



# Master Cattleman Quarterly

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Inside this issue:

Thoughts on Renting or Purchasing Pastureland 2

Cattle Industry Dynamics Finally lining up 4

Cotton Stalk Residue as a Winter Feed Resource 5

Land in Farm and Ranch Transitions: How Do You Move an Immovable Object? 6

Oklahoma Beef Management and Marketing Snippets: PI (Persistently Infected) Testing Rates 7

Recent Publications 8

## New Year's Resolutions - Value Creation on the Ranch

*Kellie Curry Raper, Professor and Livestock Marketing Specialist, Agricultural Economics*

As 2022 comes to a close, many of you are focused on 2023. How will my cows winter through a limited forage scenario? Is that feed truck going to make it through one more production year? How will those first-calf heifers work out? What will my calving percentage be? How can I increase the value of my future calf crop? How will I manage those calves once they hit the ground? Will I do it differently this year? You are asking that question too – right?

Creating economic value is a continuous process. One place to start is to objectively assess the successes and failures of your past calf management practices with respect to value creation and plan your calf management strategy for the coming year accordingly. Another is to step-back completely and ask, in the words of famous management guru Peter Drucker, “If we weren’t already doing it this way, how would we start?” This question requires a hard look at tradition for the economic value that it adds rather than simply for tradition’s sake.

What’s your operation’s optimal value strategy? It is the strategy that best fits your resource base, including labor and management capabilities, facilities, time, knowledge and/or the capacity to add new knowledge, and the ability to handle any upfront costs that facilitate changing your strategy. Assess your capabilities, costs and returns from your current calf management strategy and predicted costs and returns from a strategy change. Understand that your best strategy may look different than your neighbor’s because of differences in that resource base.

Don’t forget that part of your strategy should include finding the right market for your calves. You’ve heard me say it before – Market Your Management! The right market will often be the difference between a profitable strategy and an unprofitable one.

Basic calf health management practices on the ranch impact the efficiency and quality of cattle moving through the supply chain and, ultimately, the quality of beef on the consumer’s table. Buyers have incentive to pay premiums for cattle that are more likely to thrive as they move to the next phase of production. Find the market where buyers value - with their wallet - the calf health management strategy that you’ve implemented. The right market may be your local auction market, a regional auction market, a special sale through a certified program or selling direct to someone further down the supply chain. Who is your target buyer for those attributes that you’ve built into your calves and how do you access those buyers?

OSU Fact Sheet AFS-3305 (at <https://extension.okstate.edu/fact-sheets/oklahoma-quality-beef-network-vac-45-program-requirements.html>) lays out the requirements for Oklahoma Quality Beef Network’s (OQBN) VAC-45 preconditioning program. The list of program requirements represents attributes that, even implemented individually, can add value when it’s time to market your cattle (*at the appropriate venue – see above!*), this list is a good place to start when considering calf health management strategies. OQBN’s program requirements include:

- 5-way respiratory vaccine—2 rounds
- 7-way clostridial vaccine -2 rounds
- One dose of M. haemolytica vaccine
- Weaned a minimum of 45 days
- Males castrated and healed
- Dehorned and healed
- Bunk trained

What’s in this list that you are already doing? What are you not doing that you have the capacity to implement with the next calf crop? Make a New Year’s resolution to examine your calf health management and marketing strategy!



