

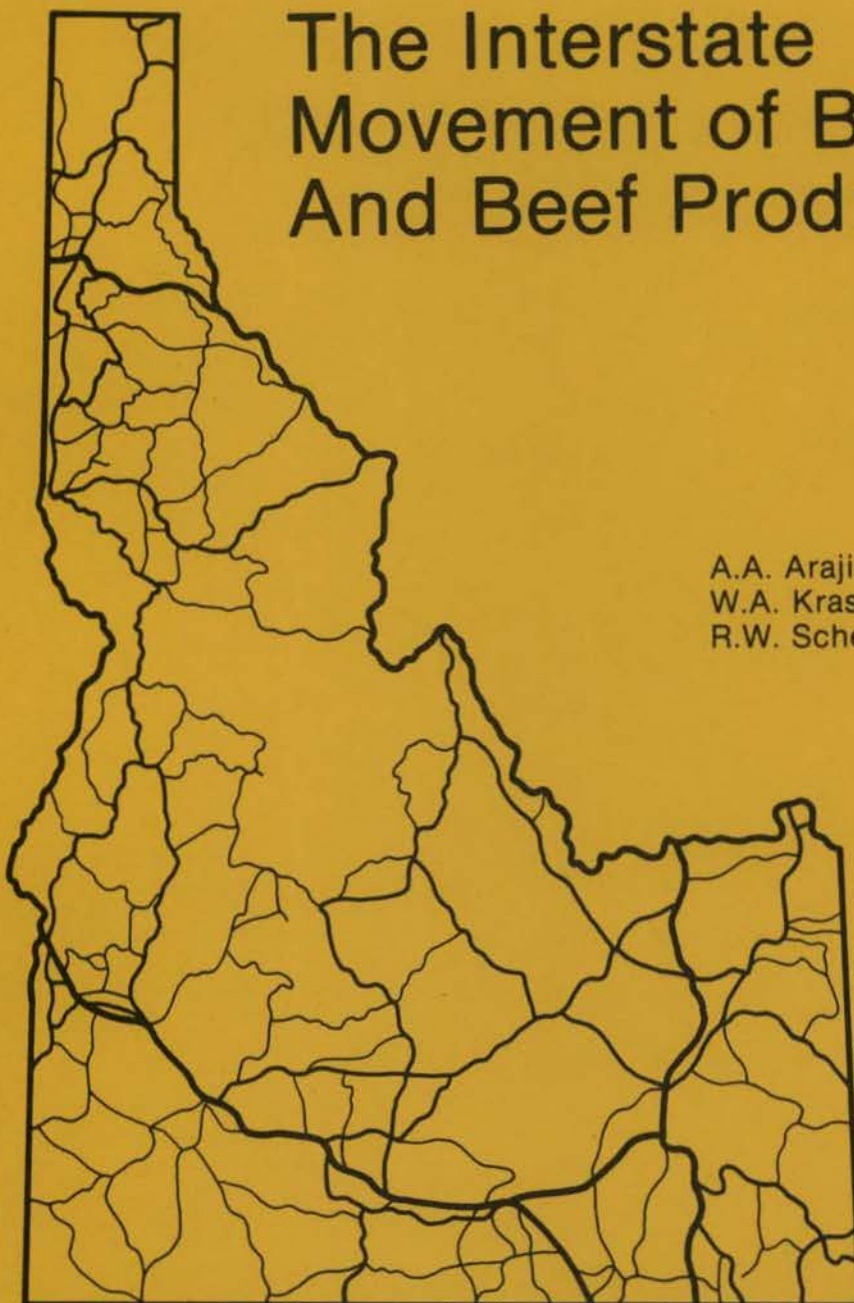
# The Interstate Movement of Beef And Beef Products

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## About This Research

This bulletin is the first in a series of four research reports evaluating the movement of beef and beef products within Idaho and between Idaho and other states.

This publication will evaluate the movement of beef and beef products between Idaho and other states. Other reports analyze the movement of cattle and calves within Idaho, evaluate and present alternatives to improve the economic efficiency of the present pattern of beef and beef product movements, and estimate the economic impact of the various sectors of the Idaho beef industry on the state's economy.

The four reports are:

Bulletin No. 557: The Interstate Movement of Beef and Beef Products.

Bulletin No. 559: The Movement of Cattle and Calves Within Idaho.

Bulletin No. 563: The Economic Impact of the Idaho Beef Industry.

Bulletin No. 583: Costs of Transporting Idaho's Beef and Beef Products.

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## Summary

Agriculture is the principal industry in Idaho and beef is the leading agricultural commodity, accounting for over 30% of cash farm receipts. Less than 25% of the beef produced in Idaho is consumed here. The rest is shipped to other states in various forms. This study was set up to analyze the movement of beef and beef products between Idaho and other states.

