

TRENDS IN LAMB MARKETING AND PROCESSING

by G. Alvin Carpenter¹

The sheep industry has been experiencing difficult problems the past three or four years. Thus there is rising interest and a feeling of urgency for all segments to develop a coordinated program to strengthen the position of the industry for the future.

My assignment is to discuss the questions of how, where and when lambs are marketed, where they are processed and current trends.

Where Are Lambs Produced?

Sheep and lambs are produced in virtually every state of the union. Concentration is greatest in the range states, where nearly two-thirds of the lambs originate. The leading producing states in the order named are Texas, Wyoming, California, Colorado, South Dakota, Montana, Utah, New Mexico and Idaho. These nine states had 62 percent of the total number of sheep and lambs on inventory January 1, 1964.

Iowa, Ohio, Minnesota and Nebraska are leading producers among the native sheep states. All of these except Ohio are also important feeding areas for lambs shipped in.

Trends in Volume of Slaughter

The number of lambs marketed are, of course, dependent upon sheep inventory numbers and the lamb crop produced. Records of sheep numbers have been kept by the USDA since 1867, at which time there were 46,327,000 head. Over the years numbers fluctuated up and down somewhat, but they reached a peak of 52,000,000 head in 1942.

During the war period 1942-45, lambs marketed annually for slaughter averaged about 25 million head. Since 1946 we have had a gradual decline in inventory numbers; thus the 28.2 million head on inventory January 1, 1964 were only one-half the number we had 22 years earlier.

Lamb slaughter averaged approximately 15 million head per year for the five year period 1956-60. Then in 1961, because of a number of factors, the

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overall slaughter of lamb increased to 17,190,000. And in 1962, 16,837,000 were slaughtered. In 1963 the number fell to 15,822,000 and in 1964 the figure will approximate 15,000,000.

Where Are Lambs Slaughtered?

Although lambs are slaughtered, at least in small quantities, in virtually every state, 60 percent of the U.S. total in 1963 was slaughtered in California, Texas, Colorado, Iowa, New Jersey and Nebraska, in that order. Another 19 percent was slaughtered in the four states of Minnesota, Utah, Michigan and Illinois. Thus about 79 percent of the total was slaughtered in 10 states. The changes in slaughter in each of these 10 major states between 1961 (a year of high slaughter) and 1963 are shown in Table 1.

Table 1. Number of lambs slaughtered by major states, 1961-63

State	Number of head slaughtered			Percentage of total U.S. slaughter in 1963
	1961	1963	No. head increase or decrease	
	(in thousands)			
California	2,498	2,321	- 177	15
Texas	1,694	1,938	+ 244	12
Colorado	1,810	1,879	+ 69	12
Iowa	1,635	1,181	- 454	7
New Jersey ^a	1,189	1,145	- 44	7
Nebraska	1,147	1,046	- 101	7
Total 6 states	9,973	9,510	- 463	60
Minnesota	1,261	820	- 441	5
Utah	387	764	+ 377	5
Michigan	740	736	- 4	5
Illinois	529	732	+ 203	4
Total 10 states	12,890	12,562	- 328	79
Grand total U.S.	17,190	15,822	- 1,368	100

^aAlthough the figures report slaughter in the state of New Jersey, most of these lambs were kosher killed for consumption in New York City.

Source: Statistical Reporting Service, United States Department of Agriculture, and calculations.

The total slaughtered in the 10 states in 1961 was 74 percent of all U.S. slaughter. However, in 1963 this increased to 79 percent, the increase showing a further concentration in major slaughter areas. The four states of Texas, Colorado, Utah and Illinois each showed increases in slaughter between 1961 and 1963 despite an overall decline in slaughter of 1,368,000 head for the U.S. as a whole. This can be explained by the fact that new slaughter plants were opened by major national packers in the San Angelo area of Texas, in Ogden, Utah and in Rochelle, Illinois. Slaughter in Texas has more than doubled since 1958. There also has been an expansion of lamb slaughter around the Denver area. All other slaughter areas have showed reductions. The largest declines-- in Iowa and Minnesota--have reflected the general decline in sheep numbers in the states adjacent to key slaughter plants in those states.

