

# TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT  
August 2023 – Volume 43 – Issue 8



## EXTENSION

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### Home Grown – Tree Update

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*Laura Payne, Horticulture Educator, Payne County*

I'm starting to receive a lot of calls again pertaining to tree issues. Clients are seeing browning of the leaves and early leaf drop. Even though we can't always say for certain what might be causing a problem with a specific tree, here's a general summary of what we are seeing and what, if anything, you need to do about it.

Our early season weather seems to be a big contributor to the symptoms we are seeing now. We started off this season with a lot of rainfall after a drought. The damp conditions along with the temperatures created a very humid environment. This was the perfect formula for leaf spot fungal diseases to move in on a variety of plants, not just trees. We also experienced so much rainfall that I saw trees just sitting in water. Poor drainage and saturated soils deplete the plants roots of oxygen causing root rot.

Then we went from a lot of rainfall to no rain and really high temperatures. This scenario created a type of flash drought. The leaves on my tomato plants started turning yellow and then brown. The soil around my tomatoes seemed moist one day and the next it was so dry my plants were flagging before I got home from work. I'm not too worried about my tomatoes because it's time to cut them back by about one-third and get ready for a fall crop, but I was a bit concerned about my Oak trees. However, I have now had three inches of rain to help my trees recover and although they will still look bad, I'm not going to worry about it. The reason I'm not worried about my trees is that the leaves were green long enough for the tree to photosynthesis to make and store food, and fall is just around the corner.

Dutch Elm Disease (DED) continues to take out a few elms every year and this year will probably be no exception. However, just because an elm is turning brown does not automatically mean DED is the cause. The leaf spot diseases mentioned above plus the presence of leaf-chewing insects can also cause the decline. If your tree leaves are gradually declining all over the plant, it is nothing to be concerned about. Of greater concern would be when one or two branches turn completely brown in a short period of time, with the adjacent branches taking on a wilted appearance. DED kills trees by clogging the vascular system and choking off large parts of the plant. If you see signs of possible DED, always look carefully at the condition of the branches before jumping to conclusions. I have submitted several Elm samples to the lab and not one of the samples came back positive for DED. Elms are weak wooded trees and are easy damaged with broken or twisted limbs.

High winds and ice storm damage on trees are a huge contributor to tree diseases. When a tree limb breaks off beyond the branch collar, the tree can't close off the wound and heal as fast. The open wound is perfect for diseases and insects to enter and start destroying the tree. It is always recommended to hire a certified arborist to come and assess the tree damage and make a proper cut to the damaged branch so the tree can heal properly.

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

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### Dermatophilosis

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*Barry Whitworth, DVM, Senior Extension Specialist, Department of Animal and Food Sciences*

The rain has been a welcome sight in Oklahoma. Unfortunately, abundance of moisture and warm temperatures produce some unwanted diseases in animals. One of these diseases is a skin condition called Dermatophilosis. Dermatophilosis is caused by a bacteria known as *Dermatophilus congolensis*. *Dermatophilus* means skin loving. *Congolensis* was the species name chosen by René Van Saceghemthe, a Belgium military veterinarian stationed in the Congo in 1915. Common names for the skin infection are rain scald, rain rot, and streptotrichosis. In sheep the disease is named according to the location of the outbreak. Sometimes it is called lumpy wool disease while other times it is called strawberry-foot rot. Strawberry-foot rot is uncommon in the United States. Cattle are the animal most commonly infected, but horses, sheep, goats, and some other animals can be infected as well.

*D. congolensis* is gram positive bacteria that thrives in moist warm conditions. The bacteria can be found on the skin of many animals. When skin is continuously wet the top layers soften which allow for the bacteria to penetrate and grow. The bacteria can also gain entry from direct contact or trauma caused by insect bites, ultraviolet light, and injuries from shearing.

Initial clinic signs include small circular crust-like scabs or tufts of hair in the crust (paintbrush lesions) with the skin underneath being red or purulent (puss). Sometimes the crust enlarges and may be mistaken for a wart. The crust will separate during the healing process which leaves a bald spot. The size of lesions can vary from a half inch to very large areas when several lesions merge together. On rare occasions, some animals will become seriously ill with the disease. Lesions found on the udder or teats can impede nursing by calves.

The disease is initially diagnosed based on the characteristics of the skin lesions. It is confirmed by making and staining an impression smear of the skin under the crust or the crust on a microscope slide. With a microscope, the stained slide is viewed for parallel rows of coccoid cells which are commonly called “railroad tracks”. Other means to diagnose are bacterial cultures and histopathology.

Sores may spontaneously improve when the weather turns dry or if the animal is placed in dry conditions. Bathing the animal with antibacterial soaps to remove the crust will soothe the skin but may not stop the infection. In severe cases antibiotics are usually effective. Several different classes of antibiotics have been used, so producers should consult their veterinarian for what works best in their area. Most animals do well with appropriate therapy.

Prevention and control of the disease revolves around minimizing the environmental conditions that cause the disease, preventing contact with infected animals, biosecurity, and a good herd health program. The skin is the barrier to *D. congolensis*. To maintain the skin barrier, animals require proper nutrition with special emphasis on minerals and vitamins. Animals need relief from excessive moisture, so they can dry out. Shepherds need to be careful about shearing sheep during extended rainy periods. Shearers need to keep clippers clean and disinfected between animals. Grooming tools need to be cleaned in between animals as well. Lastly, infected animals need to be isolated from the herd until healed.