**Feeder cattle** — Of the 438,470 feeder cattle shipped from Idaho in 1971, about 40% went to the Pacific States of California, Washington, and Oregon; 35% to the Mountain States, primarily Colorado and Utah; and 25% to the Midwest, primarily Iowa and Nebraska. About 54% of Idaho feeder cattle were shipped to other states in September, October, and November. This seasonal marketing of feeder cattle is a result of traditional spring calving in Idaho.

Idaho imported 132,887 feeder cattle from other states during the same year. Washington, Oregon, Montana, Nevada, and Utah are the principal out-of-state suppliers.

**Fed cattle** — About 55% of the 423,000 fed beef produced by Idaho's feedlots in 1971 was exported liveweight for slaughter in other states. Pacific States received 63%, the Mountain States, primarily Utah, 33%, and the Midwest, 4%.

The Idaho meat packing industry imported 86,251 fed beef from other states for slaughter in Idaho. Over 93% were imported from Oregon, Montana, Nevada, Utah, California, and Washington.

**Carcass** — Idaho's meat packing industry slaughtered 374,000 cattle in 1971. Fed beef accounted for 74%; bulls and cows, 26%. Approximately 202.5 million pounds of carcass and boxed beef were exported from Idaho. California was the major market, receiving 74.5% of the total.

**Cows** — Of the 97,251 cows exported by Idaho in 1971, about 53% went to the Pacific States, primarily California; 41% to the Mountain States, primarily Utah, and 5.5% to Nebraska and Iowa. Significant portions of the cow outshipments to California and Utah were for slaughter.

During 1971, Idaho imported 59,215 cows, primarily from Montana, Wyoming, Oregon, and Utah. Most were shipped in for slaughter.

**Bulls** — Idaho exported 17,425 bulls in 1971. The Pacific and Mountain States, primarily California and Utah, received 95% of them. Most of these bulls went to slaughter but a small percentage was exported for breeding purposes.

Approximately 6,362 bulls were shipped into Idaho during 1971, almost all for slaughter. Over 61% came from Montana and Wyoming, and 21% from Washington and Oregon.

**Calves** — Idaho shipped 11,491 baby calves to other states during 1971. Over 51% went to Washington and 27% to the Midwest.

Idaho imported 22,285 calves from other states. Washington and Oregon supplied 48%; Montana and Wyoming 20.5%.

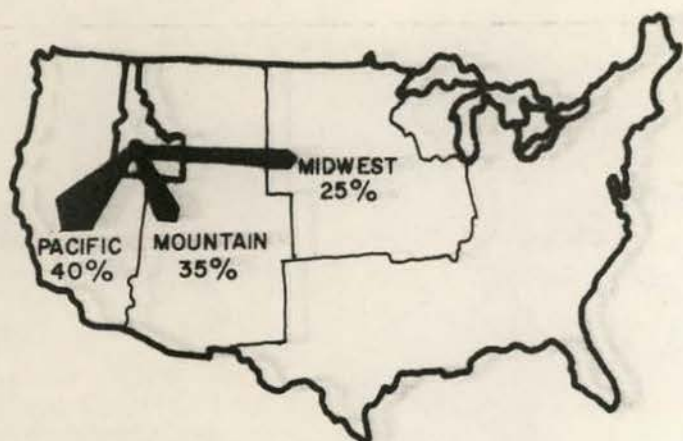


Fig. 1. Outshipment of feeder cattle, 1971.

Table 1. The interstate movement of beef and beef products, Idaho, 1971.

| Market class                 | Outshipment |     | Inshipment |     |
|------------------------------|-------------|-----|------------|-----|
|                              | Number      | %   | Number     | %   |
| Feeder cattle                | 438,470     | 56  | 132,887    | 44  |
| Fed beef                     | 231,427     | 29  | 86,251     | 28  |
| Cows                         | 97,251      | 12  | 59,215     | 19  |
| Calves                       | 11,491      | 1   | 22,285     | 7   |
| Bulls                        | 17,425      | 2   | 6,362      | 2   |
| Total liveweight             | 796,067     | 100 | 307,000    | 100 |
| Carcass and boxed beef (Lb.) | 202,524,697 |     |            |     |

