

# TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT  
June 2023 – Volume 43 – Issue 6



## EXTENSION

<i>In this edition...</i>			
Foot Rot in Cattle	Page 1	Are You Implanting Your Calves?	Page 2
Home Grown – Hort. Tips for June	Page 2	LRP: A Review of 2022	Page 3

### Foot Rot in Cattle

*Barry Whitworth, DVM, Senior Extension Specialist, Dept. of Animal and Food Sciences, OSU*

The long-range forecast found at the Mesonet (<https://www.mesonet.org>) is predicting above normal chances for precipitation over the next few weeks for most of the state. Many areas in Oklahoma have received much needed rain in the past few days. With moist conditions, producers should be observing their cattle for foot rot.

Foot rot is caused by *Fusobacterium necrophorum* subspecies *necrophorum* and sometimes other bacteria are involved (*Porphyromonas levii*, *Prevotella intermedia*, *Staphylococcus aureus*, *Escherichia coli* and *Truperella pyogenes*). These bacteria are normal inhabitants of the digestive tract of cattle and consequently in the environment. The problem arises when the bacteria enter the tissue of the foot through a break in the skin. The damage to the skin may be from puncture wounds or abrasions or continuous exposure to wet conditions which softens the skin. Once the bacteria gains entry into the tissue, it multiplies and releases toxins that damage tissue. If left unchecked, the bacteria invade deeper structures in the foot. This may result in permanent problems and may shorten the life of the cow.

Diagnosis of foot rot begins with a thorough examination of the foot. Foot rot lesions usually infect both claws, so if only one claw is infected, the problem is not likely foot rot. Producers should look for signs of swelling between the toes as well as redness or necrotic tissue. Also, observe for separation of the skin at the hoof wall. Most cases of foot rot will have a foul smelling odor. The foot may feel warm to the touch. This distinguishes foot rot from fescue foot which is cold to the touch. Cows may have a fever and refuse to eat. Most cows are reluctant to bear weight on the infected foot due to pain.

When treated early, most cases respond well. Treatment begins with cleaning the foot and removing as much necrotic tissue as possible before applying a topical medication. Most cases do not require bandaging. Administering an antibiotic is also necessary. A producer should consult with their veterinarian for what product works best in their area. Pain management may also be necessary in some cases. Sometimes damage to deeper structures of the foot occur and require more aggressive therapy such as surgical intervention to salvage the animal.

There is a very aggressive form of foot rot with a fast onset, extreme necrosis, and erosion of the interdigital space. The condition is referred to as “super foot rot”. This condition is resistant to regular treatments. Super foot rot is thought to be caused by a resistant strain of *Fusobacterium*.

Prevention is the best plan of action and begins with good hygiene. Preventing cattle from standing in wet manure infested areas will help detour foot rot. Cows that have foot rot should always be isolated until healed. In the past, the use of ethylenediamine dihydriodide (EDDI) was used to prevent foot rot. However, under the US Food and Drug Compliance Policy Guide, the use of this product is restricted. Also, under the Veterinary Feed Directive (VFD), chlortetracycline (CTC) cannot be added to feed for the prevention or treatment of foot rot since VFD drugs cannot be used in an extra-labeled manner. If cattle are deficient in zinc, the addition of a mineral mix with zinc may aid in prevention of foot rot. Footbaths work well in confinement operations but are not practical in range conditions. There is a foot rot vaccine available with a label claim to aid in preventing disease.

## TIMELY TOPICS

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EXTENSION

The most important thing producers should do is to pay close attention to their cows during these wet conditions. At the first sign of lameness, cattle should be examined for any signs of foot rot and treated promptly. Any delay may lead to complications.

For more information about foot rot, producers should consult with their veterinarian and/or their local Oklahoma State University County Ag Extension Educator. Also, a fact sheet AFS-3355 with detailed information on foot rot is available from Oklahoma State University Cooperative Extension Service at <https://extension.okstate.edu/fact-sheets/foot-rot-in-cattle.html> or copy can be obtained from the local county Extension office.

