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## Early Herd Rebuilding Could Happen Through the Bred Cow Market

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## In The Cattle Markets

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### **Early Herd Rebuilding Could Happen Through the Bred Cow Market**

The USDA Cattle Inventory report showed a 4% reduction in beef cows, a 6% decrease in heifers held back for retention, and a 5% reduction in heifers expected to calve this year (USDA-NASS 2023). Feeder cattle supplies will be reduced nationally in 2023. Continued liquidation in 2023 will depend on the profit margins producers expect to receive. Higher prices for feeder cattle are expected but higher feed costs, especially hay, and other inputs are limiting the profit potential. Some producers have already run out of hay as heavy snow has limited winter grazing and persistent drought conditions shortened the grazing season and reduced overall hay production. Much has been said about the ENSO weather patterns changing this year. If this weather pattern does materialize the change will benefit the Southern Plains with a cool and wet spring/summer whereas the Northern Plains generally stay dry in the summer before a cool/wet fall. For Northern Plains cattle producers, it may get a bit tougher before things improve from a feed perspective.

There will be producers who have feed resources and believe profits are to be had in 2023 and 2024. The quickest way for these producers to increase the feeder cattle supply is through the addition of bred cows or bred heifers. Bred heifers receive a premium over bred cows. For example, the price ratio of bred heifers to bred cows has averaged 2.5% over the last 5 years. In other words, bred heifers are on average 2.5% more expensive than bred cows. The premium is the widest in the Spring (March-May) and lowest in the Fall (September-November). There is a premium due to the longer useful life of the cow in the herd but smaller than expected due to potential issues with calving which can occur with first calf heifers.

However, the national bred cow price masks several factors that impact price. Age, weight, months bred, genetics and market conditions are the primary drivers of bred cow prices. One study using Oklahoma City bred heifer and bred cow sales from 2000-2015 estimated the premiums and discounts for each of these factors in the bred cow market (see Mitchell et al. 2018). To illustrate how these factors could impact producers' decisions to either buy or sell bred cows this year, I walk through several scenarios assuming we have a three-year-old bred cow that is six months pregnant, is a medium/large 1-2, and black hided. February 2023 prices for this type of cow in Oklahoma City, OK is \$1,150 but has averaged \$870 over the past three years.

Producers selling cows older than this should expect to receive a discount and the discounts tend to decrease almost linearly from 0%-20% as cows age. A four-year-old bred cow would cost \$1,150 (0% discount), a seven-year-old bred cow would cost \$1,035 (10% discount), and a ten-year-old bred cow would cost \$920 (20% discount). Producers considering marketing older cows as bred should acknowledge the heavy discounts assigned as age increases.

Similarly, the closer the cow is to calving, the more expensive the bred cow becomes relative to a six-month-old bred cow. Discounts and premiums are nearly linear between a 4% premium (\$1,196) for an eight-month-old bred cow, a 5% discount (\$1,092) for a 4-month-old bred cow, and a 12% discount (\$1,012) for a one-month-old bred cow. These premiums and discounts exist as there less risk of losing a calf as age increases, lower production costs before the calf's birth, and revenue is received more quickly when late-gestating cows are purchased.

Selling this same bred cow at different times of the year will impact the price received. Producers looking to buy bred cows in the late winter or early spring should expect to pay a premium. The highest premiums are in February and March as many producers are purchasing cows that are on the same calving cycle in anticipation of summer grass and pastures. Prices peak in early March at approximately an 8% premium (\$1,242). Prices are lowest in the summer and fall months in areas that are heavy spring calvers as producers are culling their herds and determining which heifers to be retained – a 4% discount (\$1,104). Selling the same quality, age, and pregnancy age results in a difference of \$138 per cow.

Current market conditions will also play a role in the price of bred cows. The feeder cattle and corn markets are the two largest drivers of bred cow prices. Higher feeder cattle prices create incentives for more calves to be brought to market and bred cows are the quickest way to do so. Higher corn prices increase the cost of gain in feedlots. This puts downward pressure on feeder cattle prices although the impact is delayed as it takes at least 6-8 months before the potential calf will reach the feedlot. Combining these impacts and current price forecasts can show the premiums and discounts producers can expect to receive for a bred cow. Premiums/discounts are relative to our bred cow (three-year-old that is six months pregnant) and current CME Feeder Cattle (\$210 per cwt.) and Corn (\$6 per bu.) contracts. Table 1 shows these premiums and discounts. The nearby feeder cattle price at the time of sale has a much larger impact than the nearby corn price. For example, relative to the BASE, a \$0.50 decline would increase the price of our bred cow by 0.77% whereas a \$10 per cwt. increase in the feeder cattle contract increases the price by 5.29%. Producers looking to rebuild herds through the bred cow market should be aware of these and other factors before buying or selling bred cows.

**Table 1. Nearby CME Feeder Cattle and Corn Price Expectations on Bred Cow Premiums and Discounts.**

		CME Corn Price Expectations (\$/bu.)				
		5.00	5.50	6.00	6.50	7.00
<b>CME Feeder Cattle Price Expectations (\$/cwt.)</b>	<b>180</b>	-14.34%	-15.05%	-15.70%	-16.29%	-16.83%
	<b>190</b>	-9.05%	-9.81%	-10.49%	-11.12%	-11.69%
	<b>200</b>	-3.74%	-4.54%	-5.26%	-5.92%	-6.53%
	<b>210</b>	1.61%	0.77%	BASE	-0.70%	-1.34%
	<b>220</b>	6.98%	6.09%	5.29%	4.55%	3.88%
	<b>230</b>	12.38%	11.45%	10.60%	9.83%	9.12%
	<b>240</b>	17.81%	16.83%	15.94%	15.13%	14.39%

Source: Authors' calculations using estimates from Mitchell et al. (2018)

Note: Estimates are for a 3-year-old bred cow that is 6 months pregnant.