

**Cattle Market: Current Situation and Outlook**

by

C. Wilson Gray

A. E. Extension Series No. 96-10

September 1996

# Cattle Market: Current Situation and Outlook \*

By C. Wilson Gray †

## **What's in a cycle? How long can it last?**

The beef industry has had a history of cycles since numbers have been kept on cows. As prices increase ranchers increase herd size. As the additional heifers begin to reproduce total beef supplies increase. Eventually this leads to more product on the market than can be profitably sold to either domestic consumers or exported. As prices then decline ranchers begin to reduce herd size and eventually reduce the total supply of beef enough that prices begin to increase again. This initiates a new cycle.

## **Trends**

When discussing "cattle cycles" three types may be distinguished. These are the seasonal patterns, cyclic patterns and secular or trend patterns.

Seasonal patterns are regular recurring patterns that occur within the year. Cyclic patterns are those which follow a generalized pattern but have a length of several years from trough to trough. Trends are considered as a long term direction and cover a number of cycles.

## **This cycle versus the past**

Since 1928 there have been six full cycles. We are in the middle of a seventh. The six full cycles have averaged ten years in length with typically a six year growth phase and a four year liquidation phase.

Since 1979 several things have changed regarding cycles. The long term trend had been for inventories to increase. The 1979-1990 cycle marked the first cycle that the inventory peak was lower than the peak of the previous cycle. Additionally inventories increased only three years and liquidation lasted eight years. 1990 also marked the first time that the trough was below the previous trough. Structural changes in beef demand and changes in price relationships between beef and other meats were contributors to this trend shift.

## **Can we blame Canada/Mexico for this mess?**

The recent NAFTA/GATT agreements and the earlier CFTA agreement have been questioned as cattle prices have slipped. We like to sell to others but the idea of allowing them into our markets is not as appealing. In order to gain access to other markets we must often, however, allow access to ours. In short, free trade is often a two way street. Naturally the question has come up of the impact of these imports on U.S. cattle prices. These imports have added to US supplies and at least in local areas no doubt have impacted cattle prices.

However, if we allow a 700 pound carcass equivalent for each head of cattle imported and subtract that amount of meat from total beef supplies U. S. beef production has still increased significantly in recent years.

Both live cattle and meat are imported/exported between the U.S. and Canada and the U.S. and Mexico. Trade with other countries such as Japan is nearly entirely as meat. Due to declining net imports of beef in recent years the U.S. may be a net exporter of beef in 1996 for the first time since WW2. This could be adversely affected however by the decline in imports by Japan due to recent health issues.

### **Canada imports and exports**

In the past, excess capacity at the feedlot and processing levels have given incentives for importation of fed and feeder cattle. The slaughter destination points have been primarily Washington, Colorado, and Nebraska. Other factors include consistently higher U.S. cattle prices, favorable exchange rates and a reduction of import tariffs. NAFTA did little to change U.S.-Canadian live cattle trade since that was liberalized in the earlier (1989) CFTA agreement. Nearly all live cattle trade with Canada is in slaughter cattle (94% in '94 and '95). In 1995 imports of Canadian cattle increased 12 percent over year earlier figures and have increased 55.5 percent over 1995 for the January through May period. That pace would be a record number of cattle if it continues through the year. However this situation may not continue. Both Cargill and IBP have large slaughter plants in Alberta and both are undergoing major expansion of these plants. That would reduce the flow of fed cattle to the U.S.

A study by Montana State University compared U.S. and Canadian live cattle and meat imports and exports for 1994 and 1995. USDA data indicate that net live cattle imports increased 16.1 percent but net beef imports decreased 24.3 percent. Consideration of all trade changes would indicate a net price increase of \$0.43 per cwt on fed cattle and \$0.89 on feeder cattle. If the focus is only on net live cattle imports then fed cattle prices declined by \$0.87 cwt and feeder cattle by \$1.74 cwt.

### **Mexico imports and exports**

U. S. imports of cattle from Mexico is primarily feeder cattle as contrasted with Canadian trade. Due to a severe drought and the rapid devaluation of the Peso in late 1994 a record number of cattle were imported to the U. S. in 1995. Most of this movement occurred in the first half of the year. Mexican cattle imports increased 54.2 percent over 1994 . In 1996 for the January through May period they are at 21.5 percent of 1995, a considerable reduction.

Work done at Oklahoma State University indicates that for each additional 100,000 head imported in a month will reduce the price of 3-4 weight calves by \$0.66 per cwt, 4-5 weight calves by \$0.70 per cwt, and 5-6 weight calves by \$0.52 cwt. The highest import month in 1995 was March at 270,000 head. That would have impacted 4-5 weight calves by \$1.89 cwt. or about \$8.50 per head.

### Other export markets

The U.S. trades with countries other than Canada and Mexico. The total market must be considered when looking at beef trade. Five countries account for about 97 percent of U.S. beef trade. They are Japan (57%); Canada (18%); Mexico (14%); South Korea (11%); and Taiwan (2%).

**Table 1. Total U.S. beef and Live Cattle imports & Exports**

|        | U.S. BEEF<br>EXPORTS | U.S. BEEF<br>IMPORTS | U.S. LIVE<br>CATTLE<br>EXPORTS | U.S. LIVE<br>CATTLE<br>IMPORTS |
|--------|----------------------|----------------------|--------------------------------|--------------------------------|
| Year   | Mil. Pounds          | Carcass Wgt          | Thousand                       | Head                           |
| 1990   | 1006.4               | 2355.9               | 119.9                          | 2135.0                         |
| 1991   | 1188.5               | 2406.5               | 311.0                          | 1939.1                         |
| 1992   | 1323.8               | 2439.8               | 321.8                          | 2255.3                         |
| 1993   | 1275.0               | 2401.3               | 153.4                          | 2499.1                         |
| 1994   | 1610.8               | 2370.7               | 230.8                          | 2082.5                         |
| 1995   | 1820.8               | 2103.5               | 94.5                           | 2786.2                         |
| 1996 f | 2074                 | 2081                 |                                |                                |
| 1997 f | 2025                 | 2250                 |                                |                                |

f = forecast

In 1995 beef exports accounted for about 7 percent of U. S. slaughter. Nearly all of our live cattle exports are to our two neighbors, Mexico (57 %) and Canada (40%). Live cattle exports however are only equivalent to about 1% of U.S. slaughter.

It is important to consider beef trade on a dollar basis also. Comparing import and export values shows a trade surplus exists. In 1995 the total value of U.S. beef exports(meat, cattle, by-products, etc.) was \$5.41 billion while we imported a value of \$3.04 billion. Export value is nearly 2 times that of import values. This positive trade balance is a benefit to the beef industry compared to the situation if no trade surplus existed.

**Table 2. U.S. Live Cattle Trade with Canada and Mexico**

| Year           | Canada        | % of Prev. Year | Mexico        | % of Prev. Year |
|----------------|---------------|-----------------|---------------|-----------------|
|                | Thousand Head |                 | Thousand Head |                 |
| 1990           | 854.4         | 148.7           | 1261.1        | 144.4           |
| 1991           | 904.7         | 105.8           | 1034.2        | 82.0            |
| 1992           | 1270.5        | 140.4           | 981.7         | 94.9            |
| 1993           | 1202.3        | 94.6            | 1296.6        | 132.0           |
| 1994           | 1010.3        | 84.0            | 1072.1        | 82.7            |
| 1995           | 1132.7        | 112.1           | 1653.4        | 154.2           |
| 1996 (Jan-Jun) | 852.8         | 145.5           | 219.9         | 24.1            |

**Forward planning -- what's the outlook?**

Desperate times may require extraordinary measures to cope. For many operators the down side of the cattle cycle often means moderate to extreme belt tightening, foregoing "luxuries" such as new equipment and trips or even major reductions in key areas such as repairs and family living. A common fallacy is that the most profitable operations have the lowest over all cost. Actually, the most profitable operations are those that generate the most NET income from the use of their resources. Often their cost per cow may be typical, but they are generating more units of production per cow thus lowering their cost per pound sold.

**Know what your costs are**

So what are your costs? A good question. Not everyone has the answer. Numerous budgets are available from the Extension Service to use as a guide on determining costs. A more in-depth approach would be to use your operations records with the FINPACK-IDAHO program (available through many county offices) to do an analysis of the ranch. This is compatible with the national IRM-SPA-Financial guidelines also.

