



# Master Cattleman Quarterly

June 2025, Vol. 67

Inside this issue:

Calf Management and  
Marketing: What's Your  
Next Move? 2

Drought Preparedness –  
Alternative Water  
Sources 3

Explaining Global Beef  
Trade 4

Add “Check Calving  
Distribution” to the  
To-Do List 5

Variable Costs of Baling  
Prairie Hay 6

Smarter Gain with  
Ionophores 7

Survey of Oklahoma  
Cattle Producers  
Regarding Ticks and  
Tick-Borne Diseases 8

## New World Screwworm In Mexico

Rossllyn Biggs, DVM, Extension Beef Specialist

Cattle producers face an ever-evolving list of challenges in maintaining the health and safety of their herds. Now, a threat has reemerged in Mexico that could impact the livelihood of many ranchers—New World Screwworm (NWS). This parasitic fly is known for infesting open wounds on livestock, especially cattle. NWS also poses a significant threat to other mammals, including humans, and occasionally, birds.

In November 2024, reports confirmed that the pest had resurfaced in the southern Mexico state of Chiapas. Prior to this time NWS had effectively been eradicated from the continental United States (US) since the 1970s with partnerships between the US and Mexico pushing the pest to Mexico's southern border by 1986. Although due to the pest's ability to be unknowingly transported there have been isolated incidents of NWS in the US such as the 2016 identification in the Florida Keys in Key deer, pets, and swine.

NWS, *Cochliomyia hominivorax*, is a parasitic fly native to parts of Central and South America. Its larvae infest open wounds on mammals and feed on live tissue, unlike other maggots that feed on dead tissue. Infected animals experience significant pain, swelling, foul odor, and infection. If left untreated, the infestation can lead to severe tissue damage and even death within two weeks.

A female fly typically lays eggs near open wounds, mucous membranes, or body orifices. In cattle, the primary risk of screwworm infestation comes from exposed tissue such as areas created during branding, tagging, dehorning, or castration. Even minor cuts and the umbilicus of newborns are

vulnerable.

The NWS female fly only mates once in its lifetime. With this understanding, the sterile insect technique has been utilized for eradication of the pest. The US and Panama operate the sterile male fly production facility in Panama through the US Commission for Eradication and Prevention of Screwworm. This facility has historically produced 100 million sterile flies per week. Male flies are irradiated at the facility and then released to mate with wild females. Over time, along with stringent treatment of infected animals and movement restrictions, the fly was maintained at the biological barrier in Panama. Multiple factors played a role in the reemergence of the pest into Costa Rica, Nicaragua, Honduras, Guatemala, El Salvador, Belize and now Mexico.

To protect the US, ruminant movement from Mexico was halted after the identification of NWS in the country. In February 2025, the USDA announced a protocol to resume imports. The comprehensive protocol involves significant inspection and treatment procedures. Additionally, the USDA is working to release sterile flies at strategic locations in Mexico and Central America.

NWS is a state and federally reportable Foreign Animal Disease in the US. If producers suspect NWS, they should contact their veterinarian and animal health authorities for instructions on how to submit samples for confirmation.

The resurgence of the New World Screwworm is a real threat to the cattle industry. By taking proactive steps to protect livestock, cattlemen and animal health officials can help prevent the spread of this destructive pest.



### Calf Management and Marketing: What's Your Next Move?

*Kellie Curry Raper, Professor and OSU Extension Livestock Marketing Specialist*

Every cow-calf producer strives to produce the best cattle that their unique resource base allows. Right now, you are likely making – or have already made – decisions for your current calf crop based on (1) the resource constraints that you face and (2) the market opportunities available to you. A quality calf crop starts with a quality herd as its foundation and includes good management to achieve the goal of producing calves that you are proud of and that maximize the returns to your efforts. The process also involves a lot of planning. But the plan isn't complete without both a calf health management program and a marketing plan for those calves.

