

**Cow-culling and heifer-retention strategies for**

# More Net Profit

Story by  
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Beef business economist Harlan Hughes estimates the five-year average profit pocketed by Plains producers from 1994 to 1998 was a meager \$3/cow. Consequently, there weren't many 1999-born heifers saved as replacements for commercial cow herds.

It wasn't a phenomenon peculiar to the prairie states that Hughes observed at close range. Needing to pay some bills, cattlemen across the country took advantage of better calf prices and

cash in many, most or all of their heifers.

Last fall's calf prices were better yet, and while cattlemen from drought-stricken areas may not have held back many 2000-born heifers, the typical rancher probably felt it was time to save some females.

Predictions by Hughes, professor emeritus at North Dakota State University (NDSU) and author of *The Market Advisor*, indicate prices could be higher still in 2001 and might be as good or better through 2003. So until calf prices slip again, with an expected low in 2006,

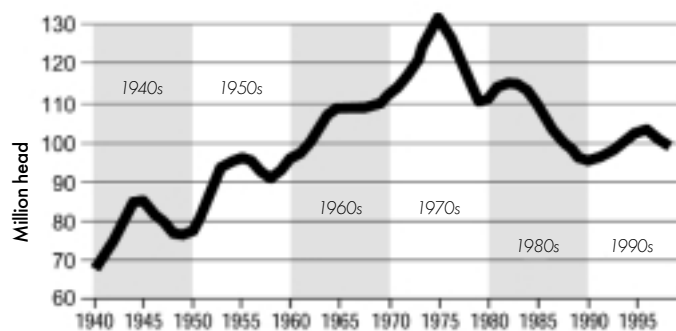
many producers will be encouraged to increase heifer retention and to expand their herds.

"The problem is those producers are selling fewer calves during the time of high prices while keeping relatively high-priced replacement heifers. And those high-priced replacements produce calves during periods of low prices," Hughes warns. "It's the nature of the cycle."

**Don't fight it**

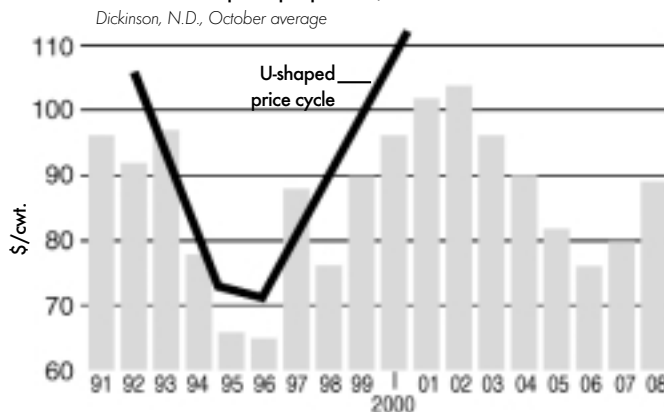
Hughes considers the cyclic nature of the country's cattle population to be the most important force influencing the cow

Table 1: U.S. all-cattle numbers, 1940-1998



Source: Livestock Marketing Information Center

Table 2: North Dakota price projections, 500- to 600-lb. steer calves



Source: NDSU Agriculture Communication



business. He says the 10-year cattle cycle causes 10-year price cycles. When cattle numbers go down, prices go up. Conversely, when cattle numbers climb, prices fall.

Though many cattlemen curse it, Hughes suggests the cycle of alternate booms and busts is here to stay. Improved demand for beef might help keep prices higher in general, but he believes the cycle will continue with its characteristic peaks and valleys. Consequently, Hughes coaches cattlemen to stop fighting it and to make the cattle cycle work to their advantage.

"I doubt we can do away with the cattle cycle without doing away with the cow, for it's the biology of the cow that causes the cycle," Hughes explains. "When the cowman receives the signal to expand, it takes three years for the heifer calves he saves to produce calves that contribute to the beef supply. By that time, here comes the signal to cut back. Since we can't change the biology of the cow, we might need to change how we respond to the signals."



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### **Using the cycle**

Hughes says the cattle cycle consists of three phases: expansion, contraction and turnaround. Following contraction of the nation's herd during the late '90s, the industry is entering a turnaround phase. Indicators include increased heifer retention, a shortage of feeder cattle to fill the country's recently expanded feedlot capacity, more cattle going on feed as calves and upward pressure on calf prices. Then expansion continues until the cycle peaks. Historically, that's in the middle of each 10-year period (see Table 1).

Hughes believes each phase offers unique profit opportunities, so management strategies must change with the phases. Among the strategies for increasing average net income, he recommends matching cow-culling rates and replacement-heifer retention to the cattle cycle.

"North Dakota Cow Herd Analysis and Performance System (CHAPS) data indicate that ranchers cull 14% to 15% of their cows, on average, each year," Hughes offers. "But my economic analysis shows there is a time to cull and a time that you shouldn't. Likewise, there is a time to keep heifers and a time to sell as many calves as possible, including the heifers."

Through analysis of costs and returns for Integrated Resource Management (IRM) cooperators' spring-calving herds, Hughes found that nearly every cow that had a calf, even if she calved late, made a profit from 1990 through 1993 — a period of good calf prices. Consequently, Hughes challenges the often-recom-

mended practice of routinely culling cows with late-born calves.

"Times of high calf prices are not good times for heavy culling," Hughes says. "From 1994 through '96, however, calf prices dropped dramatically (see Table 2 on page 34). While most high-producing cows generated profits during that period, most low- to middle-producing cows did not. When they are netting very little or losing money, cull — and cull deep. Replace those cows with low-priced heifers."

Hughes says heifers born in 1996 (a year of low calf prices) illustrate how low-priced replacements produce calves during a time in the cycle when calf prices are high. And the reverse almost always holds true. Heifer calves saved during periods of high prices produce calves during years of slow markets.

### **Low in '5, '6**

"I would suggest that on the upward side of the price cycle, producers should sell as many calves as possible. Don't hold back heifers, or hold back as few as possible. Try to build a cash reserve to prepare for tough times. They will return. The toughest years usually end in 5 or 6, so I look for calf prices to be low again between the years 2005 and 2007," Hughes says.

"The cycle peak, probably 2002 to 2003, could be a good time to sell bred females. Then cull heavily on the downward side of the price cycle. If you have surplus grass, consider marketing that through yearlings," Hughes adds. "But hold back more heifers while prices are low. If you're thinking about changing genetics in the herd, that could be a good time to do so since even the newest genetics are most reasonably priced during this phase. The 'low-priced' replacements you keep could be the most valuable — the most profitable — cows in your herd."