Three areas are key signals in determining how your operation is doing and where the potential problem(s) might arise. Those business measures are: liquidity, solvency and cost structure.

**1. Liquidity**, a.k.a. cash flow, refers to the operation's ability to meet cash expenses, family living, and debt service as they occur, and to meet unplanned events. It is a short run or current measure of financial health. The severe

events. It is a short run or current measure of financial health. The severe drop in cattle prices is causing liquidity problems for many operations. If an operation has problems meeting current obligations, obtaining credit or other services from creditors and suppliers may be a problem. The stress level can often rise proportionately.

Liquidity can be measured in several ways. A common balance sheet measure used by lenders is the current ratio. This is the value of current assets divided by the total of current liabilities. A large ratio, 1.5 or 2 to 1 is desirable. This indicates the extent to which assets that can readily be converted to cash are available to meet current obligations. A low current ratio is a warning flag that cash is likely not available to meet all current obligations.

Other liquidity measures that are easily provided by the FINPACK analysis to measure cash flow condition are the years to turn over intermediate debt and cash farm expense as a percent of income. A low turnover number indicates that the turnover time is in line with the expected usefulness of the assets. A high number would indicate that intermediate debt will increase as cash flow is not sufficient to cover the replacement of assets as needed.

Cash farm expense as a percent of income shows the percentage of gross income needed to meet operating expenses including interest. Commonly this is in the 65 to 75 percent range. A larger number indicates that little cash is left to meet debt service, family living, taxes or to reinvest in improvements.

**2. Solvency** is a measure of longer term financial stability. If the business were liquidated today, would there be enough cash to repay all debts including tax liabilities? Solvency analysis should evaluate the net worth, projected changes in net worth, and debt structure. As such, solvency measures are developed from the balance sheet.

One solvency measure that is widely used is the debt-to-asset ratio. This is the ratio of total ranch debt divided by total asset value. It indicates the "debt loading" that the operation is carrying. For example, an operation with \$200,000 in debts (current, intermediate and long term) and \$300,000 in total assets would have a debt-asset ratio of 67%. An operation with the same debt but assets of \$500,000 would have a ratio of 40%. Both situations are solvent because debt is less than asset values. However, the ranch with a 67% ratio is at a much greater financial risk than the latter due to the higher debt load. A lower ratio shows greater solvency and implies more ability to withstand short term operating losses.

In general, debt-asset ratios of 60% or more indicate that close attention will be needed during periods of low income as debt service requirements may be higher and the equity available to support the operation is limited. Ratios between 40% and 60% indicate greater strength and ability to withstand short term operating losses. A ratio lower than 40% is very good.

Net worth (defined as assets minus liabilities) is an important measure of risk bearing ability. It shows the owners equity in the ranch. Growth in new worth

comes from profits from operations, increases in asset values over time, and retirement of debt. Growth in net worth is typically a goal of ranch owners.

Related to this is the change in new worth from year-to-year. In FINPACK this is calculated by adding net non-farm and net farm income and then subtracting family living, taxes and interest on non-farm debt. This figure is the amount new worth is expected to increase (decrease) between years. Small but positive changes should be considered a caution signal and any zero or negative changes as a flashing red light. Negative changes in net worth indicate that equity values are eroding.

**3. Cost structure** and profitability go the heart of basic management information. Costs usually don't change as fast as income. Thus when prices decline costs may be unchanged resulting in lower or negative profits. First, you must determine what your cost is (UI budgets can be a guide to this) and then examine what areas are high or too low, and what production factors may be related. As examples, during high calf prices an operation may be able to afford vet & medical costs of \$30 per cow. during times of low prices this needs to be brought down to the average of \$15 per cow unless there is some extenuating circumstance. Examination of records may show costs are in line but weaned calf crop is 88% compared to 92% in your area. Determining the reason and correcting will give you 4% more calf crop, usual for a very small increase in cost.

The key here is to know what your costs are so that you have a basis for taking management action. Again, FINPACK can assist in getting a handle on your costs.

### **What's your business/marketing plan**

Knowing your costs is one part of a management plan. To really have a handle on your ranch's business affairs however more is needed. Analysis of records from farm and ranch associations in several states show that cost analysis, planning for marketing and business management consistently payoff in a big way. The top 1/3 of profitable operations consistently have net income of three to six times that of farms in the bottom 1/3. During periods of low prices these operations may still be profitable versus running into the red.

In addition to knowing what your production costs are, a good set of basic financial records is important. From there you can develop - and hopefully follow - a marketing plan, analyze past records for areas to improve and refine plans for the future.

Management refers to the decision making process involved in controlling and directing a business. In simpler terms, using what you have to get what you want most. Having a set of objectives is important here as these then guide the planning process. These should be discussed and agreed upon by all having a stake in the ranch operation. Once agreed to current operation and alternatives under consideration can be evaluated for their ability to help

obtain one or more of the objectives. Profitability is an obvious one, children's education or retirement planning may be others.

It is very important to write down your objectives and broaden that in the context of an over all ranch business plan. This can also be used to present your strategy when requesting financing from a lender. Timing and flexibility are two other management principles that need to be kept firmly in mind as you operate. Time, the one resource that can't be bought, borrowed or stretched, matters. Timeliness of operations, market timing, timing of changes or new business can greatly impact success or failure rates. Because the future is uncertain, the flexibility to update plans and act accordingly will help keep an operation on-track to it's objectives. A useful technique is "Management by exception" where you monitor your monthly cash flow plan but only tack action if expenses are over budget by 10% or more. The "warning flags" need to be set and re-evaluated so that they signal the need for attention while there is still time to make corrections.

Build on your operations strength's. Land, people or other assets must work for the growth of the operation so that it remains viable. People make productivity in any business. Good people management can often make a critical difference to the success of the ranch.

With a sound management plan you should be in the position of knowing more about the financial side of your operation than your banker. During times when cash flow is tight maintaining a good relationship is one key to survival. To score points with your lender, don't hit him with any surprises like missed payments or need for additional borrowing above the original line amount. Keep your banker apprised about the situation and let them know ahead of time if there is a problem. When you meet to discuss financing have a current set of financial statements, and a projected cash flow if refinancing. Show where you plan to make cost cuts. If you are seeking refinancing or payment extensions show how this will benefit not only you but the bank, and what other sacrifices you are making to make things work out. Tell him about other options you considered. When he goes to the loan committee the more he knows the better he can help your case.

### **Plan for the next phase of the cycle**

We are likely at or near the trough of this cattle cycle. Most long term forecasts put the peak in cattle numbers in 1996 and peak in beef production in 1997. This would indicate that prices have or soon will bottom. Low profits will cause herd reductions to continue as numbers decline for the next two to three years.

Counter-cyclic strategy would imply that for those financially able to maintain or expand herds the next few quarters may offer some of the best prices this decade for doing so. Buying high priced cows has rarely been profitable.

For those who need to solve immediate cash flow problems some combination of the following will occur. Revenues will need to increase, expenses will need



to be reduced, family living will take a hit, capital assets will have to be sold, off-farm employment to add to income, or debt payments restructured to improve demands on cash flow.

Regardless of the tactic used one objective is likely to be maintaining a viable base herd to build with when profits begin to improve. With the associated uncertainty of forecasting prices many operators feel that trying to plan is a futile exercise. The inability to see the future is why planning is so important. Having a plan gives you the strategy to find profits.

**Price forecast(s)**

In the table below are 1996 and first half 1997 cattle price estimates. The strengthening in late fall and early 1997 prices is predicated on a larger corn crop resulting in some feed grain price moderation. It also assumes that the drought in the southern plains and Texas will not return and fall winter wheat pasture will be at least average this fall providing a market for fall grass calves. A reduced corn harvest or lack of fall grazing would negatively impact these prices.

**Table 3. 1996 - 1997 Average Cattle Prices & Forecast, PNW**

|                         |      | 1996  |       |       |       | 1997  |       |
|-------------------------|------|-------|-------|-------|-------|-------|-------|
|                         | Unit | I-p   | II-p  | III-f | IV-f  | I-f   | II-f  |
| Ch. Steers<br>11 - 1300 | cwt  | 63.06 | 60.16 | 63-67 | 64-68 | 65-71 | 67-73 |
| Steers 7-800            | cwt  | 58.11 | 56.87 | 61-65 | 62-66 | 63-67 | 67-74 |
| Steers 5-600            | cwt  | 59.00 | 57.50 | 60-65 | 63-66 | 64-70 | 67-75 |
| Utility Cows            | cwt  | 31.50 | 30.76 | 29-33 | 25-30 | 29-33 | 30-34 |

p = preliminary; f = forecast

What are the pro's (Bull market) and con's (Bear market) of the situation?