When you market your calves, buyers can visually observe some indicators of quality and management for themselves – characteristics like frame, muscling, hide color, fill, fleshiness, castration, horn management and lot uniformity. Some of these characteristics are determined by herd genetics and while they are changeable, that change is a longer-term decision with no impact on the calf crop already on the ground. The rest of those characteristics are the result of current management decisions, as are unobservable calf characteristics such as vaccination status, weaning status, weaning period length, and certification. All are important components in the overall price of feeder cattle.

Perhaps the most famous quote of Peter Drucker, the father of modern management in the business world, is

***“What gets measured gets managed”***  
which is sometimes restated as  
***“You can't manage what you don't measure.”***

Are you measuring the impact of your current calf management decisions? And assessing the potential added value of implementing management practices that you currently don't employ? Measure both the expected cost and expected benefit and consider whether you can implement a “new to you” management practice. And if you do make the change, measure the realized cost and benefit and use that as input into next year's decision.

With this year's calf crop, consider the decisions that you can make now that can make a difference in the value of those calves in a few months at marketing

time. For example, if you are not weaning calves at least 30 days prior to marketing, what constrains you from doing so? Is it facilities? Data from the Oklahoma Beef Management and Marketing (OBMM) survey indicate that access to preconditioning pens is highly correlated with implementation of 45-day weaning minimums, respiratory vaccinations, and feed bunk training. If you have no place to hold calves separate from cows, consider whether you can build pens – even for part of your calf crop – and consider whether you could expand it next year. Can you remedy that before weaning time? If not, gather cost and benefit information and consider it for next year's calf crop. How many weaned or preconditioned calves would it take to pay for the initial cost of those pens?

If you are already weaning calves for 30 days, you presumably already have a place to separate them from their dams. Can you hold them for two more weeks to hit a 45-day weaning period? Sixty-three percent of producers who responded to the Oklahoma Beef Management and Marketing survey are weaning calves at least 45 days prior to marketing, but our research indicates that markets are also rewarding significantly longer weaning periods with higher premiums – up to 100 days. Assess what constraint keeps you from holding calves for longer weaning periods before marketing. Is it a need to use that space for something else? Is it forage/feed availability? Is it time? Is it tradition? Does the expected benefit outweigh the expected cost?

***And then walk through this same process for other potentially value adding management practices.***

Every producer's resource base is different. Presumably, your management and marketing strategies reflect the availability of those resources and their value to your operation. An annual or even semi-annual assessment of your strategy is a healthy exercise. At every level, record keeping about inputs, management practices, marketing successes and failures provides crucial input for future decision-making.

Ask yourself some important questions. Who am I marketing my cattle to? Do my management practices fit the buyer audience that I want to target? Is there a

## Calf Management and Marketing: What's Your Next Move? (Continued)

recommended practice that I currently do not utilize, and could it be beneficial to do so? What is the best way to access the buyers who are looking for cattle managed like mine?

For this year's calf crop, find the market where buyers are willing to compensate you for the management that you have put into your calves. And in preparing to breed for next year's calf crop, be sure to get a strategy in place for their management and marketing too.

*When you keep doing what you've been doing,  
you're going to keep getting what you've been getting...*  
Henry Ford.

What's YOUR next move?

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## Drought Preparedness –Alternative Water Sources

*Brian Freking, SE Area Livestock Specialist*

As summer approaches it is always on my mind what would happen if I couldn't use my primary water source for my livestock. There are several alternatives for providing water to livestock that can help maintain their health and improve production efficiency. Here are some options:

**Fenced Ponds:** Fencing off ponds or streams can prevent livestock from contaminating water sources. You can install a system that ensures clean drinking water through a gravity-fed stock tank while allowing natural filtration by the surrounding vegetation [<sup>1</sup>, <sup>4</sup>].

**Limited Access Water Sources:** These are designed to limit livestock access to surface water, encouraging them to drink at designated points while avoiding prolonged contact with potentially contaminated water [<sup>4</sup>].

