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# ECONOMICS COMMENTATOR

**SOUTH DAKOTA STATE UNIVERSITY**

**No. 383      January 16, 1998**

## **THE LIVESTOCK INDUSTRY, 1997 - WAS IT A GOOD YEAR? WHAT ABOUT 1998?**

## **BEEF, PORK AND LAMB PRODUCTION IN THE U.S.**

by

**Gene Murra  
Emeritus Professor**

by

**Gene Murra  
Emeritus Professor**

Whenever one uses the terms "good" or "bad", the context in which the term is used should be made clear. For example, for most livestock producers, 1997 was a good year only if price was the major factor. A good year from a price only viewpoint may not be a good year from a cost or profit viewpoint. In the following article, the term good or bad will refer to "general conditions" (not individual producers) and to specific factors which will be stated. Also, a few statements regarding 1998 expectations are included.

### **Fed Cattle**

Prices for fed steers were in the mid-\$60's early in 1997 and stayed within \$2-3 of that most of the year. A brief visit close to \$70 in October was followed by the mid-\$60's in late Fall. Price levels in 1997 were above 1996 early in the year but below 1996 levels after mid-year. Prices in 1997 were \$10 below the 1991-95 average early in the year, but were only \$5 below those levels after mid-year.

Profits were not easy for fed cattle producers to find in 1997. Very small profits may have been earned by some producers early in the year. However, from the Spring to the end of the year, most feedlots lost money.

Two factors contributed to the losses. First, corn prices, while lower than in 1996, were still high. In addition, feeder cattle prices (discussed later) were above 1996 levels. The higher costs of the corn and feeder cattle inputs combined with the affects of the 1996-97 winter to create breakevens well above prices. In total, 1997 could not be called a good year for most South Dakota feedlot operators.

*(Continued on p. 2)*

This article will be used to report on three areas: (1) total beef, pork and lamb production, (2) the size of the breeding herd in each of those areas, and (3) production per unit in each area. In each case, a brief analysis will be included. The data used were obtained from the Livestock Marketing Information Center.

The LMIC in Denver, Colorado publishes a weekly letter which includes considerable information on a wide variety of agricultural related topics. That letter is sent to all participating states, including South Dakota. The letter dated November 15, 1997 contained information on changes in the production per unit (cow, sow and ewe). When combined with previous information from the Center, some interesting conclusions can be drawn.

### **Total Production**

Table 1. Beef, Pork and Lamb Production, United States, Selected Years

	Beef (bil. lbs)	Pork (bil. lbs)	Lamb (mil. lbs)
1975	16	13	370
1985	18	15	340
1995	25	18	280
1997	25	17.5	250

**Beef:** While cattle inventories in the U.S. peaked in 1975, beef production did not. In fact, as inventories decreased from about 135 million head in 1975 to under 100 million head in mid-1990's, production first held steady and then increased. Beef production in 1975 was about 16 billion pounds. In 1997, it is expected to be about 25 billion pounds.

*(Continued on p. 3)*



## Hogs

*(The Livestock Industry .... cont'd from p.1)*

In 1998, conditions should be favorable from a supply viewpoint, especially after the first 3-4 months. Fewer cattle on feed should support prices. However, demand, especially foreign demand, is the "uncertain" factor. If beef exports in 1998 are at or above 1997 levels, then fed cattle prices should be \$5.00 or more above 1997 levels. That means prices could be in the \$70's for part of 1998. Even then, however, profits won't be large as early 1998 breakevens also are above \$70. In 1998, demand will be the major key.

### Feeder Cattle

Most producers enjoyed higher prices for the calves they sold in 1997, at least compared to 1996. However, many producers had fewer calves to sell (winter impact) and had sharply higher costs (also winter impact). As a result, for most South Dakota cow-calf operators, 1997 will not be remembered as a good year.

Prices for almost all weights of feeder steers were in the \$70 area at the beginning of the year. As the year progressed, lighter calves gained more ground than heavier calves. By early Fall, 400-500 pound steers were above \$90, 500-600 pound steers were around \$90, and 700-800 pound steers were around \$80. All prices noted are "average"--some producers got more, others got less. Compared to 1996, lighter steers were almost \$30 higher and heavier steers were \$15 higher. Prices early in 1997 were \$30 below the 1991-95 average for 400-500 pound steers and \$10 below that same average for 700-800 pounders. By Fall, most prices in 1997 were equal to the 1991-95 average. It should be noted that prices in the 1991-95 period were highest early in the period and much lower by 1995.