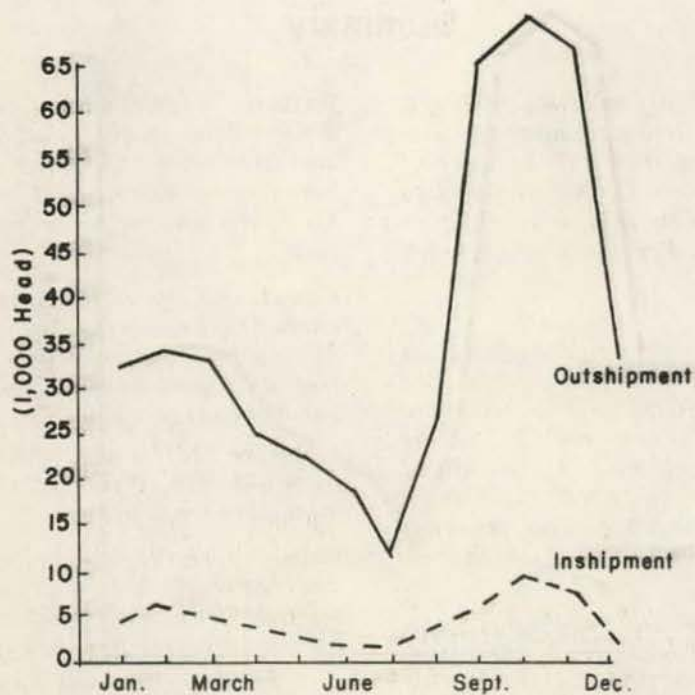


Fig. 2. Seasonal variation in outshipment and inshipment of feeder animals into and out of Idaho, 1971.



# The Interstate Movement of Beef and Beef Products

A. A. Araji, W. A. Krasselt, R. W. Schermerhorn

Idaho is among the few states in the Nation that significantly depend upon agriculture for growth and development. Lack of population centers within Idaho also force our agricultural industry to depend significantly on outside markets. The beef industry is a prime example. Idaho consumes only about 25% of the state's beef production; over 75% is marketed in other states in various forms.<sup>1</sup>

The questions often asked by members of the Idaho beef industry are: Where is our beef going and in what form? What types of beef animals are being imported by the Idaho beef industry and from what sources? Answers to such questions are essential to the efficient production and marketing of beef and beef products. This study was designed to address these questions.

## Objectives of the Study

The objectives of this study were:

1. To analyze the movement of beef from Idaho to other states and to identify the major markets for various beef industry products.
2. To analyze the movement of beef from other areas into Idaho and identify the major sources of supply.
3. To evaluate factors affecting the interstate movement of beef and beef products.

## Method and Study Area

Data compiled by the Idaho brand inspector on the movement of live cattle between Idaho and other states were analyzed by points of origin and destination for various classes of cattle. Data on the movement of carcass and processed beef were obtained from federal- and state-inspected slaughtering plants. Seasonal variations in the movement of beef and beef products were determined and factors affecting the seasonal variations were evaluated. Correlation techniques were used to detect significant relationships between prices at points of destination and origin and the interstate movement of beef.

<sup>1</sup>Araji, A. A., and C. Drury, 1973. Production-consumption relation of beef and lamb in the West. Idaho Agr. Exp. Sta. Progress Report No. 165.

<sup>2</sup>Feeder cattle in this study include both stockers and feeders. The only young stock excluded from this class are those considered baby calves as indicated on the brand inspection. Stockers are lightweight weaner cattle that are marketed for purposes of pasture feeding before breeding or intensive feedlot feeding. Feeder cattle are animals marketed for intensive feedlot feeding. Therefore, the movement of feeder cattle may include two production periods.

## Interstate Movement Of Feeder Cattle

The Idaho beef industry shipped 796,064 beef animals to other states during 1971, and approximately 307,000 head were shipped into Idaho from other states (Table 1).

Feeder cattle<sup>2</sup> constituted 56% of all beef cattle shipped out of Idaho to other states and 44% of the beef cattle shipped into Idaho from other states.

## Outshipment

Of the 438,470 feeder cattle moved from Idaho to other states, 96% were beef breed and only 4% were dairy breed. About 58% of the feeder cattle were marketed directly and 42% were handled through auctions (Table 2).

The Western Region is the major market for feeder cattle shipped out of Idaho, taking about 75% of the total outshipment in 1971. Within the region, the Pacific States purchased 40% and the Mountain States 35% (Fig. 1). The other 25% went to the midwestern states. Table 2 shows the final destinations, by states, of the feeder cattle exported from Idaho.

## Inshipment

Approximately 132,887 head of feeder cattle moved into Idaho from other states in 1971, with about 42% of the transactions handled through auctions and 58% handled directly. Nearly 38% of these feeder cattle came from Washington, 20% from Oregon, 17% from Montana, 11% from Nevada, and 8% from Utah. Wyoming, California, and the midwestern states combined supplied about 7% of the Idaho inshipments.