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### Home Grown – Horticulture Tips for June

*Laura Payne, Horticulture Educator, Payne County*

Here's your horticulture tips for June:

- Remain diligent for insect activity. For vegetable growers, scout often so you can maintain the upper hand. Remove the early insects by hand. Inspecting for and destroying eggs before they hatch should be a high priority. Often times this will eliminate/reduce the need for chemical control.
- Spider mites can also be a problem this time of year. Scouting these are more difficult as spider mites are extremely small and difficult to see with the naked eye. An easy tip for detection is to place a piece of white paper under a leaf and tap on the leaf several times to knock the mites on the paper. The mites will be easy to spot as they scurry around. Insecticidal soaps and neem oil offer some control of mites but diligence is necessary to keep the populations low as they reproduce rapidly as the temperatures go up. Note that most all purpose insecticides do NOT provide spider mite control so product selection is somewhat limited. Even products that are labeled for control do not work well once populations become high and the mites protect themselves with webbing. Once webbing is evident, it is best to remove the infested leaves.
- June is also a good time to begin controlling the growth of select flowering plants. Educate yourself on the growth habits of the specific plants in your garden as it is important to prune at the proper time so flowering is not adversely affected. In general terms, most annuals benefit from light pruning (pinching back) to prevent them from developing leggy weak stems and to encourage continued blooming. Many of the spring blooming perennials are now past their peak bloom and can be cut back as well.
- Remove any wraps that have been placed on trees to prevent winter injury or deer damage. Leaving this material on throughout the growing season increases the opportunity for insects and disease to attack your tree. Just make a note on your calendar now to replace it again in the fall.

For more information on this or any other horticultural topic, you can contact your local OSU Extension Educator

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### Are You Implanting Your Calves?

*Earl H. Ward, Area Livestock Specialist*

It still amazes me how many cow-calf producers are not implanting their calves. Many say it is because they want to sell them "all natural." However, rarely are those calves market to an all-natural program, they are just sold at the sale barn. This means that the producer is not utilizing every tool they have to increase the amount of revenue that could be generated from their calf crop.

## TIMELY TOPICS

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EXTENSION

Growth promoting implants have been used to boost beef production since their approval by the Food and Drug Administration in the 1950's. Implants are approved for the use in beef cattle to increase weight gain and increase feed efficiency. There are three natural hormones (estradiol, progesterone, and testosterone) and two synthetic hormones (zeranol and trenbolone acetate) used in the beef cattle implants. Estradiol, progesterone, and zeranol are estrogenic hormones, which are hormones that affect female characteristics. Testosterone and trenbolone acetate are androgenic, which refers to hormones affecting the male characteristics.

Implants are small pellets that are inserted into the middle third on the back side of the animal's ear, between the skin and cartilage and slowly dissolve into the blood stream. The ear is used because it does not enter the food system. Estrogenic implants increase the amount of somatotropin and insulin-like growth factor in circulation. Androgenic implants increase the insulin-like growth factor as well as decrease the loss of muscle tissue. Some implants use a combination of both estrogenic and androgenic hormones. Since implants affect the hormone production by the animal, they are not recommended for the use in animals intended for breeding.

A multitude of implants are marketed for beef production. They will be marketed as gender specific, be targeted for a certain stage of production, and they have various levels of potency. A higher level of potency is only recommended when the increased potential can be met nutritionally. Much like an animal's genetic potential, it would not be able to reach the implants full potential without adequate nutrition provided.

This long-time proven tool for producers comes at a cost of \$1.50 to \$2.00 per head depending on the chosen implant. That investment could increase a nursing calf's daily gains by 0.10 pounds per day. Over 90 days, that would be a minimum of 9 pounds of additional gain per calf. Lets say that currently a 500 cwt calf is bringing \$2.50/lb, well then that means that your \$2/hd investment just returned \$22.50/hd. That's a 1025% rate of return on investment. Not a bad payout.