**Pipelines and Tanks:** High-pressure plastic pipes can be used to transport water from a main source to various watering locations. Installing tanks allows for effective distribution and conserves water usage [<sup>2</sup>].

**Automatic Waterers:** These are supplied with city water or groundwater and can be used to provide a fresh, consistent water supply. Ensuring that the surrounding area is kept clean and well-maintained is crucial [<sup>3</sup>].

**Rainwater Harvesting:** Pretty uncommon but this in-

volves collecting rainwater from roofs or other surfaces which can be stored and used as a clean water source. However, certain filtration systems may be needed to ensure its purity [<sup>3</sup>].

**Developed Springs:** If there are existing springs on the property, they can be developed to provide a consistent water source. This method can be particularly cost-effective, as gravity can often be utilized to bring water to the livestock without the need for pumps [<sup>4</sup>].

Each alternatives has its benefits and considerations, including installation costs, maintenance needs, and water quality provided. It's crucial to evaluate which option works best for your specific conditions and needs. It never hurts to plan for the next environmental challenge.

### References:

<sup>1</sup> ID-108: The Kentucky Beef Book

<sup>2</sup> extension.oregonstate.edu em-8588 "Livestock water management during a drought".

<sup>3</sup> publications.ca.uky.edu/aen-176 "Providing and Improving Drinking Water for Livestock"

<sup>4</sup> publications.ca.uky.edu/aen-98 "Alternative Water Source: Developing Springs for Livestock"

## Explaining Global Beef Trade

Derrell S. Peel, OSU Extension Livestock Marketing Specialist

Why do some countries import beef; some export beef; and some both import and export beef? Beef trade in countries around the world is driven by a variety of factors including cattle inventories/beef production; population; general and product specific beef preferences; and transportation/logistics. Table 1 provides broad indicators of some of these economic forces.

The total size (population) of a country is a factor affecting beef trade in the country. Population and per capita consumption drive total beef consumption. For example, China has relatively low per capita consumption (Column F) but is a large beef consumer and importer by virtue of a large total population (Columns B and E). In contrast, the U.S. is the largest beef consumer with a population one-quarter of China but per capita consumption roughly 4.5 times higher. Not surprisingly, countries with large beef industries (cattle inventory) tend to be large beef consumers, for example, China, Brazil, and the U.S. India is an exception simply because much of the population does not consume beef and many of the cattle are not part of the commercial herd. India is, however, the third largest beef exporter, much of which is carabeef, meat from water buffalo.

One general indication of beef trade is the population relative to cattle inventory of various countries. Countries that have large populations relative to the size of their cattle industry are frequently beef importers. Of course, it depends on their general preferences and tendency to consume beef. Table 1 shows that the highest people to cattle ratios are in Japan, China, and South Korea (Column D). These countries rank 1, 3, and 4 for

total beef imports. Total beef imports in Japan and South Korea are 143 and 166 percent of domestic production, with China imports equal to 52 percent of total beef production (Column I). The U.K. is the number five beef importer and has a relatively high people/cattle ratio. Imports represent 56 percent of production.

On the other hand, countries with low ratios of people to cattle are more likely to be beef exporters. Countries with the lowest people to cattle ratios are New Zealand (0.55), Argentina (0.86), Australia (1.0), and Brazil (1.14) (Column D). These countries rank 6, 5, 2, and 1 as beef exporters, respectively (Column H). New Zealand exports 90 percent of production but is not a bigger exporter simply because it is a small country and a small beef producer in total. Australia exports 73 percent of production. Argentina has high per capita beef consumption but also exports 37 percent of production.