Producers need to remember that *D. congolensis* is a zoonotic pathogen. When livestock producers are treating infected animals, they need to wear protective clothing and especially gloves.

Fortunately, or unfortunately depending on how a livestock producer views the weather, summer usually produces dry weather which will most likely eliminate any problems with *D. congolensis*. However, if rainy conditions continue,

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producers need to observe cattle for skin infections. Any signs of infection need to be dealt with promptly to prevent spreading of the organism. For more information about Dermatophilosis, livestock producers should contact their veterinarian or their Oklahoma State University Cooperative Extension Agriculture Educator.

## References

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## Cost Trends

*Scott Clawson, Area Agricultural Economics Specialist*

The drought conditions of 2022 and 2023 have been immensely difficult to navigate and cow liquidation has continued into 2023. The surge in cash cattle prices have yet to encourage the expansion of the US beef cow inventory. Persistent drought, slow developing forage conditions, and financial considerations have all been cited as reasons for the continued liquidation. The other, and equally important, component that seems to be mentioned is increased input costs.

Price index using 2011 as base	May	May	% Change
	2014	2023	
Fertilizer	103	118	15%
Chemical	110	150	36%
Fuel	103	87	-15%
Supplies and repairs	106	144	36%
Autos and trucks	105	130	23%
Machinery	112	158	41%
Building Materials	107	165	54%
Hay and forages	127	154	21%
Concentrates	119	141	19%
Diesel	98	88	-10%
Nitrogen	112	105	-7%
Potash and phosphate	116	122	5%
Herbicides	110	171	55%
Trucks	105	131	24%
Tractors	108	135	25%
Other machinery	112	170	52%

Source: <https://usda.library.cornell.edu/concern/publications/c821gj76b>

	Q1	Q1	% Change
	2014	2023	
Average Fixed Interest Rate on Operating Loans	6	8	33%

Source: <https://www.kansascityfed.org/agriculture/agfinance-updates/>

It would not be breaking news to hear that it costs more to run a cow now than ten years ago. The specifics on that are certainly variable, but there are some trends that seem to be present. For this discussion, we will break costs into two categories that may flex some from the textbook definitions. Those will be direct expenses and indirect expenses. Direct expenses referring to those items that go directly into the cow. Costs such as feed, hay, vet, etc. would fall here. Indirect expenses are covering what it takes for us to get those things to the cow. Examples being farm trucks, tractors, equipment, etc.

As the table indicates and is reinforced by our lived experiences, most cost categories have increased in the past decade. Many of the direct cost components vary from year to year. For example, we tend to see softer hay prices after a wet summer. Similarly, we see fluctuations in many of our feed ingredients based on the success of the grain production year. On the other side of expenses, we find the indirect costs like trucks, tractors, and machinery. These tend to not have the same price fluctuations as feed or hay. Interest rates have increased as well. Higher interest rates can stress both sides of the ranch expense equation as those direct expenses are placed on

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operating lines and indirect items may be financed. Interest rate hikes also impact the providers of farm inputs as they are facing the same challenge.

It is easier to see and feel cost increases to feed, hay, etc. But when evaluating expansion and retained ownership decisions for the fall of 2023 and into 2024, don't forget about the indirect costs that have increased and make a replacement plan for those big ticket pieces of machinery. These items can erode profit margins as much as anything else. The continued strength of the cash cattle market is providing the momentum for some big returns for cattle producers, let's take a minute to ensure that our costs situation is enabling us to put as much profit in the bank as possible.

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<b>Value of Gain Calculation</b>					
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OK Weighted Average Report 8/11/23					
Weight	\$/lb	Value/hd	Added lb.	Added \$	\$/lb Added
321	\$ 3.3446	\$ 1,073.62			
374	\$ 3.2336	\$ 1,209.37	53	\$ 135.75	\$ 2.56
423	\$ 3.0940	\$ 1,308.76	49	\$ 99.40	\$ 2.03
473	\$ 3.0205	\$ 1,428.70	50	\$ 119.93	\$ 2.40
522	\$ 2.8783	\$ 1,502.47	49	\$ 73.78	\$ 1.51
574	\$ 2.8222	\$ 1,619.94	52	\$ 117.47	\$ 2.26
628	\$ 2.6936	\$ 1,691.58	54	\$ 71.64	\$ 1.33
675	\$ 2.6079	\$ 1,760.33	47	\$ 68.75	\$ 1.46
718	\$ 2.5750	\$ 1,848.85	43	\$ 88.52	\$ 2.06
771	\$ 2.4888	\$ 1,918.86	53	\$ 70.01	\$ 1.32
825	\$ 2.4179	\$ 1,994.77	54	\$ 75.90	\$ 1.41
927	\$ 2.3672	\$ 2,194.39	102	\$ 199.63	\$ 1.96
962	\$ 2.3447	\$ 2,255.60	35	\$ 61.21	\$ 1.75

  

Long Stocker Run		Short Stocker Run		Heavy Stocker Run	
Starting		Starting		Starting	
321	\$ 1,073.62	321	\$ 1,073.62	628	\$ 1,691.58
Ending		Ending		Ending	
962	\$ 2,255.60	522	\$ 1,502.47	962	\$ 2,255.60
Total Gain	Δ Value	Total Gain	Δ Value	Total Gain	Δ Value
641	\$ 1,181.98	201	\$ 428.86	334	\$ 564.02
VOG		VOG		VOG	
\$ 1.84		\$ 2.13		\$ 1.69	



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