## Interstate Movement of Feeder Cattle by Idaho Crop Reporting Districts

Table 3 shows the points of origin and destination of the interstate feeder cattle shipments by Idaho crop reporting districts. District 1 accounted for 17% of the feeder cattle outshipment and 43% of the inshipment. District 2 had 25% of both outshipment and inshipment. District 3 accounted for 28% of the outshipment and 5.5% of the inshipment, and District 4 had 30% of the outshipment, 27% of the inshipment.

## Seasonal Variations

About 16% of the feeder cattle outshipment and 17% of the inshipment occurred in October (Fig. 2). The least



Table 2. Total outshipment of feeder cattle from Idaho by state of destination and market channel, 1971.

| State              | Auction | Direct  | Total   | %     |
|--------------------|---------|---------|---------|-------|
| Washington         | 38,393  | 41,847  | 80,240  | 18.3  |
| Colorado           | 29,043  | 44,620  | 73,663  | 16.8  |
| Nebraska           | 19,043  | 31,907  | 51,301  | 11.7  |
| California         | 20,482  | 22,488  | 42,970  | 9.8   |
| Iowa               | 18,199  | 22,579  | 40,778  | 9.3   |
| Oregon             | 15,451  | 22,257  | 37,708  | 8.6   |
| Utah               | 12,128  | 21,196  | 33,324  | 7.6   |
| Montana            | 6,280   | 12,136  | 18,416  | 4.2   |
| Arizona            | 7,912   | 6,558   | 14,470  | 3.3   |
| Nevada             | 2,126   | 11,467  | 13,593  | 3.1   |
| Wyoming            | 5,647   | 6,192   | 11,839  | 2.7   |
| Illinois           | 2,841   | 5,051   | 7,892   | 1.8   |
| S. Dakota          | 1,746   | 3,954   | 5,700   | 1.3   |
| Other <sup>a</sup> | 2,810   | 3,766   | 6,576   | 1.5   |
| Total              | 182,452 | 256,018 | 438,470 | 100.0 |

<sup>a</sup>Other includes all states with less than 1% of the total.

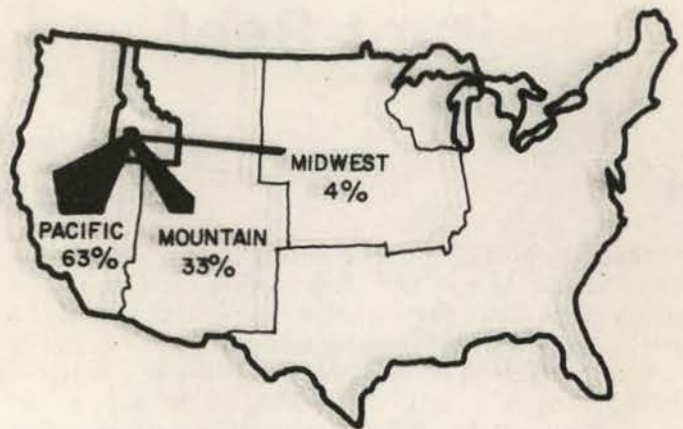


Fig. 3. Outshipment of fed (slaughter) cattle, 1971.

Table 3. Interstate movement of feeder cattle by points of origin and destination, Idaho, 1971.

| State          | Idaho Crop Reporting Districts <sup>1</sup> |         |            |         |            |         |            |         |         |         |
|----------------|---|---------|------------|---------|------------|---------|------------|---------|---------|---------|
|                | District 1                                  |         | District 2 |         | District 3 |         | District 4 |         | Idaho   |         |
|                | Inship                                      | Outship | Inship     | Outship | Inship     | Outship | Inship     | Outship | Inship  | Outship |
| Arizona        |   | 783     |            | 3,741   |            | 8,540   | 126        | 1,406   | 126     | 14,470  |
| California     |   | 5,265   | 652        | 15,870  | 1,374      | 13,396  | 250        | 8,439   | 2,276   | 42,970  |
| Colorado       |   | 549     | 38         | 20,719  | 16         | 40,847  |            | 11,548  |         | 73,663  |
| Montana        | 2,902                                       | 3,431   | 562        | 753     | 145        | 1,641   | 23,038     | 12,591  | 25,994  | 18,416  |
| Nevada         | 24  |         | 9,009      | 2,835   | 4,838      | 9,149   |            | 1,609   | 13,871  | 13,593  |
| Oregon         | 4,364                                       | 6,503   | 21,633     | 28,942  | 52         | 2,014   |            | 249     | 26,050  | 37,708  |
| Utah           |   | 20      |            | 716     | 700        | 7,444   | 5,147      | 25,144  | 5,847   | 33,324  |
| Washington     | 49,431                                      | 44,424  | 747        | 16,438  | 138        | 17,728  | 2          | 1,650   | 50,319  | 80,240  |
| Wyoming        |   | 292     |            | 721     |            | 3,273   | 6,995      | 7,553   | 6,995   | 11,839  |
| Western Region | 56,721                                      | 61,267  | 32,641     | 90,735  | 7,264      | 104,032 | 35,558     | 70,189  | 131,478 | 326,226 |
| Illinois       |   | 270     |            |         |            | 89      | 283        | 7,533   | 283     | 7,892   |
| Iowa           |   | 7,228   |            | 6,828   |            | 4,282   | 254        | 22,440  | 254     | 40,778  |
| Nebraska       |   | 4,712   | 14         | 9,468   |            | 10,152  |            | 26,969  | 14      | 51,301  |
| S. Dakota      |   | 1,644   |            |         |            | 1,365   |            | 2,691   |         | 5,700   |
| Midwest        |   | 13,854  | 14         | 16,296  |            | 15,888  | 538        | 59,633  | 552     | 105,671 |
| Other          |   | 287     | 81         | 822     | 11         | 3,604   | 57         | 1,863   | 149     | 6,576   |
| TOTAL          | 56,721                                      | 75,408  | 32,750     | 107,853 | 7,275      | 123,524 | 36,152     | 131,685 | 132,887 | 438,470 |