## Thoughts on Renting or Purchasing Pastureland

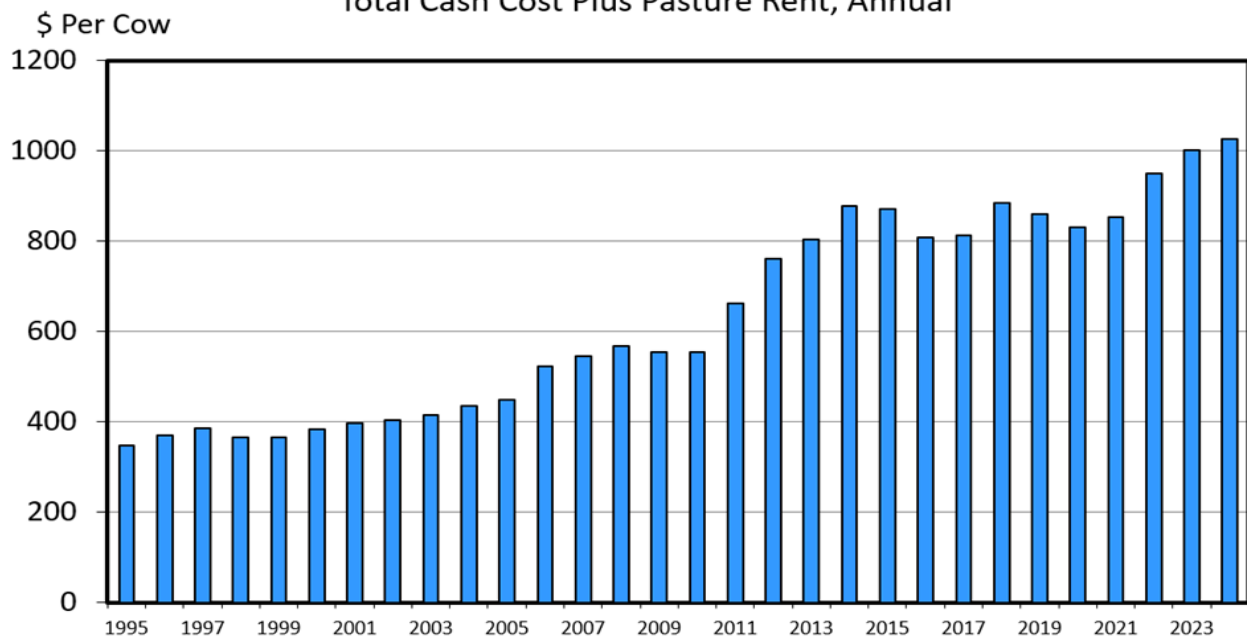
Roger Sahs, Extension Specialist, OSU

Not all producers can afford to own all the pastureland they run livestock on and likewise some landowners prefer not to operate the farm, but wish to earn a desired return or a contribution to their living expenses instead. It is no secret that investing in a ranch is oftentimes quite expensive and can be financially stressful. There is plenty of risk involved with the beef production industry as indicated by the increase in estimated average costs in the cow-calf sector (Figure 1).

For many years, the Livestock Marketing In-

focusing on the direction of change. And like everything else, the cost of doing business in the cow-calf sector has gone up. OSU cow-calf budget cost estimates traditionally have not been this high, but they certainly could be if the drought hangs on and we keep feeding high-priced groceries in addition to paying all the other bills. The drought does throw a monkey wrench into the works concerning present and future earnings. In addition to sources of production risk, then you also have to deal with market risk. At the end of the day, all of this can affect your financials con-

**Figure 1. ESTIMATED AVERAGE COW CALF COSTS**  
Total Cash Cost Plus Pasture Rent, Annual



Data Source: USDA & LMIC, Compiled by LMIC  
Livestock Marketing Information Center

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formation Center (LMIC) has estimated costs for market analysis purposes. While these estimates do provide a time-tested glimpse into national-level production decisions by cow-calf operations, the costs are best interpreted in a broad context,

cerning the ability to cash flow and the potential negative impact on your balance sheet. Leasing assets like land instead of purchasing them is a viable form of risk management since it requires less total cash outflows.

### Thoughts on Renting or Purchasing Pastureland (cont.)

Table 1 shows alternative the annual principal and interest payments associated with pastureland loans of various amounts per acre and under different interest rates. When one considers a land payment relative to potential income per acre from beef production, potential cash flow problems are obvious. For instance, say that it takes 10 acres per cow on \$2500 per acre purchased land to meet the forage requirements.

At a 7% interest rate and if the buyer can make a 20% down payment, land payments alone are \$161 per acre or \$1610 per cow! It is difficult for a cow to make land payments given other production costs and potential income limited to the sale of one calf annually.

There are other ways to control the land necessary with a beef operation without owning land. Can grass be rented for less than it costs to own? Many times the answer is yes. If comparable pasture can be leased for \$20 per acre, then the annual payment is \$200 per cow, a much lower cash outlay than the debt obligation previously mentioned. Lower annual payments are a big reason many prof-

itable cow/calf producers rent relatively more land.