Recently lamb slaughter has tended to increase in areas closest to major supplies, except for the kosher plants in New Jersey. This is in line with trends in meat packing in general. Location of slaughter for both cattle and lambs the past two decades has been influenced by rising costs, competition in the industry and developments in livestock feeding, transportation and meat retailing. Major trends in lamb processing which are likely to continue are:

1. Lamb slaughter is concentrated more in areas closest to major supplies. Efficient operations require a steady flow of considerable volume to keep unit costs low.
2. Slaughter has declined in some of the former major centers (Chicago, St. Louis, New York, Cleveland, Kansas City) because of difficulties in procuring steady supplies and because of the relative shift in transportation costs of lambs and meat.
3. The total number of lamb slaughterers has declined in most areas. Those that do remain are handling larger volumes per plant to keep costs down. In California, for example, about nine plants now kill 90 percent of the lambs; 20 years ago there were nearly twice that many plants.
4. Some of the national packers have shut down older plants, such as Kosher plants in New York City and elsewhere, because of obsolescence, high labor costs and lack of steady supplies in those areas. Other, more modern plants have been opened in strategic areas, and several plants have been remodeled to utilize labor-saving equipment and new cost-cutting processes.
5. Direct buying of lambs by packers has increased, especially in the West. Fewer lambs are going through public stockyards. This trend will continue.
6. There will probably be an increase in informal integration between the packer and lamb feeders. Packers will depend more and more on

the same suppliers and these suppliers will know the specifications of the slaughterer and will try to produce for his needs as to type of carcass, weight, time of delivery, etc.

7. Competition between packers for lamb orders from the larger retailers is very keen. Packers are required more and more to meet specifications laid down by large buyers. U.S. "Choice" is the merchandising symbol in many areas, especially the West; in the East packer brands are more dominant. Twenty years ago 1,000 lamb carcasses might have been sold to 50 different retail customers by a packer route salesman. Today the bulk of the lamb is sold by packers on a carload or volume basis to four or five large retailers. It is usually sold over the telephone at an agreed-upon price according to an understood set of specifications.
8. In brief, the lamb slaughter business is characterized for the most part by:
 - a. Excess slaughter capacity.
 - b. Lack of continuous volume of uniform quality.
 - c. A guaranteed work week for labor.
 - d. A consumption pattern geared largely to the Northeast and the Pacific Coast.
 - e. Sales of meat to large-scale retail or wholesale buyers whose market power is increasing.
 - f. Increasing competition from other red meats and poultry, which are usually lower priced at retail and offer the housewife greater variety and are always available at uniform quality.

This situation poses important problems for the industry. Solutions will require close cooperation among all segments.

Concentration of Slaughter by Plants and Firms

Some 500 plants slaughtered lamb in the United States in 1960.² Most of them are small. Only about 90 plants slaughter 20,000 or more lambs each per year; the remainder are small plants operated mostly by single plant firms.

²U.S. Tariff Commission Report on "Lamb Mutton, Sheep and Lambs," Washington, D.C., June 1960, p. 24.

Historically, the lamb slaughtering industry has been rather heavily concentrated in a few large firms or national packers. Approximately two-thirds of the lambs killed in the United States are killed by the nine largest packers (see Table 2) and 60 percent of the total is killed each year by "the big three."

In recent years some independent firms have increased their kill near major markets on both the East and West Coasts. The U.S. market share of the 14 largest independent lamb killers in 1960 was 20 percent, a rise from 9 percent in 1950. On the other hand, there has been a decline in the total number of lamb killers in recent years, with many of the small independent plants going out of business.

Large independent lamb slaughterers operate mostly in the Northeast and Pacific Coast areas. In three other areas national packers still slaughter most of the lambs. (Table 2.)

National packers accounted for all of the commercial slaughter in the West Northcentral region, more than three-fourths in the mountain region and nearly two-thirds in the West Southcentral region, which is mainly Texas.

Table 2. Consumption and slaughter of lamb by areas, 1960-63

Area of United States	Percentage of U.S. total		National packer's share of commercial sheep and lamb slaughter in each region ^a
	Consumption of lamb and mutton ^a	Commercial slaughter of sheep and lambs 1960 1963	
Northeast	50	16 13	27
East Northcentral	15	13 11	39
West Northcentral	3	30 ^b 27	100
South	3	- -	66
West Southcentral	2	8 14	62
Mountain	4	14 17	78
Pacific	23	19 18	35
United States	100	100 100	63

^a Armour, Cudahy, Hormel, Hygrade, Morrell, Rath, Swift, Wilson, Dubuque. Information for 1960 only.