<sup>1</sup>District 1 — Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone counties.

District 2 — Ada, Adams, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Valley, and Washington counties.

District 3 — Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, and Twin Falls counties.

District 4 — Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Clark, Custer, Franklin, Fremont, Jefferson, Lemhi, Madison, Oneida, Power, and Teton counties.



interstate movement of feeder cattle occurred in July. Overall, 54% of the feeder cattle were marketed out of state in September, October, and November. This high seasonal marketing is a result of the heavy spring calving in Idaho.

## **Interstate Movement Of Fed Cattle**

Fed beef for slaughter represents 29% of the beef cattle outshipment from Idaho and 28% of the cattle movement into Idaho.

### **Outshipment**

About 55% of the fed beef marketed from Idaho feedlots in 1971 went to other states for slaughter (Table 4). Outshipment of fed slaughter cattle consisted of 70% steers and 30% heifers. Direct marketing accounted for 87% and auctions 13% of the fed cattle sales.

The Pacific States, primarily California, received 63% of this fed beef. The Mountain States, primarily Utah, received 33% and 4% went to the Midwest (Fig. 3).

### **Inshipment**

Idaho meat packers imported 86,251 head of fed beef from other states in 1971, 79% through direct marketing and 21% through auction markets. The inshipments were 58% steers and 42% heifers. About half of the fed beef inshipments were from Oregon points of origin, 17% from Montana, 4% from Washington and 26% from California, Nevada, and Utah combined.

### **Seasonal Variations**

No significant seasonal variation occurred in the movement of fed beef from Idaho to other states. About 22% of all outshipments occurred in the first quarter of the year, 28% in the second quarter, 24% in the third quarter and 26% in the fourth quarter. The largest outshipments occurred in October and April (Fig. 4).

Over 64% of the fed cattle shipped into Idaho occurred in the third and fourth quarters of the year. The highest inshipment occurred in October (Fig. 4).

## **Interstate Movement Of Carcass And Boxed Beef**

Idaho's packing industry in 1971 slaughtered 374,000 cattle of which 74% were fed beef and 26% were bulls and cows. State meat packers exported 202.5 million pounds of carcass-equivalent beef to other states, including 134.8 million pounds of fed beef (Table 5).

California is the major market for Idaho's carcass and boxed beef, receiving 75% of the total outshipment. Overall, the three Pacific states — California, Washington, and Oregon — accounted for 93% of the carcass-equivalent beef Idaho exported to other states. About 5% was marketed in the Midwest (Fig. 5).

## **Interstate Movement Of Cows, Bulls, Calves**

Cows, bulls, and calves accounted for 15% of beef cattle shipments from Idaho to other states and 28% of the beef cattle inshipments into Idaho.

### **Outshipment of Cows**

Idaho exported 97,251 beef cows to 19 different states in 1971 (Table 6). Estimates are that 70% were exported for immediate slaughter and 30% were exported for breeding purposes.

The Western States received 94% of these beef cows (Fig. 6). Utah, Washington, California, and Oregon are the major importers of Idaho's beef cows with 34%, 20%, 15.5% and 12% respectively.

### **Inshipment of Cows**

During 1971, Idaho imported 59,215 beef cows from 14 states. Montana is the major supplier of cows to Idaho accounting for 48% of the total inshipment into Idaho. Oregon, Washington, Wyoming, Nevada, and Utah ranked next (Table 6). States in the Western Region supplied 98% of the Idaho inshipment.

