Coccidiosis in dairy calves and heifers

What is coccidiosis?
Coccidiosis is an infection of the large and small intestines caused by protozoan parasites. In the host animal’s intestinal cells, coccidia undergo developmental, reproductive cycles (see life-cycle diagram on reverse).

How do animals get coccidiosis?
- Infected animals shed infective oocysts in feces
- Non-infected animals become infected by consuming oocysts from fecal-contaminated pasture, feed, water, bedding and by grooming contaminated hair coats
- Protozoan parasites may remain dormant for weeks or months in soil, water and vegetation, thriving in a moist, moderate, airy environment

How does coccidiosis affect cattle?
- Coccidiosis can decrease weight gain
- The infection destroys cells lining the lower GI tract, causing a reduction in nutrient absorption, thereby reducing feed efficiency

What are some of the signs?
- Diarrhea (watery to sometimes bloody), fecal soiling on the tail
- Dehydration, reduced feed intake, weakness, depression

What animals are at a high risk of developing coccidiosis?
- Calves after 3 weeks of age and up to 6 months are most vulnerable
- Over-crowded/confined animals (freestall barns, feedlots, small pastures)
- Animals in “stressful” situations: weaning, pen moves, shipping, diet/weather changes
- Infections are frequent during management changes and temperature fluctuations
- Animals not provided with an effective coccidiosis control program or without an effective ionophore included in their diet

Economic impact: The cost of coccidiosis worldwide is estimated at $400 million (U.S.)
Cost estimate includes animal death loss to coccidiosis, veterinary expenses and treatment of clinical coccidiosis, but does not include losses due to subtle impaired growth, impacts on feed efficiency, and effects of subclinical coccidiosis.

(Jolley and Bardsley, 2006)
Prevention is key

How can producers prevent coccidiosis in their replacement animals?

- Limit fecal-to-oral transmission of the coccidiosis parasite through environmental management
  - Minimize exposure of animals to fecal-contaminated feed, water, and soil
  - Routinely clean maternity pens for early prevention
  - All-in/all-out hutch management (clean, relocate hutches between calves)
  - Minimize contact between calves
  - People in contact with calves should routinely wash boots, clothing
  - Prevent overgrazing of pastures
  - Raise water troughs above the ground
- Isolate animals with severe clinical signs (severe diarrhea, dehydration)
- Include Rumensin in the calf starter to prevent coccidiosis “breaks”

Rumensin provides continuous coccidiosis prevention through three different stages in the coccidian life cycle

1. Rumensin kills coccidia before they invade the small intestine
2. Rumensin kills coccidia emerging into the lumen of the small intestine
3. Rumensin reduces the opportunity for reinfection by reducing oocyst shedding

Options for control and treatment: coccidial vs. coccidiostatic

Agents are either coccidial (cidal), which means they KILL the parasite, or coccidiostatic (static), which do not kill the parasites, but arrest their development. With coccidiostatic treatment, the live parasites will still be present in the calf’s intestines.

<table>
<thead>
<tr>
<th>Agent</th>
<th>Killing action</th>
<th>Trade name</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monensin</td>
<td>cidal</td>
<td>Rumensin®</td>
<td>Rumensin controls the protozoan population by killing the coccidiosis parasites.</td>
</tr>
<tr>
<td>Lasalocid</td>
<td>cidal</td>
<td>Bovatec®</td>
<td></td>
</tr>
<tr>
<td>Amprolium</td>
<td>cidal</td>
<td>Corid®</td>
<td></td>
</tr>
<tr>
<td>Decoquinate</td>
<td>static</td>
<td>Deccox®</td>
<td></td>
</tr>
</tbody>
</table>

Bovatec® and Deccox® are registered trademarks of Zoetis. Corid® is a registered trademark of Merial.

For additional product information or to report a suspected adverse event associated with the use of this product, call (800) 428-4441.