**Bulls**

**Bears**

Cattle on feed numbers are down  
 Feedlot placements have been light  
 Slaughter weights are down  
 Herd is in the liquidation part of cycle  
 High hog prices make beef more favorable  
 Exports look good -- poss. net exporter for the first time since WW2

Corn prices are projected at \$3.25  
 Negative cattle feeding margins  
 Feedlot BE were about \$60  
 Pork production is steady  
 Poultry (broiler and turkey) production has increased  
 Beef consumption shows little or no change

### **OK, so what are some options?**

Now that we've discussed more than most want to know about cycles and markets and management, what can an operator do to make the best of the situation? Several options can be considered. Which will work best depends upon an operations circumstances and available resources, especially labor and feed. The need for cash flow will also be a major factor in what is done.

#### **Fall sales**

The most traditional sale method and last year one of the better alternatives was to sell calves off the cow and put effort into herd management. Given the prospect of slightly improved prices this fall over last this might not be a bad strategy. The U of I budget, included in the appendix, indicates this to be a marginal situation. As always it is best to figure this based on your costs.

Although feed grain prices are expected to moderate we are at least one more harvest away from any real surplus in feed. Thus feedlots will continue to be more interested in heavier weight calves as those work better economically. If you have light calves marketing to fall grass pasture operators might be a good alternative.

#### **Backgrounding**

Overwintering calves last year didn't work well for many. This year could be better given the anticipated fall - spring price spread between 500 lb. and 700 lb. calves. Using the CalfWinter analysis program the margin is thin but positive. This assumes a 500 pound calf in at \$64.50 cwt. for 120 days and gaining 1.8 pounds per day. \$65 cwt is received for the 710 pound calf next spring. Hay (\$70/ton) and feed barley (\$148/ton) were fed. The owner supplied all labor. This option should be evaluated based on your feed availability and facilities for over wintering calves.

#### **Retained Ownership**

Keeping cattle until slaughter has been another strategy used by some. Idaho has had a retained ownership program for several years now, the *A to Z Retained Ownership Company*. It was organized by cow-calf producers to obtain better information on how their cattle perform in the lot and on the rail. Profitability has also been tracked by owner. This has allowed ranchers to "get their feet wet" without betting the ranch on the outcome.

Again, when considering this option individual circumstances will make all the difference. Pencil out costs, evaluate feed yards and enter cautiously. It can be a good bet but know your numbers up front. The retained ownership budget indicates this might work going in with a 700 lb. calf for 165 days.

#### **What about cull cows**

On any ranch about 20% to 25% of income is from cull cows. Most operations do spring calving, run pairs on pasture or range over the summer and then test and sort cows in the fall. Culling should be based first on cows with physical

problems. Bad udders, prolapses and poor feet are not something to keep when prices are low. Culling for other factors is a matter of ranch policy. Typically open cows, age, and low weaning weights are reasons for culling.

As prices decline keeping non-productive cows in the herd becomes increasingly expensive. In general, mature cows wean more pounds than heifers and second calf cows or late calving cows. A reasonable culling criteria would include a) physical culls, b) open cows, c) open yearlings d) cows that have reached terminal age e) bred yearling heifers that will calve after the 45th day of the calving season, f) late calvers or young cows producing small calves relative to the herd average.

This strategy removes young stock that probably won't cover their costs while they still have a high salvage value, and removes late calving cows and heifers that will lower the average weaning weight for the herd.

### **Managing culls**

If the ranch has sufficient feed one option for culled cows is to hold them from fall culling until January or February. This accomplishes a) improving the cows condition thus improving potential value, b) moves the cull sale from fall when prices are typically their lowest to winter/spring when prices normally improve for culls and c) utilizes surplus feed. Cattle must be capable of improving condition and gains need to be economically attained for this to be profitable.

An alternative would be to cull early and sell right away. This would reduce feed costs slightly in some cases, move the cows to market before any sharp seasonal declines occur and get cows marketed in slightly better condition than if held until later in the fall. Cull cow prices usually begin to slide in September and drop much more in October and November. Early sales might avoid larger discounts later. In addition, with the financial stress ranchers are facing many will undoubtedly be culling at higher than typical levels this fall. The fall price drop could be more than normal.

### **Strategic Alliances**

Another alternative being used more often is the strategic alliance. An alliance is by definition an association to further the common interests of the members. In the last decade various efforts have been made to secure agreements with processors on behalf of producers. Three basic types of beef carcass alliances exist. These are breed association sponsored, commercial and natural/implant free.

- Breed Association alliances are predominately British breeds. Groups include: Certified Angus Beef, Certified Hereford Beef, Supreme Angus Beef (Red Angus) and Certified Shorthorn Beef.
- Commercial Carcass alliances target either high quality beef or lean red meat yield goals. Groups include: Western Beef Alliance, Integrated Beef Technologies, Moorman's and Farmland Supreme Beef Alliance.

- Natural/Implant Free alliances target all-natural, implant free beef and are among the oldest programs. All are commercial but with the "natural" orientation. Groups include: Maverick Ranches Beef, Laura's Lean Beef and Coleman's Natural Meats.

Each association has specific criteria for carcasses to qualify for their branding. Breed type, use of additives, grade and quality considerations are a few of the factors involved. The formulae pricing systems used are changed periodically to effect market changes. Changing genetics on the ranch takes time. A cattleman will only oversee six to seven generations in his lifetime. Attempting to move the herd genetics toward a particular alliances criteria may be a desirable long term goal but is not a short term solution to marketing.

### **Managers versus cowboys -- what's the score?**

Many things have impacted the industry in the last decade and one-half. Consumer demand has slipped, beef is marketed more internationally than in previous years, environmental and other concerns have landed next door. Marketing and production is and will continue to undergo some basic changes in the way business is done. Agriculture in general is undergoing what some call "industrialization." This process is moving agriculture from an industry that rises commodities to one that manufactures final consumer goods. Those who are in business tomorrow are the ones who today are recognizing these changes and laying plans to adapt their operations to meet those challenges profitably.

### **Profits under-gird lifestyles**

Agriculture and ranching especially has always been termed a "way of life" and that holds a certain sentimental feeling for most of us. But to maintain that way of living profits have always been necessary. In good years almost anyone can make money ranching (or any other business). When prices go south attention to management takes a front seat. Much of this paper has focused on management. Learning and applying sound managerial principles is perhaps the single most important thing you can do to improve ranch profitability.

### **Maintaining a way of life**

Since the early 1970's ranchers have significantly improved productivity. However, the competition has not stood still. Poultry and pork have made even larger gains. Higher poultry supplies have given it a price advantage in the meat case. Since many consumers are price conscious shoppers the price differential has been noticed. More and more the beef industry is being driven by end-use markets. These are diversifying thus requiring differentiation back through the production chain to meet those specific end user requirements. Alliances may be one method to address this. Other methods will likely develop to remain competitive and provide what is being demanded, but not necessarily provided, at the retail counter. Failure by the beef industry to meet customer demands for quality, convenience, and value will send these buyers to pork and poultry as long as they do better at meeting their requests.

Much of the slaughter cattle market is traded in a system where animals with very different wholesale and retail values receive only slight price differentials. Cattlemen and feedlot operators will find it difficult to produce cattle that meet the desired carcass qualities unless there is financial reward in the system.

Generic promotion programs set up by beef and other commodities have been relatively small in scale compared to other commercial products. In addition the price impacts of generic advertising on beef have been relatively small. Research indicates that the greatest impact of generic promotion is in the first six months to inform consumers of new products. Once they learn about the new item it is "old news" and most folks tune out unless the ad is highly entertaining (a feature not necessarily related to selling product). Cattlemen should evaluate the allocation of check-off dollars and seriously consider re-allocating funding toward improving productivity, export market development and development of new consumer oriented products.