If you have any questions on how to implant calves or which implants to choose then contact your county's OSU Extension Educator.

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### LRP: A Review of 2022

*Scott Clawson, Area Agricultural Economics Specialist*

Livestock Risk Protection (LRP) has been a growing topic of conversation as the use of this price risk management tool is growing rapidly. As time passes and data becomes available, the preferences and manner that LRP is implemented will be more evident. At this point we are just catching some glimpses as to how it is being used by producers.

#### *LRP Popularity*

While LRP has been around since the early 2000's, adoption has been slow. The program has undergone multiple changes altering policy specifics and underlying subsidies. In 2021, the number of feeder cattle that were covered under LRP surged to 113,971 head then to 290,326 the following year. The number of head covered to date in 2023 has already surpassed 2022 with 295,958 head covered. The increasing popularity of the product has made it much easier to find local support as more providers have entered the market to meet the stronger demand for these policies.

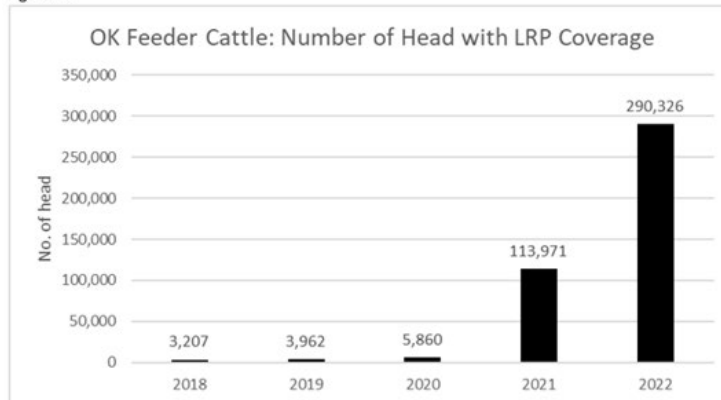
# TIMELY TOPICS

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EXTENSION

Figure 1:



Data source:

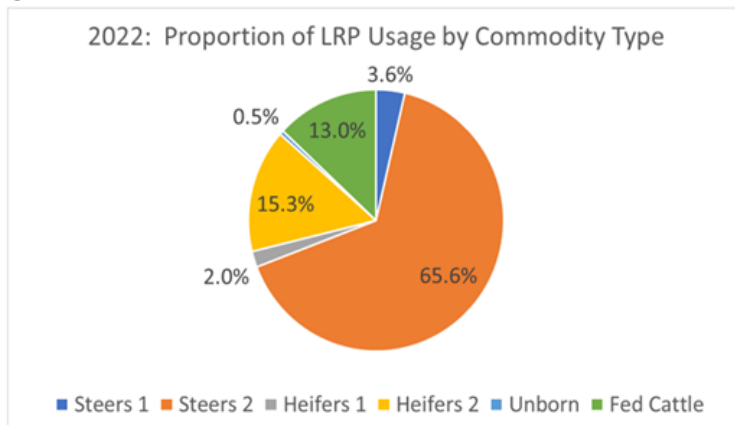
<https://www.rma.usda.gov/Information-Tools/Summary-of-Business/Livestock-and-Dairy-Participation>

Retrieved on 5/31/23

## LRP Implementation

In 2022, LRP found a home in heavier weight feeder cattle with high levels of coverage. Figure 2 illustrates what type of cattle were insured in 2022. Steers 2 and Heifers 2 (“2” indicating the 600-900 pound category) make up 80.9% of insured cattle that year. 13% are considered fed cattle. The balance (6.1%) is under 600 pounds likely making up cow-calf producers. Also, producers are finding value in the higher levels of coverage. As Figure 3 shows, 85% of feeder cattle insured were in policies at or above the 98% coverage level with a slim number insured at under 95%.