The impact of the 1996-97 winter took away most of the gains from higher prices. Many producers, especially those north of I-90, lost cattle. Those same producers usually had high production costs. Those higher costs were the result of everything from snow removal to higher feed requirements to maintain animals to higher hay costs. In many cases, the loss from the combination of lost cattle and higher costs was more than the increase in revenue from higher prices. Again, for many producers, 1997 was not a good year. For some, it was a good year after a couple of "bad" years.

If we get a big corn crop (at least 9.0 billion bushels but 10.0 billion bushels would be better), then feeder cattle producers in South Dakota should have a good year (price-wise). Of course, a corn crop of only 8.0 billion bushels would pressure feeder cattle prices sharply lower. Fewer feeders will be available for feedlots in 1998 (fewer calves and a few more heifers held back for herd building). Fed cattle prices could be above 1997 levels. Again, that means the major factor affecting feeder cattle price outlook could be corn. A 10¢ increase in the price of corn results in about a \$1.00 decrease in the price of a 600 pound steer.

In 1997, slaughter hog prices were "all over the board". Early in the year, prices were in the mid-\$50's. After a Spring low of about \$47, prices were closer to \$60 during the Summer. By Fall, prices were in the mid-\$40's. Late in the year, prices were in the mid \$30's. When compared to 1996 prices, the early part of the year was better (plus \$10), the last part of the year was worse (minus \$10-15). Prices in 1997 were above the 1991-95 average by as much as \$15 early in the year to \$0-5 later.

Other than the first quarter of 1997, and then again late in the year, slaughter hog producers earned a profit in 1997. During the first quarter, slaughter hog production netted small losses. Small profits were earned during late Spring and \$10 to \$20 per head profits were there during the Summer. Fall profits have been small and late in the year there were losses.

In many cases, potential profits from finishing hogs are passed on to the feeder pig producer. That was true in 1997. Feeder pig prices ranged from a low of about \$40 per head very early and then again late in the year to a high of about \$70 during the Summer.

Whether or not feeder pig producers earned a profit is hard to say. So much depends on "when" the pigs were sold. Certainly, under "normal" conditions, \$70 feeder pigs are profitable. To some producers, \$40 feeder pigs are profitable, to others it is breakeven.

Feeder pig prices in 1997 were above both 1996 levels and the 1991-95 average. The biggest difference was \$35 per head during the Summer when the 1997 price was about \$70. The smallest difference was about \$5 both very early and then late in the year.

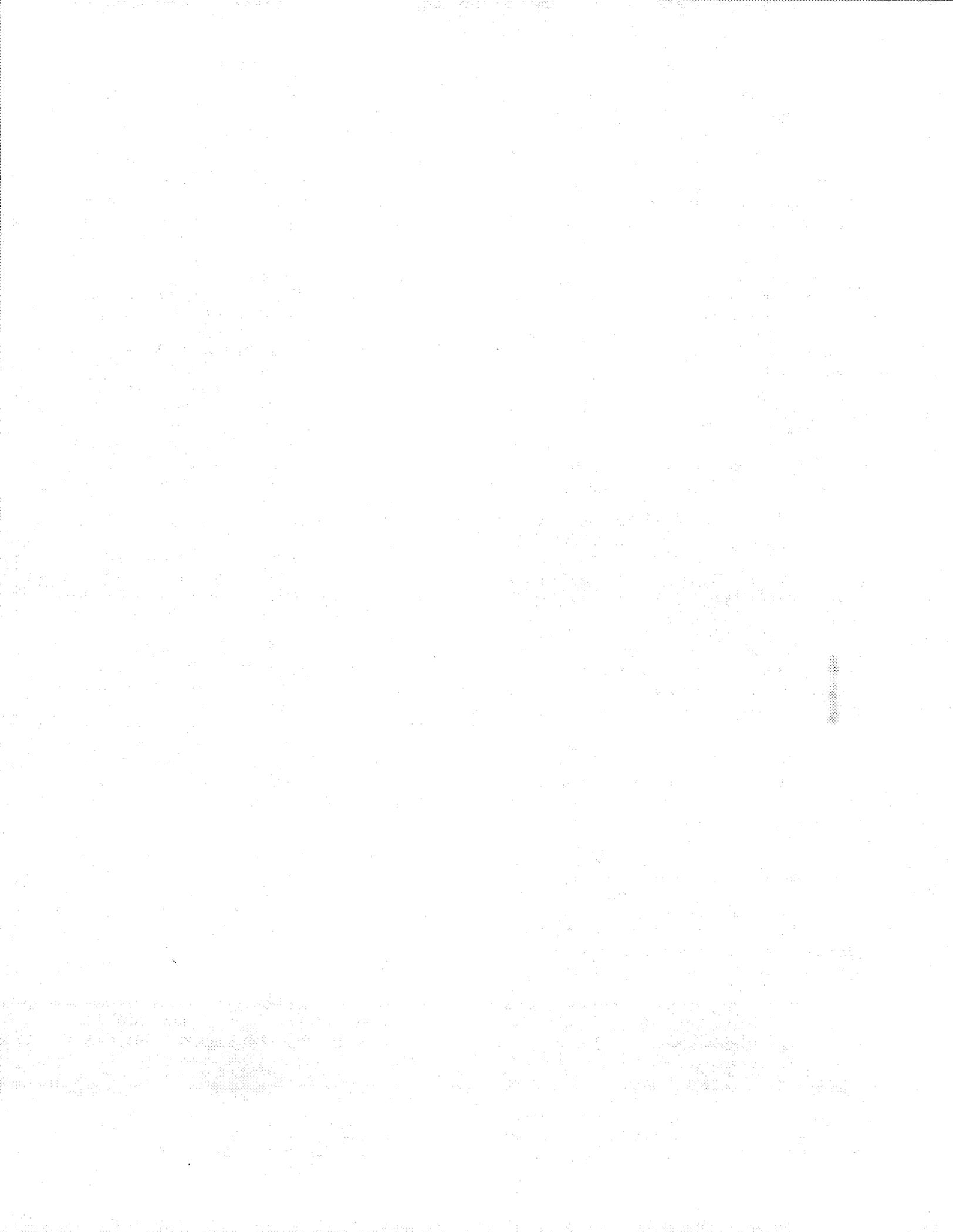
In total, 1997 was a mixed year for hog producers. Most should have earned some profits. However, in many cases those profits were small. Also, the winter did create added costs, including added unpaid labor, for some producers.