In the mean time know your cost structure, develop objectives and strategies to accomplish them, analyze your operation for savings, alternative revenue and marketing options. Pencil it out first to check feasibility and seek advice from other sources including lenders, other ranchers, your Extension agent, and others in the industry you trust.

## **References & Other Reading**

- Bastian, Chris and DeeVon Bailey, ed., **Managing for Today's Cattle Market and Beyond**, Cooperative Extension Service, August 1996.
- Boehlje, Michael, and Lee F. Schrader, "Agriculture in the 21st Century", *J. Prod. Agric.*, pp 335-341, Vol. 9, no. 3, 1996
- Gray, C.W., "Culling and Replacement Strategies Needed for '90's", Livestock Marketing Information Center, *Western Livestock Roundup*, July 1995.
- Holt, John, "Applying business management principles to management and marketing decisions", Paper presented at *Integrating Extension Education Programs for Profitability* Conference, Knoxville, TN, July 29-30, 1988.
- Hughes, Harlan, "A Look at a Combined Canadian/United States Beef Herd", North Dakota Extension Service: *The Market Advisor*, August 22, 1996.
- Lambert, Chuck, "Sorting It Out: Cattle Numbers, Beef Supplies and Demand", National Cattleman's Beef Association, August 1996.
- Libbin, James D. and L. B. Catlett, "Does Business Management Make a Difference?", New Mexico State University; Cooperative Extension Service newsletter *Agri-Cents*, December, 1987.
- Livestock Marketing Information Center, "Imports of Feeder and Slaughter Cattle and Calves from Mexico and Canada", Table 5.111, July 30, 1996.
- Makus, L.D., J.C. Foltz, and B.B. Davis, "Planning your business", Moscow, ID: University of Idaho: *Alternative Agricultural Enterprises*, Agricultural Experiment Station CIS 978, April 1993.
- Marsh, John M. and Clint Peck, "The U.S. Beef and Live Cattle Trade: Effects on Domestic Feeder Cattle Prices", Departmental Special Report #18, Department of Agricultural Economics and Economics, Montana State University-Bozeman, June 1996.
- Sartwelle, J.D., T.T. Marston, and R.P. Bolze, "Marketing and Informational Alliances in the Fed Cattle Sector", Kansas State University CES, Paper presented at LMIC Outlook Conference, San Antonio, TX, July 26, 1996.

---

\*\* Presented at Rancher Survival Seminars, September 18 -20 in Idaho Falls, Twin Falls and Caldwell, 1996.

A. E. *Extension Series 96 - 10*

† C. Wilson Gray, District Extension Economist, University of Idaho, Twin Falls Research and Extension Center, Evergreen Building @ CSI.

## **APPENDICES**

**Central Idaho Cow Calf Budget**

**Sample Calf Back Grounding Budget**

**Sample Retained Ownership Budget**

**Charts -- Cattle Cycles**

**Charts -- Imports/Exports**

**Charts -- Miscellaneous**

Cow-Calf Budget, Summer on Range, Winter Feeding, Central Idaho  
 250 Cow Herd, 90 Pct. Weaned Calf Crop

|  | Weight<br>Each | Unit | Total<br>Number of<br>Units | Price or<br>Cost/Unit | Total Value         | Value or<br>Cost/Head |
|--|----------------|------|-----------------------------|-----------------------|---------------------|-----------------------|
| <b>1. Gross Receipts</b>                 |                |      |                             |                       |                     |                       |
| Steer calves                             | 5.40           | cwt  | 610.20                      | 64.50                 | 39,357.90           | 157.43                |
| Heifer calves                            | 4.90           | cwt  | 318.50                      | 60.00                 | 19,110.00           | 76.44                 |
| Aged bull                                | 16.50          | cwt  | 99.00                       | 40.00                 | 3,960.00            | 15.84                 |
| Cull cows                                | 11.00          | cwt  | 418.00                      | 36.00                 | 15,048.00           | 60.19                 |
| Cull repl hfr                            | 9.00           | cwt  | 45.00                       | 66.00                 | 2,970.00            | 11.88                 |
| <b>Total Receipts</b>                    |                |      |                             |                       | <b>\$80,445.91</b>  | <b>\$321.78</b>       |
| <b>2. Operating Costs</b>                |                |      |                             |                       |                     |                       |
| Feed barley                              |                | cwt  | 172.80                      | 4.85                  | 838.08              | 3.35                  |
| Alfalfa grass hay                        |                | ton  | 430.56                      | 65.00                 | 27,986.40           | 111.95                |
| Deeded summer range                      |                | aum  | 2116.80                     | 12.00                 | 25,401.60           | 101.61                |
| Crop aftermath                           |                | aum  | 302.50                      | 10.00                 | 3,025.00            | 12.10                 |
| Salt                                     |                | lb   | 5520.00                     | 0.06                  | 331.20              | 1.32                  |
| Hauling                                  |                | head | 250.00                      | 13.75                 | 3,437.50            | 13.75                 |
| Marketing                                |                | head | 250.00                      | 8.12                  | 2,030.00            | 8.12                  |
| Veterinary Medicine                      |                | \$   | 3480.86                     | 1.00                  | 3,480.86            | 13.92                 |
| Machinery (fuel,lubrication,repair)      |                | \$   | 1987.77                     | 1.00                  | 1,987.77            | 7.95                  |
| Vehicles (fuel and repair)               |                | \$   | 2818.01                     | 1.00                  | 2,818.01            | 11.27                 |
| Equipment (repair)                       |                | \$   | 45.73                       | 1.00                  | 45.73               | 0.18                  |
| Housing and Improvements (repair)        |                | \$   | 1423.34                     | 1.00                  | 1,423.34            | 5.69                  |
| Hired Labor                              |                | hr   | 1668.00                     | 6.25                  | 10,425.00           | 41.70                 |
| Owner Labor                              |                | hr   | 745.00                      | 6.25                  | 4,656.25            | 18.62                 |
| Interest on Operating Capital            |                | \$   | 27928.19                    | 0.0875                | 2,443.72            | 9.77                  |
| <b>Total Operating Costs</b>             |                |      |                             |                       | <b>\$90,330.46</b>  | <b>\$361.32</b>       |
| <b>3. Income Above Operating Costs</b>   |                |      |                             |                       | <b>-\$9,884.55</b>  | <b>-\$39.54</b>       |
| <b>4. Ownership Costs</b>                |                |      |                             |                       |                     |                       |
| Capital Recovery:                        |                |      |                             |                       |                     |                       |
| Purchased Livestock                      |                | \$   | 1539.00                     | 1.00                  | 1,539.00            | 6.16                  |
| Housing And Improvements                 |                | \$   | 13156.54                    | 1.00                  | 13,156.54           | 52.63                 |
| Machinery                                |                | \$   | 2552.42                     | 1.00                  | 2,552.42            | 10.21                 |
| Equipment                                |                | \$   | 460.69                      | 1.00                  | 460.69              | 1.84                  |
| Vehicles                                 |                | \$   | 3765.86                     | 1.00                  | 3,765.86            | 15.06                 |
| Interest on Retained Livestock           |                | \$   | 149000.00                   | 0.0950                | 14,155.00           | 56.62                 |
| Taxes and Insurance                      |                | \$   | 1661.57                     | 1.00                  | 1,661.57            | 6.65                  |
| Overhead                                 |                | \$   | 2500.00                     | 1.00                  | 2,500.00            | 10.00                 |
| <b>Total Ownership Costs</b>             |                |      |                             |                       | <b>\$39,791.07</b>  | <b>\$159.16</b>       |
| <b>5. Total Costs</b>                    |                |      |                             |                       | <b>\$130,121.53</b> | <b>\$520.49</b>       |
| <b>6. Returns to Risk and Management</b> |                |      |                             |                       | <b>-\$49,675.62</b> | <b>-\$198.70</b>      |