### **Outshipment of Bulls**

Idaho exported 17,425 bulls to 21 states in 1971 (Table 6). An estimated 80% of these were exported for immediate slaughter, 20% for breeding. Utah, Oregon, California, and Washington are the major importers. About 95% of the bulls Idaho exported in 1971 went to the Western Region — 58% to the Pacific States and 37% to the Mountain States. Iowa and Nebraska and other midwestern states imported the remaining 5%.

### **Inshipment of Bulls**

In 1971, Idaho imported 6,362 head of bulls from other states, most from Montana and, overall, more than 98% from the Western Region (Table 6).

### **Outshipment of Calves**

A total of 11,491 calves were exported from Idaho to other states during 1971 (Table 6). Washington received 52% of these and Nebraska, Utah, and Iowa received 19%, 13%, and 8% respectively. States in the Western Region purchased 72% of the calves Idaho exported; the Midwest Region, 27%.

### **Inshipment of Calves**

Calves shipped into Idaho totaled 22,285 head in 1971. Over 97% originated in the Western Region, with about 40% from Washington and 57% from Montana, Utah, Oregon, Nevada, California, and Wyoming combined.

### **Seasonal Variations**

Largest shipments of cows, bulls and calves from Idaho to other states occurred during the fourth quarter of the year (Table 7). Over 70% of the calves and 39% of cows were shipped out of the state in the fourth quarter of 1971. About 60% of bull outshipments occurred in the first and fourth quarter. While outshipments of both cows and bulls occurred fairly regularly throughout the year, calf exports were extremely light in the first and second quarters.

The largest shipments of calves into Idaho occurred in the last quarter of 1971 — about 55% of the total. Over 36% of the cow inshipments also occurred in the fourth quarter. The largest inshipment of bulls — 37% — occurred in the first quarter. Inshipments were fairly uniform the rest of the year.



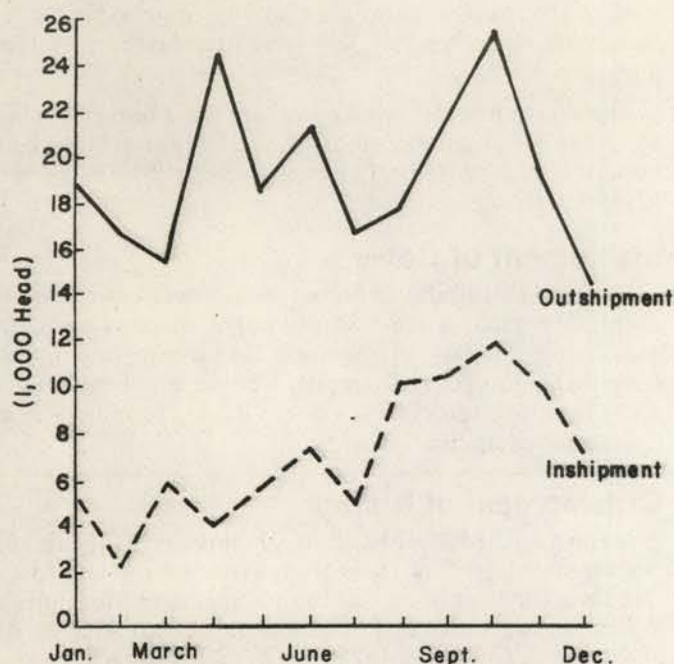


Fig. 4. Seasonal variation in outshipment and inshipment of fed (slaughter) cattle, Idaho, 1971.

Table 4. Outshipment of fed (slaughter) cattle from Idaho by state of destination and market channel, 1971.

| State              | Auction | Direct  | Total   | %     |
|--------------------|---------|---------|---------|-------|
| California         | —       | —       | 74,012  | 32.0  |
| Utah               | —       | —       | 60,032  | 25.9  |
| Oregon             | —       | —       | 43,650  | 18.9  |
| Washington         | —       | —       | 25,394  | 11.0  |
| Colorado           | —       | —       | 14,114  | 6.1   |
| Iowa               | —       | —       | 3,805   | 1.6   |
| Nevada             | —       | —       | 2,228   | 1.0   |
| Other <sup>a</sup> | —       | —       | 8,474   | 3.5   |
| Total              | 31,011  | 200,416 | 231,427 | 100.0 |

<sup>a</sup>Other includes all states with less than 1% of the total.