The U.S., along with the E.U. and Canada, ranks as both top ten beef importers and exporters. In the U.S., bilateral trade in beef reflects the diversity of beef products, with exports and imports of specific products helping to balance consumer preferences to domestic production. This adds value to U.S. producers and consumers by seeking the highest value across a wide range of beef products. The U.S. exports a mix of high-value cuts, end meats and offals, and imports mostly processing beef to support the enormous ground beef market in the U.S., along with some specialty cuts. Beef trade between the U.S. and Canada also reflects the transportation efficiency of moving similar products north and south rather than east and west across wide

**Table 1. Global Beef Trade Indicators, Selected Countries.**

A	B	C	D	E	F	G	H	I	J	K	L
Country	Population	Cattle Inventory	Population/ Cattle inventory	Cons. Total	Cons. per Capita	Global Import Rank	Global Export Rank	Import % Prod.	Export % Prod.	U.S Import %	U.S Export %
	Million	Million		Mil. Lb.	Lb.						
India	1463.87	307.5	4.76	6592	5		3		35		
China	1416.10	104.0	13.62	25545	18	1		52			18.7
E.U.	449.00	72.1	6.23	13658	30	6	7	6	10		
U.S.	347.30	86.7	4.01	27893	80	2	4	17	10	14.9	
Brazil	212.81	186.9	1.14	18100	85		1		31		
Mexico	131.95	17.7	6.95	4894	37		11		13	12.9	11.4
Japan	123.10	3.9	31.56	2683	22	3		143			21.4
U.K.	69.55	9.3	7.48	2513	36	5		56			
S. Korea	51.67	3.9	13.25	2030	39	4		166			21.0
Argentina	45.85	53.2	0.86	5108	111		5		37		
Canada	40.13	10.9	3.68	2183	54	10	8	20	44	21.9	8.4
Australia	26.97	27.0	1.0	1609	60		2		73	24.1	
New Zealand	5.25	9.6	0.55	192	37		6		90	12.1	

Data compiled from United Nations, USDA-FAS, USDA ERS. Columns E and F in carcass weight equivalents.



## Explaining Global Beef Trade (continued)

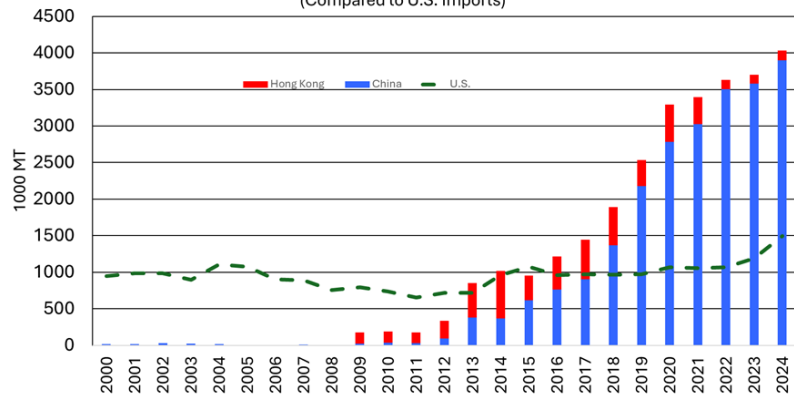
countries. Population centers in eastern Canada are closer to U.S. Midwest beef production, while beef production in western Canada is closer to U.S. west coast markets. Column K in Table 1 shows the shares of the major U.S. beef imports sources and Column L shows the shares of the major export markets for U.S. beef.

Global beef markets have evolved significantly in recent years largely due to the growth of China as a beef importer. Figure 1 shows rapid growth of beef imports in China/Hong Kong in the last decade. For many years the U.S. was the largest beef importing country but Figure 1 shows that while U.S. beef imports have been relatively steady, China grew rapidly in the past decade, surpassing the U.S. in 2016 and is now more than twice the size of the U.S. as the largest importer.

Global beef trade reflects the comparative advantage of beef producing countries, the de-

mand of beef deficit countries, the balancing of preferences for specific beef products and the logistics between trading partners. It is a complex set of economic forces but gains from trade benefit beef producers and consumers worldwide when beef markets are allowed to function without impediments and seek out the highest value for beef products.