CALF WINTERING COST ANALYSIS  
RESULTS

|   | STEERS   | HEIFERS |
|---|----------|---------|
| COMPUTED SALE WEIGHT (INCLUDING SHRINK) ....                      | 709.52   | NA      |
| COMPUTED FEED CONVERSION .....                                    | 10.07    | NA      |
| INTEREST CHARGE/HEAD .....  | \$12.55  | NA      |
| COST OF GAIN PER HEAD (EXCL. PURCHASE COST) ..                    | \$137.44 | NA      |
| TOTAL COST/HEAD (INCLUDING PURCHASE COST)...                      | \$459.94 | NA      |
| COST OF GAIN PER DAY ON FEED .....                                | \$1.15   | NA      |
| COST PER POUND OF GAIN .....                                      | \$0.64   | NA      |
| TOTAL DAYS (Fed plus Pasture) .....                               | 120      | 0       |
|   |          |         |
| BREAKEVEN SELLING PRICE AT GIVEN<br>PURCHASE PRICE (\$/CWT) ..... | \$64.82  | NA      |
| BREAKEVEN PURCHASE PRICE AT GIVEN<br>SELLING PRICE (\$/CWT) ..... | \$64.75  | NA      |
|   |          |         |
| NET RETURN/LOSS PER HEAD .....                                    | \$1.24   | NA      |
| NET RETURN/LOSS PER CLASS.....                                    | \$124    | \$0     |
| TOTAL NET RETURN/LOSS .....                                       | \$124    |         |

CALF WINTERING COST ANALYSIS  
INPUT DATA

|   | STEERS  | HEIFERS |
|---|---------|---------|
| Purchase Price of Feeder Cattle ..(\$/cwt) .. | \$64.50 | \$0.00  |
| Average Purchase Weight/head .....(lbs) ..    | 500     | 0       |
| Number of Head you Intend to Feed .....       | 100     | 0       |
| Number of Days on Feed .....                  | 120     | 0       |
| Number of Days on Pasture .....               | 0       | 0       |
| Expected Fed Average Daily Gain (lbs/head) .  | 1.80    | 0.00    |
| Expected Average Daily Gain on Pasture ....   | 0.00    | 0.00    |
| Calculated Ending Weight Including Shrink ..  | 710     | NA      |
| Interest Rate on Borrowed Money .....(%) ..   |         |         |
| (or Opportunity Cost of own Money) ....       | 9.00%   | 0.00%   |
| Monthly Pasture Charge Dollar/Head ...(\$)    | \$0.00  | \$0.00  |
| Tax on Livestock .....(\$/head) ..            | \$0.00  | \$0.00  |
| Veterinary and Medical Expenses .(\$/head) .. | \$5.00  | \$0.00  |
| Transportation Costs to Feedlot .(\$/head) .. | \$0.00  | \$0.00  |
| Transportation Costs to Market ..(\$/head) .. | \$7.00  | \$0.00  |
| Facility Repair Costs for Enterprise .(\$)    | \$1.00  | \$0.00  |
| Total Fuel Costs for Enterprise .....(\$)     |         |         |
| (Excluding Cattle Transportation) ....        | \$0.00  | \$0.00  |
|   |         |         |
| Custom Charges .....(\$/head/day) ..          | \$0.00  | \$0.00  |
| Death Loss .....(%) ..                        | 1.00%   | 0.00%   |
| Shrink at Time of Purchase .....(%) ..        | 0.00%   | 0.00%   |
| Shrink at Time of Sale .....(%) ..            | 3.00%   | 0.00%   |
| Sale Commission and Yardage .....(%) ..       | 2.50%   | 0.00%   |
| Total Depreciation to this operation .....    | \$0.00  | \$0.00  |
| Miscellaneous Costs .....(\$/head) ..         | \$5.00  | \$0.00  |
| Total Hired Labor For Enterprise .....(\$)    | \$0.00  | \$0.00  |
| Expected Selling Price .....(\$/cwt) ..       | \$65.00 | \$0.00  |

FEED INFORMATION: For each Feed Item, include the pounds fed per Head per Day and the Cost in Dollars per Ton of Feed.  
The Costs/Day and \$/lb will be Calculated

| INGREDIENT      | LBS/HEAD/DAY | \$/LB  | COST/DAY | \$/TON   |
|-----------------|--------------|--------|----------|----------|
| 1) HAY          | 15.00        | \$0.04 | \$0.53   | \$70.00  |
| 2) BARLEY       | 3.00         | \$0.07 | \$0.22   | \$148.00 |
| 3) SALT MINERAL | 0.13         | \$0.14 | \$0.02   | \$280.00 |
| 4)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 5)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 6)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 7)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 8)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 9)              | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| 10)             | 0.00         | \$0.00 | \$0.00   | \$0.00   |
| -----           |              |        |          |          |
| TOTALS:         | 18.13        | \$0.25 | \$0.76   | \$84.36  |

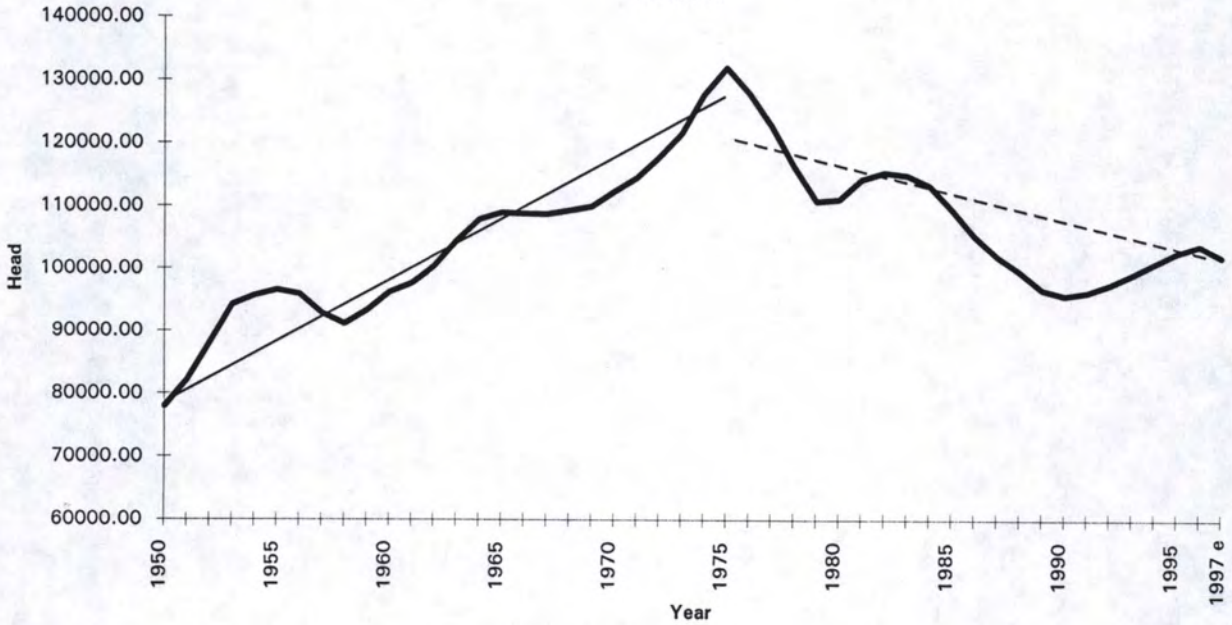
| INPUT SECTION                                      | STEERS   | HEIFERS |
|--|----------|---------|
| Feedlot Ration Charge ..... (\$/ton)               | \$150.00 | \$0.00  |
| Feed Conversion for steers ... (lbs fed/lb gain)   | 6.8      | --      |
| Feed Conversion for heifers .. (lbs fed/lb gain)   | --       | 0.0     |
| Daily Weight Gain ..... (per head)                 | 3.1      | 0.0     |
| Total Number of Days on Feed .....                 | 165      | ERR     |
| Daily Yardage Charge ..... (\$/head/day)           | \$0.20   | \$0.00  |
| Processing Charge ..... (\$/head)                  | \$5.25   | \$0.00  |
| Pregnancy Check and Abortion Charge .... (\$/head) | --       | \$0.00  |
| Veterinary, Drugs, and Supplies ..... (\$/head)    | \$2.00   | \$0.00  |
| Hauling Costs to Lot ..... (\$/head)               | \$6.75   | \$0.00  |
| Miscellaneous Expenses ..... (\$/head)             | \$2.00   | \$0.00  |
| Interest Rate ..... (%)                            | 9.00%    | 0.00%   |
| Sale and Purchasing Weights                        | --       | --      |
| Weight Beginning ..... (lbs)                       | 700      | 0       |
| Weight Ending ..... (lbs)                          | 1,200    | 0       |
| Purchase Price ..... (\$/cwt)                      | \$65.00  | \$0.00  |
| Sale Price ..... (\$/cwt)                          | \$70.00  | \$0.00  |
| Death Loss ..... (%)                               | 0.50%    | 0.00%   |
| Shrink (Weight Loss Hauling to feedlot) ..... (%)  | 1%       | 0%      |
| Number of Cattle to be fed .....                   | 100      | 0       |