Of course, that does not mean there aren't reasons to buy assets such as pastureland. Purchasing may be the preferred alternative if an off-farm job or outside income is available for loan obligations. In addition, if the producer possesses a low cost structure and has excellent management skills in beef production, the loan terms might be to his ad-

vantage. Lastly, we have seen a significant appreciation in pastureland around the state over the years, building equity in the

balance sheet (see OSU Agricultural Land Values website at:

<https://extension.okstate.edu/programs/farm-management-and-finance/oklahoma-land-values/>)

In conclusion, is it better to lease or purchase pastureland? Leasing agricultural real estate is often a more cost-effective means of acquiring forage than purchasing land. However, there are other reasons to own agricultural real estate, namely as an investment that hopefully appreciates. Just don't expect too much from your cows.

**Table 1. Annual loan payments (\$/acre), interest rates, 30-year repayment period, and 20% down payment**

		Interest Rate		
		6%	7%	8%
Loan Amount				
\$2,000/a	\$1,600/a	\$116	\$129	\$142
\$2,500/a	\$2,000/a	\$145	\$161	\$178
\$3,000/a	\$2,400/a	\$174	\$193	\$213



## Cattle Industry Dynamics Finally lining up

*Derrell S. Peel, OSU Extension Livestock Marketing Specialist*

The latest Cattle on Feed report pegs November 1 feedlot inventory at 11.706 million head, 98.0 percent of last year and the second consecutive monthly year over year decrease. The 12-month moving average of feedlot totals, which shows the average feedlot total for the previous year, peaked in September 2022 (Table 1). Feedlot inventories are expected to decrease year over year for the foreseeable future. Table 1 shows how cattle industry dynamics have developed since the last cyclical peak, with peak totals for each category highlighted in **bold**. The peak average cow herd and calf crop occurred in 2018 with the peak feeder supply noted on January 1, 2019.

The combination of effects from the pandemic in 2020 and drought since 2020 has pushed the peak in feedlot numbers and cattle slaughter into 2022, well past the cyclical peak in the calf crop in 2018. The pandemic in 2020 caused a backlog of cattle in feedlots and in the country. As a result, the estimated feeder supply on January 1, 2021 was higher than 2020. The drought in 2021 and 2020 caused cattle to be marketed earlier than usual and resulted in reduced heifer retention and increased heifer and cow slaughter in 2021 and 2022. Early marketing of cattle, reduced heifer retention and herd liquidation have kept feedlot inventories higher in 2022 and temporarily

increased beef production. Beef production is projected at a record large 28.4 billion pounds in 2022 as a result of the highest total cattle slaughter in 15 to 20 years.

As 2022 comes to a close, it appears that feedlot inventories have peaked and cattle slaughter should begin to decline in the next few months. On October 1, 2022, the inventory of heifers in feedlots was higher than the previous year, with the heifer percentage of total feedlot inventories the highest in 21 years. The number of heifers in feedlots should begin to decline and will drop sharply when herd rebuilding begins. Feedlot inventories are beginning to reflect the fact that feeder cattle supplies have been declining since 2019.

With drought conditions continuing, it is unclear when herd liquidation will cease and herd rebuilding can begin. However, it is clear that feedlot production, cattle slaughter beef production will fall in 2023. How much they will fall depends on when drought conditions will improve. Nevertheless, declining feedlot supplies mean that all levels of the cattle are finally on the same page and are reflecting the tighter cattle supplies in the country.

Table 1. Cattle Industry Dynamics, 2018-2022

	2018	2019	2020	2021	2022
Beef Cow Inventory* (avg.)	<b>31578.5</b>	31514.7	31091.2	30484.4	29635.6 <sup>^</sup>
Calf Crop	<b>36312.7</b>	35591.6	35495.5	35085.4	34600 <sup>~</sup>
Feeder Supply**	26124.9	<b>26553.3</b>	25724	26214	25537.2
Feedlot Inventory, 12 month MA	11501	11612	11658	11771	<b>11804</b>
Month, max 12 mon. MA	Dec	Dec	Mar	Jun	Sep
Fed Slaughter	25803	26117	25302	25972	<b>26075<sup>^</sup></b>
Beef Cow Slaughter	3024	3190	3268	3562	<b>3970<sup>^</sup></b>

\*(Jan<sub>t</sub>+Jan<sub>t+1</sub>)/2; <sup>^</sup>Projected; <sup>~</sup>July 1 estimate; \*\*January 1 estimate; All numbers in 1000 head.