Table 5. Export of carcass beef from Idaho, 1971.

|                   | Fed Beef <sup>a</sup><br>(lb.) | Cow & Bull <sup>b</sup><br>(lb.) | Total<br>(lb.) |
|-------------------|--------------------------------|----------------------------------|----------------|
| California        | 99,235,731                     | 53,517,440                       | 152,753,171    |
| Washington        | 17,836,084                     | 2,966,600                        | 20,792,684     |
| Oregon            | 9,954,642                      | 5,322,000                        | 15,276,642     |
| Nevada            | 2,191,500                      | 8,000                            | 2,199,500      |
| Montana           | 330,000                        | —                                | 330,000        |
| Wyoming           | 247,500                        | —                                | 247,500        |
| Pacific Northwest | 129,785,457                    | 61,814,040                       | 191,599,497    |
| Missouri          | 4,992,000                      | 5,933,200                        | 10,925,200     |
| Total             | 134,777,457                    | 67,747,240                       | 202,524,697    |

<sup>a</sup>Includes almost 100% fresh hanging carcass. About 90-95% of the carcasses were choice grade.

<sup>b</sup>Includes carcass, boxed, and processed beef.

Table 6. Outshipment and inshipment of Idaho cows, bulls, and calves, 1971.

| States     | Cows    |        | Bulls   |        | Calves  |        |
|------------|---------|--------|---------|--------|---------|--------|
|            | Outship | Inship | Outship | Inship | Outship | Inship |
| California | 15,060  | 482    | 3,133   | 98     | 197     | 1,770  |
| Montana    | 4,385   | 28,542 | 776     | 3,296  | 94      | 3,371  |
| Nevada     | 5,226   | 3,263  | 1,031   | 330    | 133     | 1,794  |
| Oregon     | 11,661  | 12,945 | 3,446   | 474    | 189     | 1,979  |
| Utah       | 32,796  | 3,009  | 3,492   | 587    | 1,468   | 2,715  |
| Washington | 19,380  | 6,341  | 2,446   | 873    | 5,920   | 8,818  |
| Wyoming    | 1,864   | 4,170  | 246     | 593    | 0       | 1,214  |
| Other      | 6,879   | 463    | 2,855   | 106    | 3,490   | 624    |
| Total      | 97,251  | 59,215 | 17,425  | 6,362  | 11,491  | 22,285 |

Table 7. Seasonal variation of outshipment and inshipment of bulls, cows, and calves, Idaho, 1971.

| Quarter | Cows    |        | Bulls   |        | Calves  |        |
|---------|---------|--------|---------|--------|---------|--------|
|         | Outship | Inship | Outship | Inship | Outship | Inship |
| 1       | 22,760  | 14,026 | 5,209   | 2,382  | 488     | 5,458  |
| 2       | 21,190  | 9,101  | 3,649   | 1,603  | 277     | 2,459  |
| 3       | 15,797  | 14,598 | 3,356   | 1,080  | 2,666   | 2,124  |
| 4       | 37,504  | 21,490 | 5,211   | 1,297  | 8,060   | 12,244 |
| Total   | 97,251  | 59,215 | 17,425  | 6,362  | 11,491  | 22,285 |



## Factors Affecting Interstate Movement Of Beef and Beef Products

The movement of live cattle from Idaho to other states is closely related to Idaho's beef production cycle which is characterized by spring calving, fall calving, and winter replacement of breeding stock. Substantial numbers of feeder cattle become available for marketing in September, October, and November. Excess feeding facilities near final markets in California attract feeder cattle from Idaho.

The outshipment of Idaho fed beef for slaughter in California and Utah is affected by the seasonality of fed beef production, lack of in-state slaughtering facilities to absorb fed beef at peak production, and demand for liveweight cattle by the meat packing industry in California and Utah.

Lack of consumption centers in Idaho is the principal reason for exporting carcass beef. California, with an annual deficit of over 1 billion pounds retail equivalent<sup>3</sup> of beef, provides the major demand. Thus, over 75% of Idaho's carcass beef is shipped into California annually.

Price mechanism apparently does not significantly influence the interstate movement of beef and beef products. Table 8 shows the intercorrelation coefficients of beef prices at points of origin and destination and the quantity of interstate movement of beef and beef products. While prices of various types of beef are significantly correlated at points of origin and destination, prices do not significantly influence the quantity of various types of beef marketed. For example, the seasonal variation in prices of feeder cattle at points of destination and origin did not significantly influence the movement of feeder cattle between Idaho and other states. In other words, increases or decreases in feeder cattle prices in Idaho did not significantly affect the number of feeder cattle leaving or entering Idaho. Seasonal variations in the prices of fed slaughter cattle in Idaho and the points of destination did not significantly influence the movement of fed cattle from Idaho for slaughter in other states.

<sup>3</sup>Araji and Drury, p. 10.

