

TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT
November 2022 – Volume 42 – Issue 11



EXTENSION

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Acorn Toxicity

Barry Whitworth, DVM, Area Food/Animal Quality and Health Specialist for Eastern Oklahoma

With the prolonged drought, most pastures in Oklahoma are in poor condition. With the lack of available forage, animals may go in search of alternative foods. If oak trees are in the pastures, acorns may be a favorite meal for some livestock this fall. This may result in oak poisoning.

Oak (*Quercus* species) leaves, twigs, buds, and acorns may be toxic to some animals when consumed. Obviously, acorns can be a problem in the fall and green acorns can be more toxic than mature acorns. When acorns form only a small portion of the diet, there are usually no signs of problems. However, consumption of large quantities may result in toxicity. Tannins in the acorns cause the toxicity. The most common tissue damaged by the tannins are the digestive tract and kidneys. Cattle and sheep appear to be more susceptible to toxicity than goats. Other animals such as horses, rabbits, and chickens have succumbed to the toxicity of oak poisoning as well. Interestingly, some individual animals are more tolerable of the toxins and show no ill effects when consuming acorns.

Clinical signs of oak toxicity usually appear a few days after consumption of acorns. Initially, the animals are weak, listless, emaciated, and anorexic. This is followed by ventral edema (swelling of lower parts of the body such as legs, chest, ventral abdomen), urinating large amounts of urine, abdominal pain, and constipation. The animal may pass hard mucus covered fecal material which may change to black tarry or bloody feces as the disease progresses. If the animal is not treated, kidney failure is likely.

A tentative diagnosis of acorn poisoning may be based on clinical signs and access to acorns. Blood tests that indicate kidney disease is another clue to the condition. A necropsy with examination of tissues for characteristic lesions of the disease is the standard to confirm a diagnosis of oak toxicity.

Treatment of oak toxicity starts with removing the animals from the area where the acorns are located. Those animals displaying signs of the disease should be given fluids to correct dehydration and electrolyte imbalances. Mineral oil and/or activated charcoal may be given to reduce toxin absorption. If animals survive the initial toxicity, they may recover, but it may take several weeks for kidney function to return to normal.

As always, prevention is better than treatment. Producers should be very careful allowing livestock to graze in areas where acorns are present. Livestock should be fed plenty of hay and feed this fall to avoid over consumption of acorns. For those producers who cannot avoid grazing areas with large numbers of oak trees, feeding a grain mixture with 10% to 20% of calcium hydroxide has been successful in preventing problems with acorn poisoning.

Two thousand twenty-two has not been the best year for livestock producers. The drought has produced poor pasture conditions as well as very little hay. On top of those problems, feed costs continue to increase. The last problem a producer needs is a large number of sick cows. For those that graze an area with a large number of oak trees, prevention may be worth the cost this year. At the very least keep a close watch of your animals this fall. Producers wanting more information about oak toxicity, should consult with their local veterinarian or visit with their Oklahoma State University Cooperative Extension County Agriculture Educator.

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Rebuilding Discussion

Scott Clawson, Area Ag Economics Specialist

Rumblings and discussion around Green Country are already starting. It could be the recent rains or just the sheer level of cow culling around the country but talk of rebuilding the cowherd has started. The recent moisture seems to have acted as fertilizer on the entrepreneurial spirit of some eastern Oklahoma cattlemen as we eagerly await the price rewards of tight cattle and beef supplies. However, that same bullish market will drive replacement prices if shopping on the open market and the values of what we retain or develop.

The last time we were asking these questions, the Cow Bid Price Estimate Calculator tool was helpful in putting all the pieces of this question together to help get us an answer. This Excel tool can be found at <https://extension.okstate.edu/programs/beef-extension/> which is the OSU Beef Extension website. The greatest benefit of this tool is that it lets producers combine expectations in the pasture with the prices and costs they expect in the future. The result is a value assigned to that replacement based on history and expectations.

Whether or not you should choose to use this spreadsheet there is value in putting those pieces of information together when making this decision. These items all contribute to the decision to buy, sell, or retain.