COST-RETURN PROJECTION FOR RETAINED OWNERSHIP

|  | STEERS<br>TOTAL<br>(\$/Head) | HEIFERS<br>TOTAL<br>(\$/Head) |
|--|------------------------------|-------------------------------|
| VARIABLE COSTS PER HEAD:   |                              |                               |
| 1. Feedlot Ration Charge   |                              |                               |
| Conversion steers 6.8 .....  | \$258.57                     |                               |
| Conversion heifer 0.0 .....  |                              | ERR                           |
| 2. Feedlot Ration Charge (\$/day).....   | 1.57                         | ERR                           |
| 3. Yardage Charge .....  | 32.92                        | ERR                           |
| 4. Processing Charge .....   | 5.25                         | 0.00                          |
| 5. Pregnancy Check and Abortion .....  |                              | 0.00                          |
| 6. Veterinary, Drugs, and Supplies .....                                       | 2.00                         | 0.00                          |
| 7. Hauling .....   | 6.75                         | 0.00                          |
| 8. Miscellaneous Expenses .....  | 2.00                         | 0.00                          |
| 9. Interest Charge   |                              |                               |
| Purchased Livestock + 1/2 variable Cost<br>for number of days in feedlot ..... | 24.74                        | ERR                           |
| A. TOTAL VARIABLE COSTS (TVC).....   | \$332.23                     | ERR                           |
| RETURNS PER HEAD   |                              |                               |
| 9. Livestock Sales   |                              |                               |
| Weight Price/cwt   |                              |                               |
| Steers: 1,200 \$70.00 .....  | \$840.00                     |                               |
| Heifers 0 \$0.00 .....   |                              | \$0.00                        |
| 10. Less Purchase Cost of Animals:   |                              |                               |
| Steers: 700 \$65.00 .....  | (455.00)                     |                               |
| Heifers 0 \$0.00 .....   |                              | 0.00                          |
| 11. Less Death Loss: 0.50% of line 9 .....                                     | (4.20)                       | 0.00                          |
| C. GROSS RETURNS PER HEAD.....   | \$380.80                     | \$0.00                        |
| D. RETURNS OVER TOTAL VARIABLE COSTS (PER/HEAD)                                |                              |                               |
| (Gross Returns - TVC) .....  | \$48.57                      | ERR                           |
| E. TOTAL RETURN OR LOSS .....  | 4,856.77                     | ERR                           |
| F. BREAK-EVEN SELLING PRICE (\$/CWT):  |                              |                               |
| (TC + 10 + 11)/(Selling Weight) .....  | \$65.95                      | ERR                           |
| G. BREAK-EVEN PURCHASE PRICE (\$/CWT):   |                              |                               |
| (Buy Price-TC of Gain*100/Purchase Wght) ..                                    | \$71.94                      | ERR                           |
| H. AVERAGE COST PER CWT OF GAIN  |                              |                               |
| Feed Costs .....   | \$51.71                      | ERR                           |
| Non-Feed Costs .....   | \$15.57                      | ERR                           |
| Total Costs .....  | \$67.29                      | ERR                           |

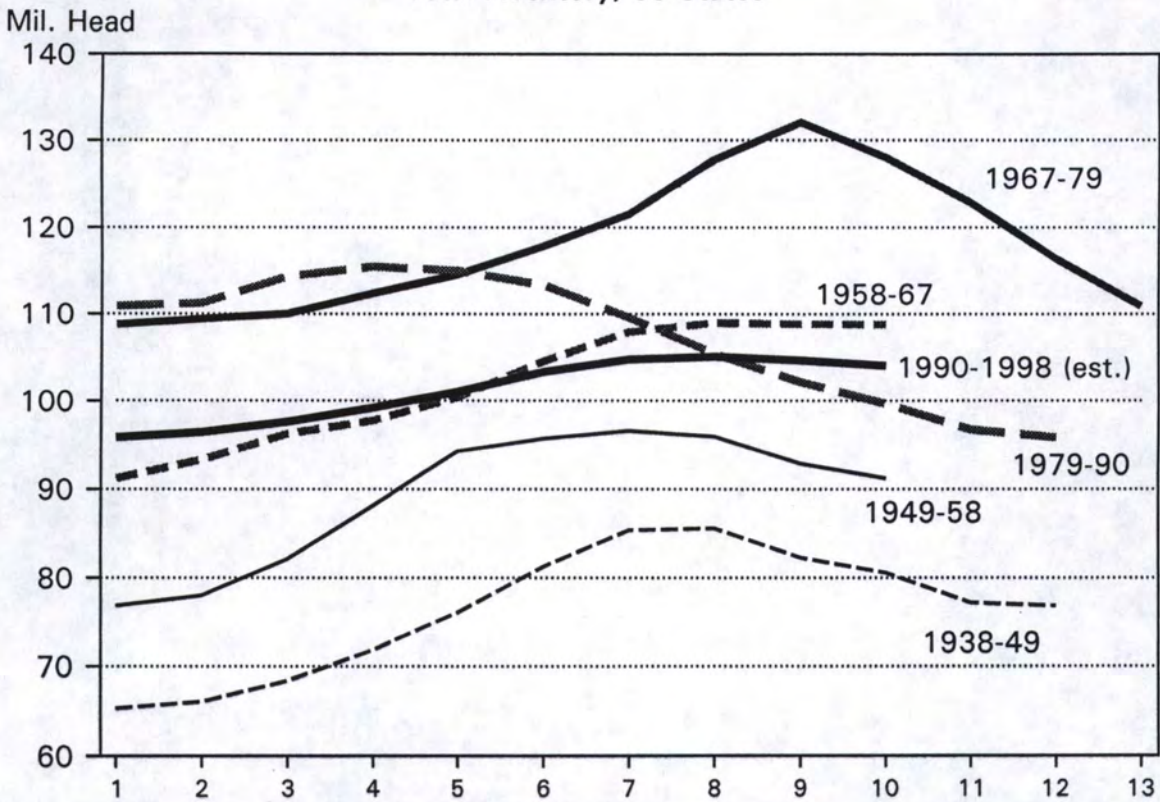
### January 1 Total Cattle Inventory

50 States

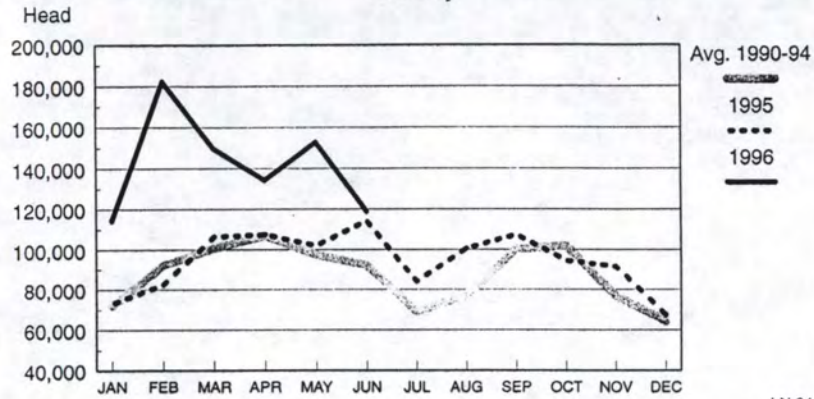


### CATTLE ON FARMS BY CYCLES

Total Inventory, 50 States



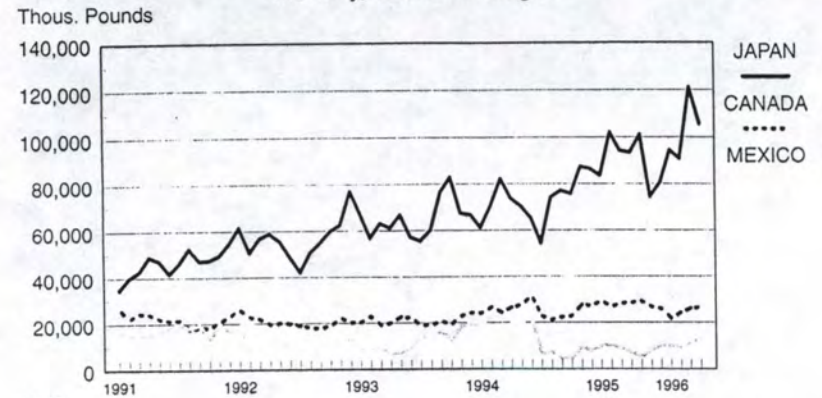
### U.S. CATTLE IMPORTS FROM CANADA Monthly



