



COW SENSE CHRONICLE

JUNE 2014

FOOT ROT: CAUSE, TREATMENT, AND PREVENTION

It's summertime! Along with the positives might come a few negatives—like pinkeye, horn flies, and perhaps foot rot. I've spent some time on the first two in previous issues of Cow Sense Chronicle; this month, the focus is on foot rot.

Foot rot or “foul foot” is a necrotic infectious disease of cattle (and other livestock) which causes swelling and lameness in one or more feet. “Necrotic” implies tissue decay and death, and if you've been around a bad case of foot rot you know that it can get pretty stinky. Spreading of the toes and dewclaws are fairly classic signs of foot rot. Generally, some injury or softening and thinning of the skin between the toes provides the entry point for the infectious agents that cause foot rot. This might be from rough ground, muddy conditions, or a myriad of other conditions that cattle might encounter in their environment. The bacteria cannot gain entry to the skin by themselves and cause foot rot.

A bacteria called *Fusobacterium necophorum* is most commonly associated with foot rot. This bacteria is also isolated from feeder cattle liver abscesses and calf diphtheria. It is a normal resident of the digestive tract in ruminants, and may survive in soil for up to 10 months. It secretes a toxin that interferes with white blood cells ingesting bacteria and causes the tissue decay and pockets of pus. In cattle foot rot, *F. necophorum* commonly cooperates with another bacteria, *Bacteroides melani-nogenicus*, which produces protein-degrading enzymes that damage the subcutaneous tissue and tendons. In sheep, the cooperating bacteria is called *Dichelobacter nodosus*, and it produces an enzyme that digests the connective tissue between the horn and flesh of the hoof.

Treatment of foot rot is generally quite successful, especially when treated early. Recovery can often be observed in 3-4 days from one antibiotic treatment. Multiple treatments may be necessary if the foot rot is not caught early and has progressed over the course of several days. Penicillin, oxytetracycline and sulfonamides are effective antibiotics to use for foot rot cases (always read and follow label directions, using appropriate administration technique). If animals do not respond at all to treatment within 3-4 days, evaluation by a veterinarian in a timely manner may be advised.

Prevention of foot rot may focus on management practices that reduce the likelihood of injury to the skin between the toes. Maximizing drainage around water tanks or other areas that are likely to get muddy (feed bunks, etc.) and minimizing time cattle spend standing in wet areas or on rough ground (perhaps easier said than done!) decreases conditions that might predispose foot rot.

Some producers may have used supplements containing chlortetracycline (CTC) for control of the diseases on its label and seen decreased foot rot incidence. As discussed in the May 2014 issue of Cow Sense Chronicle, over-the-counter use of “medically important” feed antibiotics (of which CTC is one) will cease in the future. At that time, supplements containing CTC will need a veterinary feed directive.

Another approach to prevention is to focus on mineral nutrition, particularly zinc. Zinc is important in maintaining skin and hoof integrity. Cattle should be provided with adequate dietary zinc to help minimize foot rot and other lameness issues.

Finally, a commercial vaccine for foot rot, called Fusogard® is available from Novartis Animal Health. It requires a dose and a booster 21 days later the first time it’s used, then revaccination is recommended annually or any time endemic conditions exist, exposure is imminent, or as recommended by your veterinarian. This may be an especially appealing approach to producers in natural or organic programs. Some producers I’ve visited with vaccinate their bulls each year before breeding season in an effort to keep them sound so they can conduct their important work!

Have a great summer, everyone! May your foot rot, pinkeye, and horn fly battles be minimal and easily conquered.



JUNE 2014

TRAVEL AND EVENTS

Sun	Mon	Tue	Wed	Thu	Fri	Sat
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
-----Western Extension Leadership Development Conference, Maui, HI-----						
<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>
					MSGA Mid-Year, Miles City	
	Performix Producer Meetings: Park, Powell, & Granite Co.'s					
<i>15</i>	<i>16</i>	<i>17</i>	<i>18</i>	<i>19</i>	<i>20</i>	<i>21</i>
		Ag Lenders Range School, Voldseth Ranch, Martinsdale				
<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>	<i>26</i>	<i>27</i>	<i>28</i>
<i>29</i>	<i>30</i>					