## Cotton Stalk Residue as a Winter Feed Resource

*Paul Beck, Oklahoma State University State Extension Beef Nutrition Specialist*

Cotton gin trash is often used to replace hay fed to pregnant beef cows during the winter or as a roughage in growing and finishing cattle diets. Ginning each bale of cotton produces 150 to 200 pounds of gin trash. The gin trash consists of leaves, soil, stems, boles, burrs, lint, and cottonseed and averages 12% crude protein and 43% total digestible nutrients, which makes it adequate in protein but deficient in energy for a dry pregnant cow. Research has shown cows can maintain weight and body condition with as little as 3 pounds of grain-based supplement per day. Gin trash can contain large amounts of soil contamination and is initially unpalatable to cows, which may take several days for them to adapt and begin consuming gin trash. Because of the variability and unpalatability, intake should be closely monitored and supplemental feeding adjusted accordingly.

Large amounts of residue are left on the plant after cotton harvest. Similar to gin trash, residues include cotton lint, leaves, burrs, and unopened bolls. Cotton pickers tend to leave more residue than cotton strippers. This is an underutilized source of winter feed for dry pregnant spring-calving cows. Research in Georgia showed that dry pregnant cows can be maintained on cotton stalk residue instead of bermudagrass hay with only a slight reduction in body condition. In this research, an acre of cotton stalk residue lasted 44 days when stocked at 1 cow per acre. Cow consumed about 37 pounds of residue a day. In another study from Georgia, cows grazed cotton stalk residue along with free-choice hay. Cows were stocked at 1 cow per acre for 30-days. Total hay fed was decreased by 67% for cows grazing cotton stalks without altering weight gain or body condition scores. Analysis of the residue selectively grazed by cows showed the edible portion of the residue (the leaves, bolls, lint, and seed) were over 20% crude protein and 62% total digestible nutrients and comprised 30 to 50% of the total standing residue. Cows in this re-

search had no adverse effects of gossypol toxicity and pesticide residues were below threshold levels.

The amount of residue varies greatly among cotton fields and in years with differing yield potential. To estimate the residue yield and the carrying capacity of the cotton field:

1. Find 2-3 representative areas in the field.
2. Cut each stalk in a row for a distance of 9 feet and weigh the residue collected.
3. Calculate the area harvested.
  - a. For example, with 36-inch rows: area = 9 ft harvested x 3 ft rows = 27 square
4. Calculate the residue harvested per square foot
  - a. If 3 pounds of residue was harvested: 3 pounds of residue/27 square feet = 0.11 pounds of residue per square foot
5. Residue per acre is calculated by multiplying the residue per square foot x the square feet in an acre
  - a. 0.11 pounds of residue per square foot x 43,560 square feet in an acre = 4,792 pounds of residue per acre
  - b. Assuming there are 30 to 50% edible residues, the amount of edible residue would be between 1,440 and 2,400 pounds per acre
  - c. This would carry a cow 40 to 50 days.

With hay shortages and substantial areas of failed cotton crops, grazing cotton fields or cotton residue can be a great resource to shorten the hay feeding season and reduce the hay needed to maintain cows through the winter.

## Land in Farm and Ranch Transitions: How Do You Move an Immovable Object?

*Dr. Shannon L. Ferrell – Extension Specialist, Agricultural Law*

Previously in this series, we have addressed several of the challenges in successfully getting the farm and ranch from one generation to the next. Last time, we presented a five-step approach to tackling these challenges: 1) know where you are now; 2) communicate with stakeholders; 3) come up with a plan for moving the business; 4) get an estate plan in place; and 5) evaluate, revise, and repeat. This time, we want to tackle a specific and very important asset that cuts across all five of these steps: land.

Land is perhaps the most challenging asset to handle in a farm transition. On average across all U.S. farms and ranches, land represents 86 percent of the value of all assets. Generally, then, it represents a huge chunk of the operation's asset value. It's not a liquid asset, meaning it takes a lot of time, effort, and transactional costs to turn into cash. It often carries a lot of emotional connection, whether that connection comes from its homesteading generations ago and being part of the family history for over a century, or from the fact that a lot of living family memories attach to it. And oh, by the way, it's a critical asset to the agricultural operation.