Livestock Marketing Information Center

I-N-04  
08/27/96

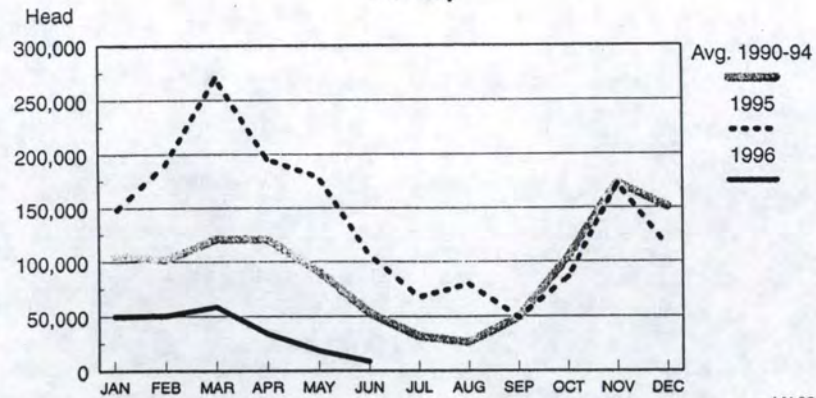
### U.S. BEEF EXPORTS TO MAJOR MARKETS Monthly, Carcass Weight



I-N-35  
07/31/96

Livestock Marketing Information Center

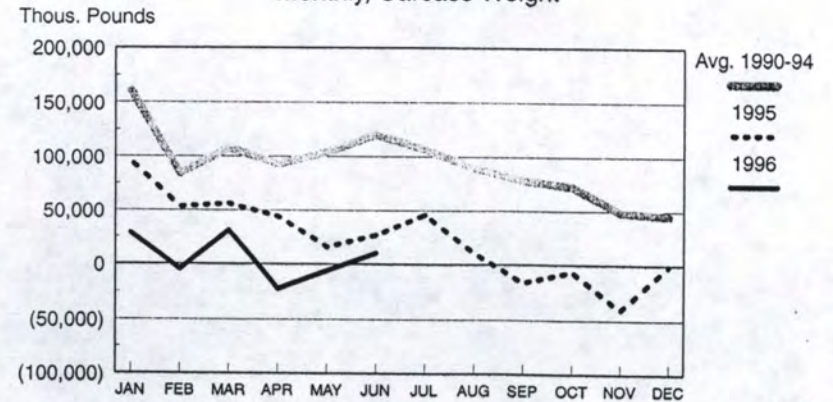
### U.S. CATTLE IMPORTS FROM MEXICO Monthly