The 1998 hog price outlook is not good. If one number were selected for slaughter hogs, that number probably would be about \$42 and even that may be tough to reach, especially early and then again late in the year. Both increased production and a tough foreign demand picture could play roles. With average costs in the \$40 area, prices only a little above that are not very encouraging.

Feeder pig prices also should be below 1997 levels. If slaughter hog prices are in the low \$40's, 40-50 pound feeder pigs will be in the \$30's.

### Sheep

Slaughter lamb prices were above 1996 levels early in 1997 (\$100 compared to \$90) and then were below last



year's levels during mid-year (\$80 to \$90 compared to \$100). By late in the year, prices in both 1996 and 1997 were in the \$80-85 area. The average price for slaughter lambs during the 1991-95 period was about \$65 all year. Feeder lamb prices were as high as \$125 in March and April but slipped to \$95-100 most of the rest of the year. Note that many lamb producers were hit with higher costs and death losses during the 1996-97 winter.

As was true for cattle, many lamb producers in South Dakota suffered from higher than normal death losses and feeding costs in 1997. The winter impact was large, again especially north of I-90. Thus, while prices were fairly high, that "good" often was more-than-offset by the "bad".

Lower sheep and lamb numbers should support prices again in 1998. However, don't necessarily expect prices to be as high as in 1997.

### Final Comment

The livestock industry in South Dakota had a "good" year if only prices were considered. However, the negative impacts of the 1996-97 winter often more than offset the positive impact of higher prices. After all, if you have less to sell or it costs more to produce what you do sell, then price alone is not enough. In total, 1997 will be remembered more for the "bad" than the "good" by many livestock producers.

Prices for fed cattle in 1998 should be above 1997 levels. They will have to be for producers to have a profitable year. Feeder cattle prices are very dependent upon corn prices -- we need a big corn crop.

Larger supplies of hogs will pressure price there. And, the sheep industry will have to struggle to maintain prices at last year's high levels.

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*(Beef, Pork, and Lamb ... continued from p.1)*

Most of the steady and then increased production, while inventories were decreasing, can be attributed to the use of larger animals (both in terms of larger cows in some breeds and crossbreeding) and feeding almost everything to heavier weights in feedlots. Calf slaughter and the slaughter of lighter grass fed animals have dropped considerably. One end result is greater production per cow (discussed later).

Pork: Pork production also has increased. Increased demand (both in the U.S. and in foreign countries) helped make production profitable and encouraged large-scale firms to enter the industry. In 1975, the U.S. pork industry produced about 13 billion pounds of pork. In 1997, that total is expected to be about 17.5 billion pounds.