Figure 2:

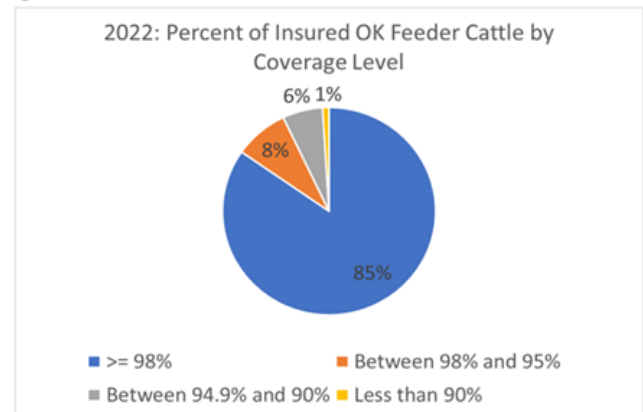


Data source:

<https://www.rma.usda.gov/Information-Tools/Summary-of-Business/Livestock-and-Dairy-Participation>

Retrieved on 5/31/23

Figure 3:



Data source:

<https://www.rma.usda.gov/Information-Tools/Summary-of-Business/Livestock-and-Dairy-Participation>

Retrieved on 5/31/23

Data suggests this product has yet to resonate on the cow-calf or pre-weaning front and it seems that producers are using this more to secure some level of profit as opposed to break even protection or a form of catastrophic coverage. Overall, it will be interesting how the usage of the product evolves as more producers are aware and comfortable with it. For more information on LRP, contact your local OSU Extension Educator.



<b>Value of Gain Calculation</b>						
EXTENSION						
OK Weighted Average Report 5-26-23						
Weight	\$/lb	Value/hd	Added lb.	Added \$	\$/lb Added	
331	\$ 3.1990	\$ 1,058.87				
383	\$ 2.9875	\$ 1,144.21	52	\$ 85.34	\$ 1.64	
422	\$ 2.8828	\$ 1,216.54	39	\$ 72.33	\$ 1.85	
477	\$ 2.7934	\$ 1,332.45	55	\$ 115.91	\$ 2.11	
524	\$ 2.7047	\$ 1,417.26	47	\$ 84.81	\$ 1.80	
573	\$ 2.5088	\$ 1,437.54	49	\$ 20.28	\$ 0.41	
615	\$ 2.4154	\$ 1,485.47	42	\$ 47.93	\$ 1.14	
670	\$ 2.2789	\$ 1,526.86	55	\$ 41.39	\$ 0.75	
734	\$ 2.1642	\$ 1,588.52	64	\$ 61.66	\$ 0.96	
775	\$ 2.1096	\$ 1,634.94	41	\$ 46.42	\$ 1.13	
812	\$ 2.0394	\$ 1,655.99	37	\$ 21.05	\$ 0.57	
923	\$ 1.9334	\$ 1,784.53	111	\$ 128.54	\$ 1.16	
1057	\$ 1.7518	\$ 1,851.65	134	\$ 67.12	\$ 0.50	
Long Stocker Run		Short Stocker Run		Heavy Stocker Run		
<i>Starting</i>		<i>Starting</i>		<i>Starting</i>		
331	\$ 1,058.87	331	\$ 1,058.87	615	\$ 1,485.47	
<i>Ending</i>		<i>Ending</i>		<i>Ending</i>		
1057	\$ 1,851.65	524	\$ 1,417.26	1057	\$ 1,851.65	
<i>Total Gain</i>	<i>Δ Value</i>	<i>Total Gain</i>	<i>Δ Value</i>	<i>Total Gain</i>	<i>Δ Value</i>	
726	\$ 792.78	193	\$ 358.39	442	\$ 366.18	
VOG		VOG		VOG		
\$ 1.09		\$ 1.86		\$ 0.83		



Brian C. Pugh, Area Agronomy Specialist



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