^b Less than 1 percent.

Source: 87th Congress 2nd Session, Committee Report on "Effect of Federal Lamb and Mutton Grades on Producer and Consumer Prices," Washington, March 7, 1962, p. 9, and with additional calculations for 1963.

These three areas together accounted for more than half the U.S. total lamb slaughter.

The Pacific Coast, a major lamb consuming area, used to be self-sufficient in production but in recent years this situation has changed. In the spring months of April, May and June 100,000 to 200,000 surplus spring lambs from the Central Valley areas of California must move east to avoid market gluts on the coast. Later in the fall some 800,000 to 900,000 lambs for slaughter are shipped into California, principally from Idaho, Utah and other mountain states. Also 400,000 to 500,000 stocker and feeder lambs are shipped into the state each year!

Lamb produced in the rest of the United States tends to move to the eastern markets. The national packers east of the Rocky Mountains supply about 70 percent of this lamb. However, when prices on the West Coast are favorable in relation to East Coast prices, more lamb moves from the Denver and Ogden areas to the West Coast.

Marketing Patterns Peculiar to the Lamb Industry

Lambs are the only type of livestock that will fatten on natural grasses without grain and still meet U.S. "choice" grade requirements. In the United States, roughly 50 percent of the total is marketed off pastures and 50 percent is from feed lots. Consequently, marketings in the range and pasture areas are highly dependent upon weather and feed conditions. Supplies moving to market in a given period may be exceedingly variable, this variability causing gluts and famines and considerable price variation during the year.

"Milk" or "spring" lambs are generally defined as those born before March 1. The principal areas marketing early milk-fat lambs off grass are the Central Valley areas of California, parts of Arizona, Texas and the Southwest and parts of the southern states, particularly Kentucky and Tennessee. The mountain states and the Midwest also market "milk-fat" lambs, but they usually move off grass later in the year, from July to October.

In the past, California producers often obtained a premium on "genuine spring lambs" because these lambs hit the eastern markets beginning in March and reach a peak in April and May, before there is much movement from other competing areas. They also move after the bulk of old crop fed lambs are marketed. In years when this holds true, California producers can get premium prices for early milk lambs. In recent years, other competing areas have been striving to lamb earlier. When weather and feed conditions are favorable, parts of Texas, Arizona, Kentucky and Tennessee can market spring lambs to compete directly with California early lambs. Because of closer proximity to large eastern consuming markets, these areas have a freight rate advantage.

The big period of marketing for the western range area as a whole is in the fall months, when lambs come off mountain ranges. The fat end is sorted out to go to slaughter and the feeder end moves into the Corn Belt for further fattening or into the Imperial Valley and other areas for pasture feeding. Receipts at public stockyards and direct movements to feeding areas in September and October are usually half again as large as the year's average rate.

Since fed lambs are ready for market 60 to 90 days after they go on feed, their marketing season extends from the late fall to the early spring. Only on the West Coast and in parts of the Southwest is the seasonal pattern different.

One of the big uncertainties in lamb feed prospects centers on what happens to wheat pastures. Kansas and other parts of the Wheat Belt often provide excellent wheat pastures for fattening lambs for market. If these wheat pastures develop, they encourage added competition for the Corn Belt feeder and for the Imperial Valley feeder. This means added competition and danger of market gluts as the lambs move to slaughter.