For pork, the average "size" of the end product (barrows and gilts going to slaughter) has not changed much. However, the number of pigs per litter and of litters per sow per year both have increased. Total production per sow per

year will be discussed later.

Lamb: Lamb production in the U.S. has dropped by about one-third in the last two decades. That decrease can be attributed to a sharply lower inventory of sheep and lambs. That inventory reduction was caused by several years of low (actually negative) profits, predator problems and the loss of the wool incentive program. In 1975, the U.S. sheep industry produced about 370 million pounds of meat. In 1997, that production is estimated to be only 250 million pounds.

### Breeding Herd Inventories

Table 2. Beef, Pork and Lamb Breeding Herds, U.S., Selected Years

	Beef <sup>1</sup> (bil. lbs)	Pork <sup>2</sup> (bil. lbs)	Lamb <sup>3</sup> (mil. lbs)
1975	57	7.4	10.1
1985	46	7.0	7.4
1995	45	7.2	5.3
1997	44	6.9	5.1

<sup>1</sup> Cows on Jan 1

<sup>2</sup> Breeding herd on June 1

<sup>3</sup> Ewes on Jan 1

Beef: Between 1975 and 1997 the beef cow inventory in the U.S. decreased by over 20 percent (from 57 million head to 44 million head). Low prices for feeder cattle resulted in negative returns to many producers and the breeding herd was reduced. Lots of competition from poultry and pork at the retail level was the underlying cause for low cattle prices.

Pork: The pork breeding inventory has decreased over the last few years, but not as much as beef. In 1975, that inventory was about 7.4 million head. In 1997, it is estimated to be 6.9 million head, a seven percent decrease from 1975. Even then, as noted in the previous section, pork production increased by over one-third in the 20 year period.

Lamb: The largest decrease in the breeding herd in the last 20 years was in the sheep industry. In 1975, the Jan 1 inventory of ewes in the U.S. was estimated at about 10.1 million head. By Jan 1, 1997, that inventory was only 5.1 million head. That was a 50 percent decrease in only 20 years.

### Production Per Unit

Table 3. Production Per Unit, Beef, Pork and Lamb, United States, Selected Years

	Beef <sup>(Cow)</sup>	Pork <sup>(Sow)</sup>	Lamb <sup>(Ewe)</sup>
	Pounds per Head		
1975	440	1600	37
1985	480	2100	45
1995	550	2500	50
1997	575	2600	50



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Beef: Given that beef production has increased and the inventory of cows has decreased during the last 20 years, production of beef per cow must have increased. In 1975, that production was estimated to be about 440 pounds per cow (it was only 300 pounds in 1955). By 1995, that amount had increased to 575 pounds per cow, a 30 percent increase. Most of that increase is due to selling a heavier animal, not by selling more animals per cow.

Pork: Pork sales per sow increased even more dramatically than did beef sales per cow. In 1975, the total pork produced per sow was estimated to be 1600 pounds. By 1997, that had increased to 2600 pounds, a 60 percent increase. Here, the increase was because of an increase in the number of animals sold per sow. For example, average litter size has increase by about 1.5 pigs. And, sows today have more litters per year than was the case 20 years ago. Only a small part of the increase was because hogs sold in 1997 were heavier than in 1975 (about 170 pound carcasses in 1995 vs. 180 pound carcasses in 1997).

Lamb: Production of lamb per ewe increased from about 37 pounds in 1975 to 50 pounds in 1997, a 33 percent increase. Both increased average slaughter weights and an increase in the number of lambs sold per ewe contributed to the increased output per ewe.

**Concluding Remarks**

The beef industry has experienced increased production in the last 20 years despite lower inventories. Heavier

weights of animals sold, not more animals sold per breeding unit, was the main cause. Heavier weights per animal sold may not be possible in the future. Increased production will have to come from one of two sources: (1) more cows and/or (2) more calves sold per cow. The latter factor may have some potential, but even that seems to be somewhat limited and is a very slow process.

The pork industry also has experienced increased production over the last 20 years despite lower inventories. Here, however, the growth is due almost entirely to more animals sold per sow, not heavier animals sold per sow. And, unlike the beef industry, future production growth could occur both by increasing the number of sows and increased numbers sold per sow. The latter reason still has much, and quick, potential.

The sheep industry experienced lower production mainly because of lower inventories. Increased production in the future will depend on more ewes and increased production per ewe. Both may be difficult to achieve.

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