**Figure 1. China/Hong Kong Beef Imports**  
(Compared to U.S. Imports)



## Add “Check Calving Distribution” to the To-Do List

*Scott Clawson, NE Area Ag Economics Specialist*

Some of the best data/information can be found in just reorganizing things that we observe daily and looking at them from another angle. This time of year is just hectic. Calving season could be winding down, fertility and herbicide applications might be in full swing, and we will be baling hay before we know it. Not to mention all the personal things like graduations, summer break, vacations, weddings, and the like that happen in the spring. So, before all this activity overruns us, let's look at the calving records for the spring and review the herd's calving distribution for 2025.

Calving distribution is simply mapping when cows calve in the calving season. Having more calves born earlier in the season the better. For my money, it is the most useful measure for the commercial beef cow herd. There are a million articles, publications, and internet rabbit holes that deal with having cows that match our environment. While that can mean many different things, cows that are rebreeding quickly after bull turn out and put a live calf on the ground early in the calving season are thriving in the environment they are in. Environment includes factors such as the forage base, nutritional resources, and our herd management decisions. From an animal performance perspective, research con-

firms what we observe as the offspring of these early calving cows continue to outperform late born calves both terminally and maternally. This makes those early born heifers good candidates to be retained.

Economically, annual expenses are typically added up and broken down to a per cow level. It makes logical sense that those cows calving early in the season are also our most profitable cows on an annual basis. These cows are taking on the same portion of annual expense and weaning a calf that is pushing down a bit harder on the scales at weaning. The most economic boost to weaning weight might be a calf born a heat cycle or two sooner.

At the end of the day, a commercial beef cow's basic task is to have a calf every 365 days and raise it to weaning. I would add “as long as she is calving in the first 21 days of the calving season”. The typical approach is to break down calving season into 21-day intervals and measure how many calves are born in each interval. More generally, aim for two-thirds of calves to be born in the first third of calving season. If this target isn't being hit, it's a good indication that we need to peel the onion a little more to identify why. Reach out to your county OSU Extension Educator for assistance in this process.

## Variable Costs of Baling Prairie Hay

Eric A. DeVuyst, Extension Farm and Ranch Management Specialist

With the plentiful moisture and warm temperatures, haying operations will soon be underway in Oklahoma. Hay yields should be well above average this year, a refreshing change from recent years. This means that hay will be readily available this fall. I expect hay prices this year will be much lower than recent years because 1) there will be an increased supply, 2) pastures, if well managed, will provide more AUMs so cow-calf producers will not need as much hay, and 3) the Oklahoma cow herd is just 71% of its historic high and 95% of its 10-year average. (LMIC 2025) Given increased production and decreased demand, hay prices will be lower than in recent years. The pressing question then is, “Will the price of prairie hay justify incurring the costs of baling?”

The cost of a hay bale varies with forage yield, bale weight, the cost of cutting, swathing, baling, and hauling hay bales, land charge, and nutrient uptake. At this point in the growing season, land charge, either rent or opportunity cost, is “sunk.” So, we can ignore it and focus on the variable cost of operations and nutrients removed. The table below provides a range of hay production costs given varying hay yields and bale weights.

These variable costs range from \$39 to \$41 per round or \$57 to \$81 per ton of prairie hay.

Over the last five years, “other” hay marketing-year-average prices in Oklahoma have exceeded \$100 per ton (USDA NASS 2024). As argued above, it is likely that prairie hay price will be substantially lower this year. It’s an open question as to whether it will cover variable costs of production. A doubling of hay production in Oklahoma this year in comparison to 2023 and 2024 is very possible. Hay price less than \$45 per bale is conceivable and return above variable costs will be tight.