Table 8. Intercorrelation coefficients of beef movement and prices.

| Variable        | X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> | X <sub>8</sub> | X <sub>9</sub> | X <sub>10</sub> |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| X <sub>1</sub>  | --             | .3160          | .4008          | .0628          | .8538**        | .5986*         | -.0542         | -.3000         | .0583          | .3532           |
| X <sub>2</sub>  |                | --             | .5275*         | .5321*         | .2477          | .5162*         | .7620**        | .5895*         | .6977*         | .5598*          |
| X <sub>3</sub>  |                |                | --             | .3842          | .1403          | .3992          | .5959*         | .4026          | .7014          | -.0609          |
| X <sub>4</sub>  |                |                |                | --             | .1148          | -.2087         | .5895*         | .4182          | .4082          | -.0987          |
| X <sub>5</sub>  |                |                |                |                | --             | .6463*         | -.1045         | -.2324         | -.0150         | .4842           |
| X <sub>6</sub>  |                |                |                |                |                | --             | .2540          | .1800          | .4461          | .5881*          |
| X <sub>7</sub>  |                |                |                |                |                |                | --             | .9223          | .9211**        | .1836           |
| X <sub>8</sub>  |                |                |                |                |                |                |                | --             | .8433**        | .1694           |
| X <sub>9</sub>  |                |                |                |                |                |                |                |                | --             | .2865           |
| X <sub>10</sub> |                |                |                |                |                |                |                |                |                | --              |

\*Significance of .05 level

\*\*Significance of .01 level

Where: X<sub>1</sub> = Idaho price \$/cwt. for fed (slaughter) cattle  
X<sub>2</sub> = Intra-state movement of fed (slaughter) cattle  
X<sub>3</sub> = Inshipments of fed (slaughter) cattle  
X<sub>4</sub> = Outshipment of fed (slaughter) cattle

X<sub>5</sub> = California price \$/cwt. for fed (slaughter) cattle  
X<sub>6</sub> = Idaho price \$/cwt. for feeder cattle  
X<sub>7</sub> = Intra-state movement of feeder cattle  
X<sub>8</sub> = Inshipments of feeder cattle  
X<sub>9</sub> = Outshipments of feeder cattle  
X<sub>10</sub> = Washington price \$/cwt. for feeder cattle



Fig. 5. Export of carcass beef from Idaho to other states, 1971.

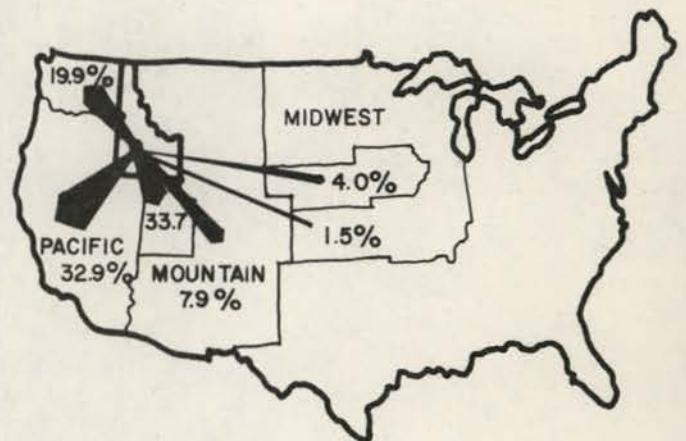


Fig. 6. Outshipment of cows from Idaho to other states, 1971.












*The State is truly our campus. We desire to work for all citizens of the State striving to provide the best possible educational and research information and its application through Cooperative Extension in order to provide a high quality food supply, a strong economy for the State and a quality of life desired by all.*



Auttis M. Mullins  
Dean, College of Agriculture  
University of Idaho



## SERVING THE STATE

This is the three-fold charge of the College of Agriculture at your state Land-Grant institution, the University of Idaho. To fulfill this charge, the College extends its faculty and resources to all parts of the state.

**Service** ... The Cooperative Extension Service has active programs in 42 of Idaho's 44 counties. Current organization places major emphasis on county office contact and multi-county specialists to better serve all the people. These College of Agriculture faculty members are supported cooperatively by federal, state and county funding to work with agriculture, home economics, youth and community development.

**Research** ... Agricultural Research scientists are located at the campus in Moscow, at Research and Extension Centers near Aberdeen, Caldwell, Parma, Sandpoint, Teton, Twin Falls and at the U.S. Sheep Experiment Station, Dubois and the USDA/ARS Soil and Water Laboratory at Kimberly. Their work includes research on every major agricultural program in Idaho and on economic and community development activities that apply to the state as a whole.

**Teaching** ... Centers of College of Agriculture teaching are the University classrooms and laboratories where agriculture students can earn bachelor of science degrees in any of 20 major fields, or work for master's and Ph.D. degrees in their specialties. And beyond these are the variety of workshops and training sessions developed throughout the state for adults and youth by College of Agriculture faculty.