<i>Weaning weights</i>	<i>Cull cow weight</i>	<i>Weaning percentage</i>
<i>Calf prices</i>	<i>Cull cow price</i>	<i>Productive life of the cow</i>
<i>Annual cash costs</i>	<i>Discount rate</i>	

These four items are a part of that calculation and may require more analysis considering our current markets.

Calf price expectation – This one is obvious but important. There would be justification to pay abnormally high prices for bred heifers if we assume \$3.00 weaned calves for the next eight years. But is that realistic? Historically, we have not seen that price level sustained. Our price expectation can be both bullish and realistic if that is your angle on the market. Using high prices for the next couple of years then a softening back to the average can be accomplished in the spreadsheet. Just remember that an estimate that works with \$2.00/lb weaned calves will also work with any price that is higher.

Productive life of the cow – There are several rules of thumb in this category. Usually, they revolve around the idea that if they have a certain number of calves then they become profitable cows. There is absolute value on cows that stand the test of time. But be careful in how long we plan for cows to be in production. Take inventory of your current cowherd. How many are over eight years old? If only 25-30% of your cowherd is over that age, then we need to exercise some caution budgeting for 100% of our new cows to reach that point. There is some nuance to this concept that will be added in *Cull Value*.

Cull Value – The year that a cow generates the most cash inflow is usually the year she weans a calf and is then culled. We receive the cash flow from the calf and the salvaged cash value of the cow. The Excel calculator lets us manipulate when the best time may be to cull a cow. Do we sell her after failure (being open) at which point she will be weighed up at per pound basis? Or should we look at moving her earlier (before she comes up open) while she could be sold at a higher price with some productive value left?

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Annual cash cost – Lastly, what do we anticipate our annual cash costs to be? Drought years are usually high-cost periods, and we likely don't want to use our 2022 cash costs. Hopefully, we will see some relief in our input markets moving forward. The conservative approach is to use your high-cost point to budget but likely finding some middle ground in your high and low-cost years could be more feasible.

Don't let perfect be the enemy of good. We will not estimate all the information exactly and that is fine. The goal is to do the best we can at stress testing the decision to assist us in making the best decision we can right now. Opportunities do and will exist in these markets, so let's do our due diligence and finding the right ones that fit our operation. For more assistance, contact your local OSU Extension Educator.




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Value of Gain Calculation

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OK Weighted Average Report 11/4/22

Weight	\$/lb	Value/hd	Added lb.	Added \$	\$/lb Added
322	\$ 2.1955	\$ 706.95			
373	\$ 2.1697	\$ 809.30	51	\$ 102.35	\$ 2.01
419	\$ 2.1031	\$ 881.20	46	\$ 71.90	\$ 1.56
476	\$ 2.0288	\$ 965.71	57	\$ 84.51	\$ 1.48
527	\$ 1.9455	\$ 1,025.28	51	\$ 59.57	\$ 1.17
573	\$ 1.8576	\$ 1,064.40	46	\$ 39.13	\$ 0.85
622	\$ 1.8132	\$ 1,127.81	49	\$ 63.41	\$ 1.29
672	\$ 1.7749	\$ 1,192.73	50	\$ 64.92	\$ 1.30
721	\$ 1.7737	\$ 1,278.84	49	\$ 86.10	\$ 1.76
770	\$ 1.7901	\$ 1,378.38	49	\$ 99.54	\$ 2.03
816	\$ 1.7847	\$ 1,456.32	46	\$ 77.94	\$ 1.69
861	\$ 1.7347	\$ 1,493.58	45	\$ 37.26	\$ 0.83

Long Stocker Run

Starting

322

\$ 706.95

Ending

861

\$ 1,493.58

Total Gain

Δ Value

539

\$ 786.63

VOG

\$ 1.46

Short Stocker Run

Starting

322

\$ 706.95

Ending

527

\$ 1,025.28

Total Gain

Δ Value

205

\$ 318.33

VOG

\$ 1.55

Heavy Stocker Run

Starting

622

\$ 1,127.81

Ending

861

\$ 1,493.58

Total Gain

Δ Value

239

\$ 365.77

VOG

\$ 1.53



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