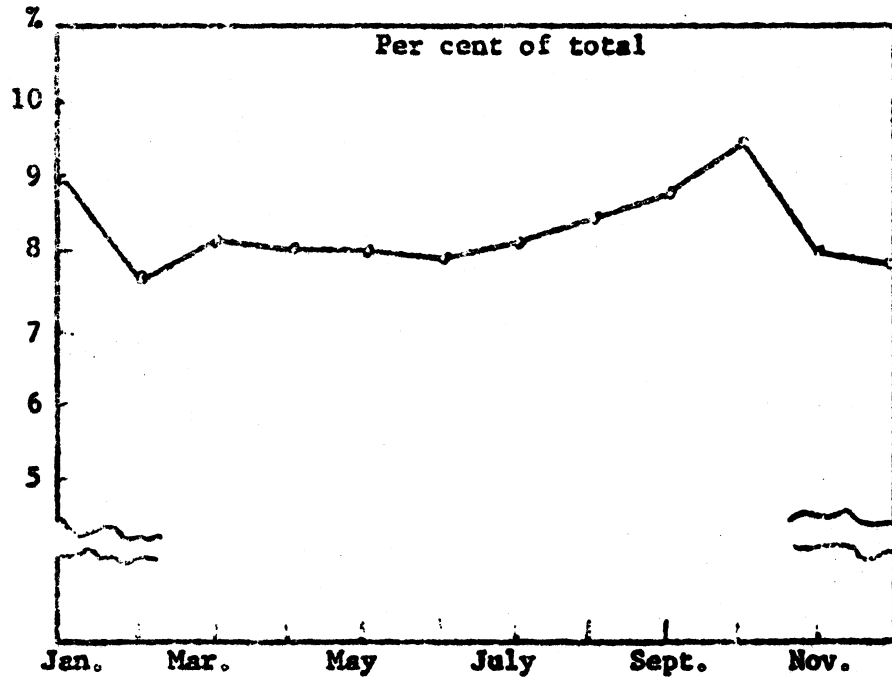
In summary, each year's movement of lambs to market is made up of fed lambs that move to slaughter in the winter and spring, early spring lambs in April to July, and later crop lambs marketed off grass from much of the nation in the summer and fall. The various seasonal supplies fit together so well, with first one source and then another predominating, that U.S. lamb slaughter by months is relatively stable. (See Figure 1.) The lowest volume of slaughter for the U.S. as a whole is usually in May and June and the highest volume is in October.

When this normal marketing pattern is upset seriously by weather or other factors, market gluts build up in certain periods and shortages occur in others. Prices are influenced accordingly.

Importance of "Orderly Marketing"

During the 1960-61 season we had a good example of what happens to prices when this so-called normal marketing pattern is upset. Many producers will remember this. Several factors combined to bring about a large increase in slaughter and the consequent decline in prices to the lowest level in 15 years. (See Figure 2.)

Because of feed conditions and other factors, the major supply areas glutted each other's markets, seasonal marketings overlapped and the overall slaughter of lambs exceeded the expectations of packers and retailers. Slaughter continued at more than 300,000 head per week for 13 consecutive weeks as compared to a normal of about 260,000. This had not been anticipated and the extra supply could be marketed only at lower prices on the East Coast.