As discussed in previous articles, just telling the next generation "We have to treat everyone the same [never mind that one heir has significantly different contributions to the operation than the others] so we are giving you everything in undivided interests" flat doesn't work. The overwhelming majority of farm and ranch operations simply don't generate enough cash flow to allow the "Farm Kid" to buy out "City Kid's)" and even if they could, it would be a tremendous financial setback to the operation as equity accumulated over years gets turned back to debt in an instant. On the other hand, taking land entirely out of the equation might leave few assets available to pass to other heirs. So, what's to be done? While many potential solutions exist, we will focus on three major pathways forward.

As a preliminary consideration to any of these three approaches, it is a good idea to conduct an appraisal of the property by a licensed appraiser with deep expertise in agricultural land valuation. Having an objective outside party determine the market value of land assets is vital to the success of any of the approaches.

The first approach recognizes the critical nature of owned land to the operation and the fact that it needs to be kept with other operational assets to give the operation the best chance of long-term success. Thus, the land is transitioned to the successors to the agricultural operation. Non-farm heirs (city kids) may be allocated other assets such as off-farm investments, mineral interests, or other assets. There is no rule that Farm Kid and City Kid need to inherit equal amounts of economic value, but the larger the disparity in economic value received, the greater the depth and quality of the conversations that need to be had to explain *why* this approach was taken. At the same time, the more intentional the current senior generation is with respect to building non-farm assets to pass to off-farm heirs, the better the odds of success for this approach. The larger the amount of non-farm assets available for distribution to heirs who are not actively engaged in the farm operation, the better the chances of success for this approach.

The second approach involves the division of the farm into separate parcels. Again, there are many ways this approach could be implemented. At its core, this approach divides the operation's land assets into separate parcels and instead of giving undivided interests to multiple parties that may have a vastly different outlook on how to operate the assets, each successor receives one or more parcels that are solely theirs. As you read that last sentence, you jumped ahead to the challenge in implanting this approach: "how do you decide who gets what parcels?" And that's not easy. Parcels with critical infrastructure like cattle handling and loading facilities, feed storage, and the like need to go to parties who are actively engaged in the cattle operations, but those parcels often also have the homestead, which may be a difficult emotional issue. What about parcels with high feed production value? Recreational value? Active oil & gas, wind, or solar production? A robust dialogue with all the parties (and perhaps a trained mediator) while the senior generation is alive can go a long way to arriving at an equitable allocation of these resources. Another approach can be a "closed auction" where the parties bid for the parcels they want. In essence, this approach requires the parties to "put their money where their mouth is" and

## Land in Farm and Ranch Transitions: How Do You Move an Immovable Object? (cont.)

make explicit the economic value they place on each parcel. The funds from the auction are then distributed among the parties equally. Parties may have a net gain or net loss from these proceeds, but in most scenarios the outcome is purchasers get the land for less cash outlay than if they had to simply buy it on the open market.