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Yield (tons/acre)		Bale Weight (lb)								
		960	1020	1080	1140	1200	1260	1320	1380	1440
1.4	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
1.6	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
1.8	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
2.0	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
2.2	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
2.4	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57
2.6	\$/bale	\$39	\$39	\$39	\$40	\$40	\$40	\$40	\$41	\$41
	\$/ton	\$81	\$77	\$73	\$69	\$66	\$64	\$61	\$59	\$57

## Smarter Gain with Ionophores

Dana Zook, NW Area Livestock Specialist

When I was growing up, my dad often told me to “work smarter, not harder”. There was always a lot to get done on the farm and I had the tendency to power through the work rather than think about an easier way. Consequently, in my current job I like to discuss products or strategies to help a producer be more efficient. In livestock nutrition, a product that can help a producer be more efficient and “work smarter” is an ionophore.

*What is an ionophore?* Ionophores are feed additives that were developed to improve efficiency and prevent coccidiosis. The two most common ionophores utilized are monensin (Rumensin® and Monovet®) and lasalocid (Bovatec®). In addition to the improvement of efficiency (more gain/less feed), ionophores have a derived benefit of preventing and controlling digestive disorders such as acidosis and bloat.

*How do ionophores work?* Ionophores improve feed efficiency simply by increasing the amount of energy available to the animal through selection of more efficient microorganisms in the gut. Ionophores are labeled for both grazing and feedlot cattle.

Oklahoma State Animal Science has historically led the charge in research around the use of ionophores for grazing cattle and there are benefits in a variety of grazing situations. For instance, cattle gain is improved 0.15 to 0.2 pounds by including an ionophore in a free-choice mineral. An additional feeding strategy supported by a great deal of research recommends offering ionophores in small package supplements to grazing cattle to complement forage nutrients and ensure proper consumption. Performance varies depending on the forage base however the supplement plus ionophore lends an additional 0.2-0.4 pounds of daily gain. Note that cattle must have proper overall nutrition, adequate forage, and have a healthy status to achieve optimum gains.

It should be emphasized that pure forms of ionophores are very potent and require extreme precision when added to blended feeds and supplements. When feeding ionophores in a pure form or within a supplement, label instructions should be strictly followed. Monensin is toxic specifically to equine species and some monogastric animals. Ionophores can be toxic to any animal when overconsumed.

Increased gain across the board, less bloat, and improved health for growing cattle of all stages; now that is what I call “working smarter”! If you are interested in what an ionophore can do for your cattle operation, reach out to any OSU County Extension Educator or Area Livestock Specialist. We would be happy to work with you.

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## Survey of Oklahoma Cattle Producers Regarding Ticks and Tick-Borne Diseases

*Jonathan A. Cammack, Assistant Professor & State Extension Specialist, Livestock Entomology & Parasitology*

The Extension Livestock Entomology program at Oklahoma State University is seeking participants for a survey on the impact of ticks on beef and dairy cattle production in the state. We are looking for producers who are interested in completing a brief survey, to help us determine tick and tick-borne disease knowledge, prevalence, and preventative measures taken to protect producers, employees, and animals from ticks and tick-borne diseases.

Our goal is to identify the issues related to ticks that are faced by Oklahoma cattle producers, so that this information can be utilized to develop more relevant Extension programming.

To access the survey, scan the QR code, [click this link](https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_4ZvF0eI932lwuns), or type the link into your browser if you are interested in participating.



[https://okstatecasnr.az1.qualtrics.com/jfe/form/SV\\_4ZvF0eI932lwuns](https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_4ZvF0eI932lwuns)



**LIVESTOCK  
ENTOMOLOGY**

**livestockbugs.okstate.edu**

**NEW EXTENSION EXPERIENCE PODCAST!** Dana Zook and Dr. Barry Whitworth, DVM, discuss the New World Screwworm on the Extension Experience Podcast and also provide useful resources in the show notes. Find this and other episodes at <https://spotlight.okstate.edu/experience/podcast/> or on Spotify and Apple Podcast apps.

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