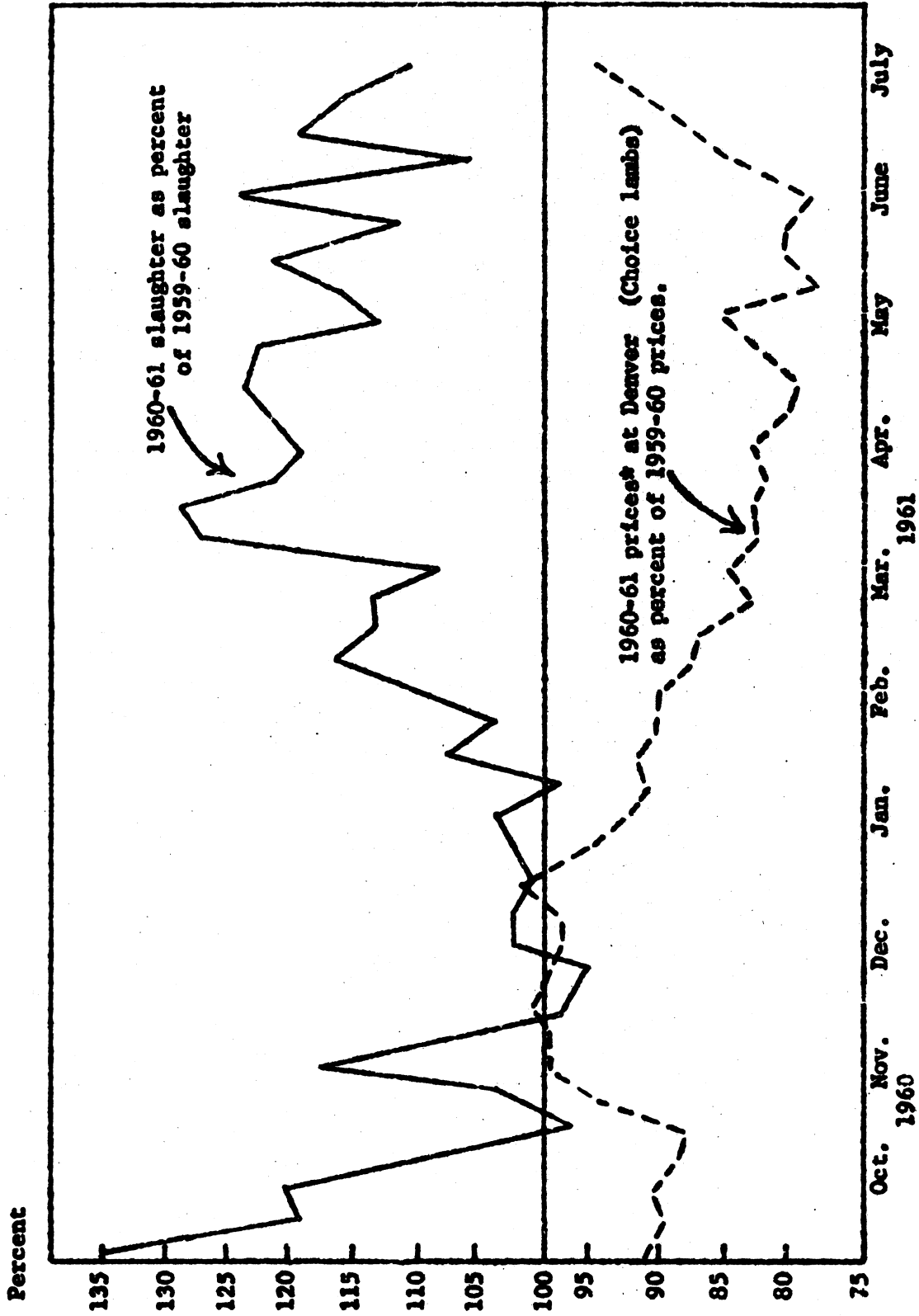


U.S. Agricultural Marketing Service, Statistical Reporting Service.
Livestock and Meat Statistics 1962. Stat. Bul. No. 333. July 1963, p.120.

Av. 1954-1963

Jan.	1,424.15	9.0%
Feb.	1,211.14	7.7
Mar.	1,290.62	8.2
Apr.	1,281.75	8.1
May	1,289.37	8.1
June	1,265.72	8.0
July	1,302.63	8.2
Aug.	1,346.00	8.5
Sept.	1,397.36	8.8
Oct.	1,496.97	9.5
Nov.	1,262.63	8.0
Dec.	1,243.39	7.9
Total	15,817.73	100.0

Figure 1. Commercial sheep and lamb slaughter: number slaughtered by months (48 states), average 1954-1963



*adjusted for Felt Values.

Figure 2. United States lamb and mutton slaughter and prices 1960-61 as a percent of 1959-60

By way of contrast, lambs moved to market well and prices exceeded the expectations of most people during the 1963-64 season just passed. In the first place, overall slaughter was 6 to 7 percent below last year and the various seasonal supplies blended well together so that market gluts were avoided. Choice lamb carcasses (45-55 pounds) sold higher than choice beef carcasses on both the East and West Coasts all year. In mid-May choice lamb was 13 cents higher than beef in New York City and in San Francisco lamb was 8 to 9 cents higher than beef. Carcass lamb prices have not averaged higher than beef prices since the mid-1950's.

In mid-July, California North Coast wooled lambs sold for 25 cents a pound, the highest price in seven years. These prices occurred in the face of big supplies and lower prices for beef and poultry. The behavior of lamb prices this year, in view of the smaller lamb slaughter and considering big supplies and low prices for beef and poultry, leads one to believe that a certain segment of the population (the lamb eaters) will continue eating lamb even at prices higher than that of competing meats. It is to be noted that retail prices for leg of lamb, lamb chops and shoulders remained remarkably stable during 1964. In fact, prices for these cuts were about the same as in 1961, a year of high lamb slaughter and low prices to producers. On the other hand, 1964 retail beef and poultry prices averaged somewhat below the year previous.