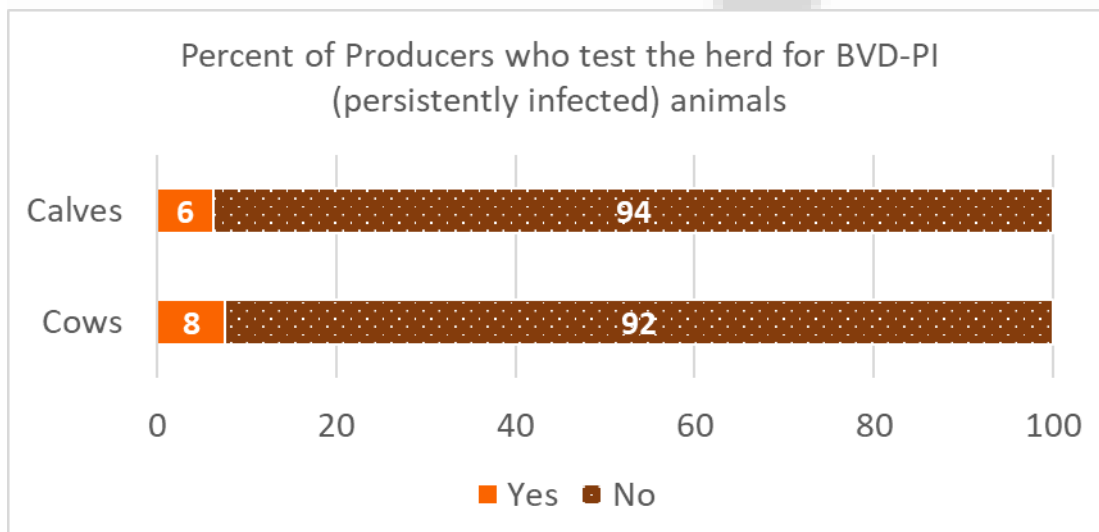
Implicit in our discussion of the first and second approaches is a desire to keep Farm Kid and City Kid from having to manage land together, which frequently brings a lot of friction for reasons we have discussed in previous articles. Nevertheless, circumstances may dictate that some way must be found for Farm Kid and City Kid to inherit land together and for them to, in turn, find a way for it to be kept in operational use by the farm or ranch. The third approach recognizes this, but also recognizes the need for the land to be kept available for future generations (meaning that absent extreme circumstances, the land should not be sold), for Farm Kid to be assured access to the land for agricultural production, and for City Kid to get some form of economic return from the land. In this third approach, a land-holding entity (such as a limited liability company [LLC]) or trust holds ownership of the land. Farm Kid

and City Kid are shareholders or beneficiaries of the entity. Farm Kid has a long-term lease under which he or she pays fair market value rent to the entity to use the land. This rental income is revenue for the entity, which in turn pays land ownership costs (such as taxes, insurance, and maintenance costs) and then distributes revenues to its shareholders or beneficiaries, *i.e.*, Farm Kid and City Kid. Thus, Farm Kid effectively pays less than fair market value rent since he or she gets a “refund” in the form of this distribution. City Kid may not get the value they would receive from an outright sale of his or her land interest, but they do receive a regular cash flow from their interest.

All of these approaches have different considerations and consequences, but the point of this discussion is that farmers and ranchers have more options for handling the transition of their land assets than they might think. A good strategic plan for the operation, a sound understanding of its financial performance, and deep, robust discussions with stakeholders can equip farm and ranch owners to use these approaches or others to successfully move the immovable asset and position their operation for success in generations to come.

### Oklahoma Beef Management and Marketing Snippets: PI (Persistently Infected) Testing Rates

*Kellie Curry Raper, Livestock Marketing Specialist, Agricultural Economics*



Source: Oklahoma Beef Management and Marketing Survey, 2017

## Recent Publications

*A Strategy for Building a Beef Cow Herd*, Oklahoma Cooperative Extension Service Fact Sheet AGE-269, November 2021. Authors: Abby ShalekBriski, Eric A. DeVuyst, Cheryl S. DeVuyst, Roger Sahs, Matthew Stockton and Katlin Ramy. Available at <https://extension.okstate.edu/fact-sheets/a-strategy-for-building-a-beef-cow-herd-agec-269.html>

*Oklahoma Quality Beef Network VAC-45 Program Requirements*, Oklahoma Cooperative Extension Service Fact Sheet AFS-3305, July 2022. Authors: Jeff Robe, Rosslyn Biggs and Paul Beck. Available at <https://extension.okstate.edu/fact-sheets/oklahoma-quality-beef-network-vac-45-program-requirements.html>

*Cow-Calf Production Record Software*, Oklahoma Cooperative Extension Service Fact Sheet CR-3279, August 2022. Authors: Courtney Bir and Brent Ladd. Available at <https://extension.okstate.edu/fact-sheets/cow-calf-production-record-software.html>

*Custom Beef Processing: Expected Yields*, Oklahoma Cooperative Extension Service Fact Sheet FAPC-245, September 2022. Author: Joel Jackson. Available at <https://extension.okstate.edu/fact-sheets/stocker-lease-agreements.html>

*Stocker Lease Agreements*, Oklahoma Cooperative Extension Service Fact Sheet AGE-572, October 2022. Authors: Roger Sahs and Rodney Jones. Available at <https://extension.okstate.edu/fact-sheets/stocker-lease-agreements.html>



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OSU EXTENSION  
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