves. Lungworms can cause serious and even fatal pneumonias in cows, calves and yearlings.

## When are cows and calves infected?

The worm life cycle begins with the passage of eggs from the cow in the manure at the beginning of the grazing season in May. The eggs hatch and the larvae migrate onto the vegetation where they are consumed by cattle grazing the pasture in a cycle that can be repeated several times over the growing season. By the end of the summer without control, cows and calves can become heavily infected and pastures contaminated with larvae. In Canada the larvae are killed by freezing but some survive the winter in a dormant state inside cattle until spring when the life cycle is repeated.

## When is the best time to treat?

The key to parasite control is to pre-

| Animals       | Cost of treatment | Weight gain (lb.) | Total benefit (hd.) |
|---------------|-------------------|-------------------|---------------------|
| Cow-calf pair | \$0.75 - 3.00     | 19 (calf only)    | \$23.98*            |
| Yearling      | \$0.50 - 1.50     | 33                | \$39.75*            |

\*Based on 600-700 lb. steers March 4, 2011 price \$1.42/lb. and 800-900 lb. steers price \$1.25/lb.

vent or reduce pasture contamination over the spring, summer and fall grazing period. This is best achieved by treating all the cows, calves and bulls in the late May and early June before they are put on pasture. This eliminates the surviving worms in the animals which stops the shedding of eggs before it starts.

## What are the economic benefits?

Numerous studies in Canada and the Northern U.S. have shown deworming increases weight gains in calves an average 19 pounds and yearlings 33 pounds over the summer (see table).

Conception rates improve in dewormed cows as they are not losing weight. In addition, animals that are not stressed with a worm burden have a more active immune system and are more resistant to infections.

## What are the treatment choices?

There are several. Macrocytic lactones (ivermectin, doramectin, moxidectin) are available in pour on and injectable preparations. These products kill adult worms, developing larvae and inhibited larvae in the intestine and the lung. They have the advantage of also killing ectoparasites (mange, lice, flies and grubs). The benzimidazoles (fenbendazole, albendazole) are oral products which also control adult worms and larvae but have no effect on ectoparasites.

The topical deworming agents are frequently preferred as there is less stress on animals and fewer chances of treatment accidents (broken needles, aspiration of product).

## How long do deworming agents work?

Macrocytic lactones have a residual effect meaning the drug continues

to kill ingested larvae and ectoparasites for weeks following treatment.

## Do I need to treat all my animals?

As the pasture is the source of infection and reinfection of cows and calves, all animals need to be treated before they are introduced to the pasture. Infected animals that are not treated can infect the whole herd.

## Do some treatments also control flies?

Macrocytic lactones do kill horn flies. They also leave a residue in the manure that kills fly larvae.

## Do I need to deworm in the fall too?

By fall cows and calves will have accumulated worm burden and need to be treated for both internal and external parasites such as lice, grubs. There is a significant economic benefit to deworming cows and calves in the fall.

## In summary

- Deworm cows, calves and bulls before they are turned out to pasture.
- Use a dewormer that kills adults, developing larvae and inhibited larvae.
- Use a dewormer that also controls flies if insecticide tags and oilers are not used.
- Retreat cows, calves and bulls in the fall.
- Consult your veterinarian or beef specialist about products and programs that best meet your needs. 🐄

— Dr. Merle Olson

*Dr. Olson is a veterinarian at the University of Alberta and research director of Alberta Veterinary Laboratories.*