Livestock Marketing Information Center

I-N-03  
08/27/96

### U.S. NET BEEF IMPORTS Monthly, Carcass Weight

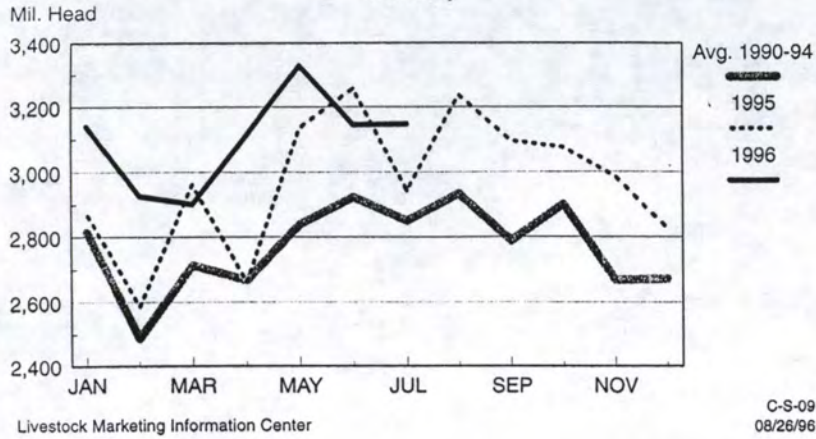


Livestock Marketing Information Center

I-N-31  
08/27/96

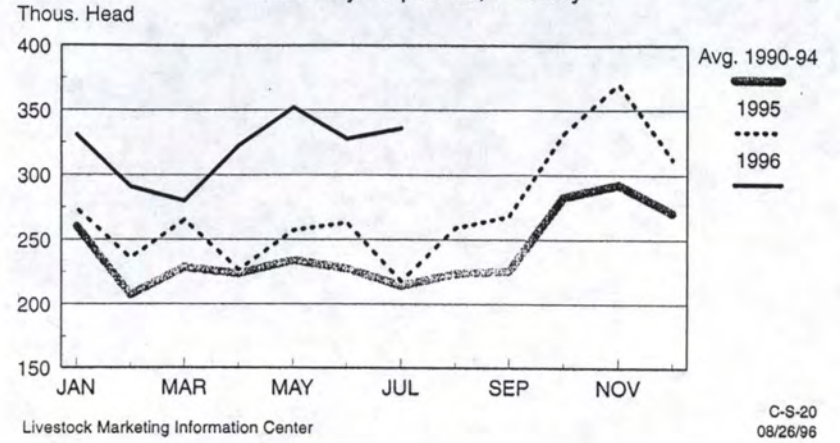
### COMMERCIAL CATTLE SLAUGHTER

Monthly



### BEEF COW SLAUGHTER

Federally Inspected, Monthly

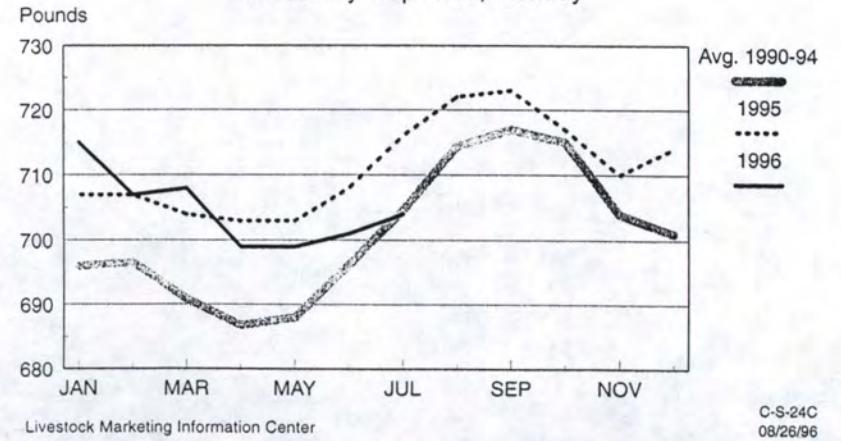


### Comm'l Slaughter as % of Calf Crop



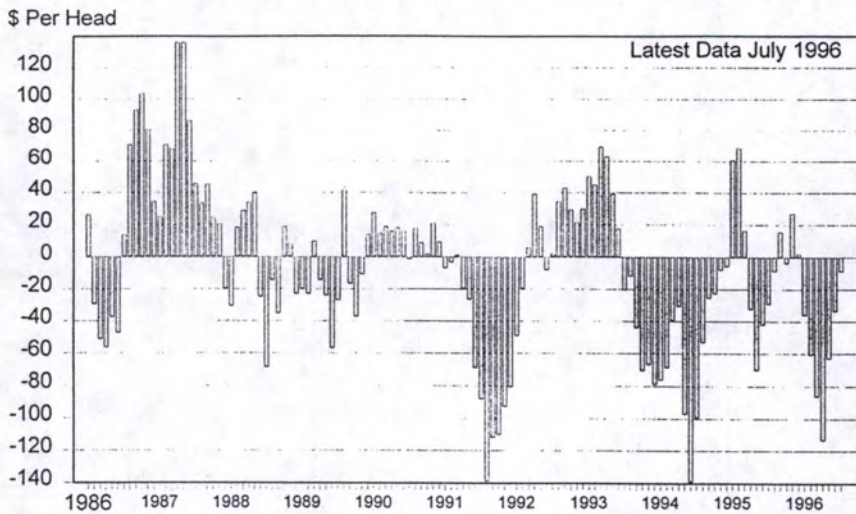
### AVERAGE DRESSED WEIGHTS -- CATTLE

Federally Inspected, Monthly



## AVERAGE RETURNS TO CATTLE FEEDERS

Feeding 725 Lb. Feeder Steer, Southern Plains, Monthly

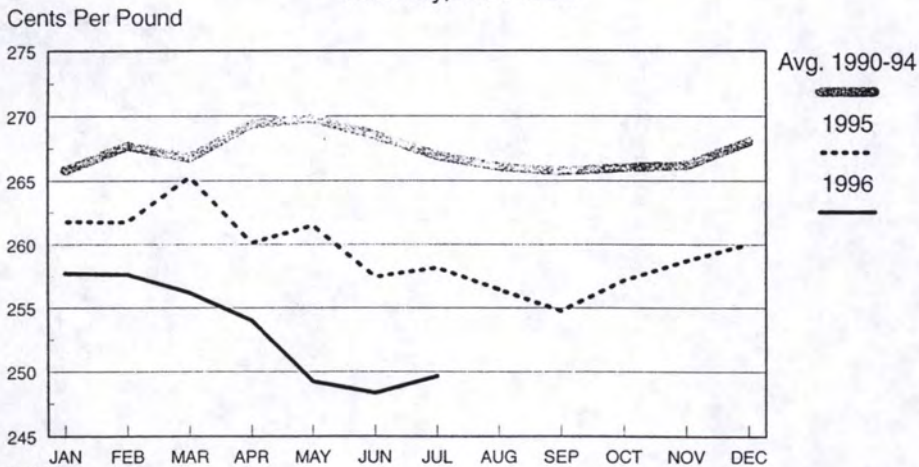


Livestock Marketing Information Center

C-P-22  
08/12/96

## RETAIL BEEF PRICE

Monthly, All Fresh

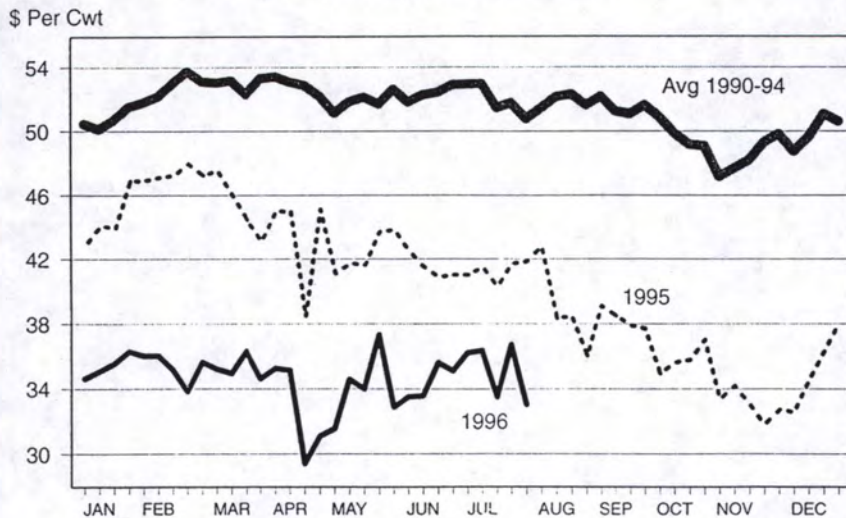


M-P-11  
08/14/96

Livestock Marketing Information Center

## BONING UTILITY COWS

Weekly Average, Southern Plains



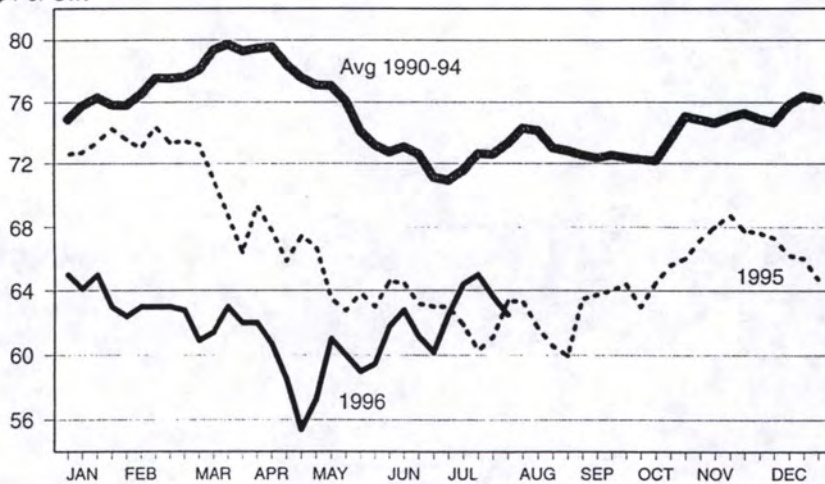
Livestock Marketing Information Center

C-P-35  
08/09/96

# CHOICE SLAUGHTER STEER PRICES

Weekly Average, Southern Plains

\$ Per Cwt



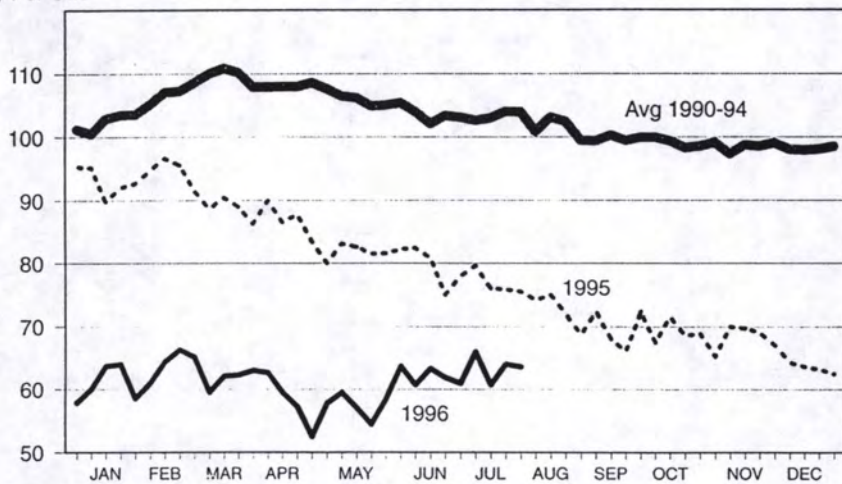
Livestock Marketing Information Center

C-P-52  
08/09/96

# MED. FRAME #1 FEEDER STEER CALVES

400-500 Lbs., Weekly Average, Southern Plains

\$ Per Cwt



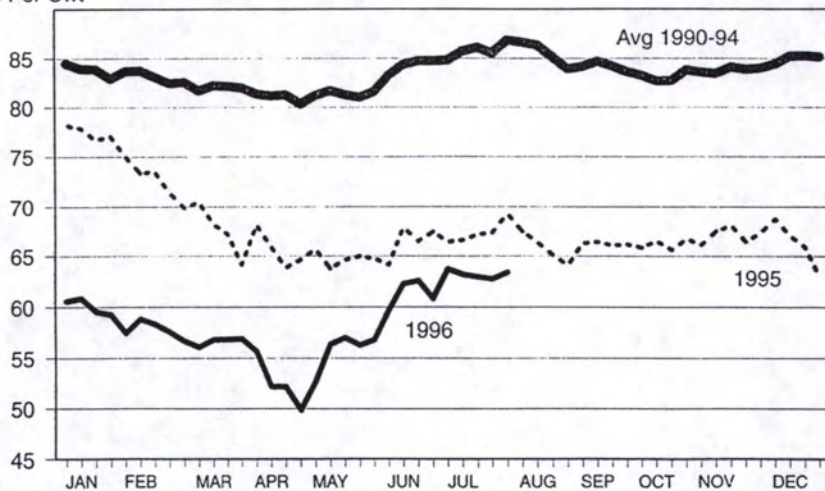
Livestock Marketing Information Center

C-P-49A  
08/12/96

# MED. FRAME #1 FEEDER STEER PRICES

700-800 Lbs., Weekly Average, S. Plains

\$ Per Cwt



Livestock Marketing Information Center

C-P-49  
08/12/96