When weekly supplies of lamb become excessive, however, (above 260,000 to 270,000 head) as they were week after week in 1961, prices become unduly depressed. There are fewer market outlets for lamb compared to other meats and the existing outlets seem less able to expand rapidly to absorb large increases in supply without serious price declines. If markets can be expanded, then higher lamb production can be marketed profitably.

What About the Future for Lamb?

What should be the objective of the industry as far as lamb production is concerned? Should it be to expand the share of the market for lamb and increase per capita consumption significantly? Or should it recognize that the demand for lamb is relatively inelastic? In other words, confirmed lamb eaters continue to consume about the same amount of lamb year in and year out regardless of the price they have to pay. Expanded consumption can be obtained only at greatly reduced prices, which might give a smaller total return to the industry. In view of the competition faced by lamb in the market, the challenge is to find ways to reduce costs per unit without greatly expanding total production.

Increased per capita consumption will not save the lamb industry unless net profits to producers go along with it. If increased per capita consumption were the only goal, we could open the flood gates for foreign imports. New Zealand would be very happy to cooperate with the U.S. industry to supply more volume for that purpose.

We are generally familiar with the dramatic rise of broilers and turkeys in the diet of U.S. consumers. These meats, along with beef, have captured an increasing share of the market, some at the expense of lamb and pork. But, some of the increase has been due to the rising per capita consumption of all meats as incomes have increased. Per capita consumption of poultry has nearly doubled since 1950. We are now eating over 30 pounds of chicken and 7.5 pounds of turkey. How has this come about? These tremendous increases in per capita consumption have taken place as a result of phenomenal decreases in the cost of production and processing. These efficiencies have been passed on to consumers in the form of lower prices. Records show that retail prices for broilers were about 60 cents a pound in 1950. Today, despite some inflation, retail broiler prices range from 27 to 35 cents in most food stores.

Without going into details, the success of the poultry industry in increasing the per capita consumption of broilers has resulted from producing a highly desirable product at a lower and lower cost. Consumers have received the major benefit in the form of lower retail prices. How about benefits to broiler producers in general? They and the feed and processing segments of the business, through vertically integrated operations, collectively, have increased production capacity so much that unless they put on the brakes, the markets are glutted and net returns to producers are all but wiped out. Yet they have increased per capita consumption. They have a bigger share of the market for meat. There is good evidence that broiler producers are producing this larger volume and getting this larger market share for the same or less return than they received for a much smaller crop. The margin per unit is so small that the grower must have many more units to get sufficient total income to survive. Technologies in the industry have promoted growth in output at a rate greater than growth in demand. Consequently, the increased supply can be sold only at a lower price. As production expands, market demand must expand also, else prices will decline.

What are the alternatives for the lamb industry? Can improved technology throughout the sheep industry give us a product that has a higher ratio of lean to fat and bone and more uniform quality throughout the country? Can we assure a continuous supply available to all important retail food stores on a year round basis? The Industry-wide Committee of the National Wool Growers is making an effort to develop the "consumer preferred lamb carcass." This move is commendable. However, I should like to pose two questions, both of which may be loaded:

1. Is the "consumer preferred carcass" the same as the "packer preferred" carcass?
2. Will the "consumer preferred carcass" with more lean and less fat generally grade "U.S. Choice" so that it can readily move to market at a profit?

It may be that when all segments of the trade are considered, the type of carcass agreed upon may have to be a compromise of the "consumer preferred carcass," the "retailer preferred," the "packer preferred" and the grading service. The packer needs a high yielding carcass to come out profitably; yet such a carcass may be too fat and wasteful for the retailer or consumer. This points up the need for team work.

The real problem lies in finding ways for the producer as well as the processor and retailer to produce, process and merchandise an improved quality product within a range of reasonable costs per unit. If this cannot be done to compete more favorably with other meats, the alternative is to accept the fact that total lamb production is not likely to increase but may decline still further. That which is produced will be merchandised more as a specialty product, which is the reputation it seems to have with many people outside of the East and West Coasts.