MINNESOTA
farm business NOTES

NO. 443 ST. PAUL CAMPUS, UNIVERSITY OF MINNESOTA JULY 1962

Appraisal of the 1960 Change in Federal Lamb Grades

Darrell F. Fienup[1]

In March 1960 the Federal grade standards for lamb were revised. Minimum quality and conformation requirements for Prime and Choice grades were reduced. Reduction in the standards was greatest for more mature or fed lambs. In general, the revised grades put less emphasis on fat or "finish."

This increased the potential supply of Prime by including about the top half of the old Choice grade. The lower boundary for the new Choice grade was similarly reduced by including about the top third of the former Good grade. U.S. Good became a narrower grade as its lower boundary was not changed. This article is concerned with the economic effects of the 1960 change in lamb standards. An earlier article dealt with overall effects of Federal lamb grading.[2]

Purpose of Grading

Grade standards have value whenever significant variation exists in a commodity's quality, age, size, color, or other attributes. This variation must be important enough to those using the commodity to be reflected in prices paid for various grades.

Uniform grade standards should serve as a buying guide for consumers. Consumer preferences for various grades can then be transmitted by price changes to producers. Producers can respond by producing grades desired.

Uniform grade standards also facilitate trading between buyers and sellers. Costs of procurement and merchandising are reduced.

Certain conflicts, however, are inherent in a uniform grading system. The main demand for U.S. graded lamb is for U.S. Choice. Its price is generally higher than for U.S. Good. Producers whose lambs grade less than U.S. Choice receive lower prices. They generally want lower standards.

Some packers depend on Federal grading in their selling operations. They generally prefer lower standards for U.S. Choice to ease their supply problems. Retailers that use Federal grading also want large dependable supplies of U.S. Choice lamb. But, they want the quality consistent with maximum consumer satisfaction.

Probably the biggest conflict exists at the meat-packing level. Here the Federal grade stamp competes directly with private packer labels. The market position of packers without private labels has been strengthened by use of the Federal grade stamp.

No grading system is perfect. Grade standards must respond to changing consumer demands and industry needs. No magic formula exists to establish boundaries between grades and quality characteristics included in each grade. Mass retailing today requires that the bulk of a commodity should fall into one generally acceptable grade. That grade is U.S. Choice.

The Compromise

Federal grade standards represent a compromise of many interests involving industry groups and the general public. This was clearly demonstrated by the conflicting interests that led to the recent lamb standards revision.[3]

Opposition to Federal grades before revision came primarily from western producers. Most western sheep and lambs are of the larger, wool type. Under the old grade standards, they required extended feeding to qualify for the Choice grade. In order to attain this grade lambs had to carry excess weight that was generally discounted in price. The new lower fat requirements, therefore, increase the proportion of western lambs grading U.S. Choice that can be sold directly off grass for slaughter.

West Coast packers generally favor Federal grading, but they wanted lower standards. They were under pressure to supply more U.S. Choice lamb because of the nearly universal demand for it in the western market area. Western packers had limited opportunity to sell lamb grading less than Choice.

Native state lamb producers did not advocate changes in grade standards. They produce lambs primarily for meat —lambs that are lighter and younger when marketed. These lambs develop more internal feathering without excessive outside fat. Age or weight is not a problem. Higher proportions of native than western lambs qualified for Prime and Choice under the old standards. Natives usually brought higher prices than fed western lambs.

Consumers want tender and flavorful lambs. But, they object to excessive fat. However, certain minimum fat requirements seem essential for desirable eating characteristics. To the extent that production of fat and wasty lambs would be discouraged, a lowering of Choice grade requirements appeared desirable.

Industry Acceptance

Federal grading is voluntary. Use of the service is a good indication of its acceptability. Retailers largely deter-

[1] This article is based on a study conducted by USDA at the request of the House Agriculture Committee. Dr. Fienup directed this research while on leave from the Department of Agricultural Economics during 1960-1961. Drs. W. C. Motes, S. H. Hiemstra, and R. E. Laubis, ERS, USDA, were members of the research group.

[2] "Consequences of Federal Lamb Grading," *Minnesota Farm Business Notes*, December 1961.

[3] "Suspension of Federal Grading of Lamb and Mutton." Hearings before the Committee on Agriculture, House of Representatives, 86th Congress, Second Session, Serial MM, January 11-14, 1960.

mine the amount of lamb that is Federally graded. They use Federal grades because of advantages in procurement and merchandising. But the final determinant is consumer acceptance.

Both the quantity and percentage of lamb graded increased significantly in 1960 and 1961. Between 1959 and 1961 the quantity of lamb graded increased nearly 40 percent. The percentage of lamb slaughtered that was graded increased from 36 percent in 1959 to 44 percent in 1961.

Use of U.S. graded lamb increased more in 1961 than 1960. This indicates some expected time lag for the industry to try, accept, and adopt the new grade standards. Increased use of the service shows that they have endorsed the change.

The national survey, taken in early 1961, showed that the change in grade standards was generally approved by firms at all levels of the lamb industry, regardless of location and grading practices. The major exception was several national packers. At the packer level, the new standards were considered more realistic as more lamb qualified for Prime and Choice. Most retailers were more satisfied with leaner lamb stamped U.S. Choice.

Before the change many retailers felt top Good lamb was equally acceptable to Choice on a quality basis and preferable in yield of retail cuts. The market for the old U.S. Prime was primarily restricted to the hotel and restaurant trade. Its supply was too limited for mass retailing.

After the change in standards, U.S. Prime became more plentiful. However, most retail firms did not prefer the new Prime over Choice. No firm surveyed switched its policy for handling Choice to Prime. On this basis, retailers seem to prefer the bottom part of the old Choice grade. The new U.S. Choice now includes the top part of the old Good grade and the bottom half of the old Choice grade.

MINNESOTA

farm business

NOTES

Prepared by the Department of Agricultural Economics and Agricultural Extension Service.

Published by the University of Minnesota Agricultural Extension Service, Institute of Agriculture, St. Paul 1, Minnesota.

Production Changes

Some changes were also observed in production practices in the west. About half of the West Coast packers felt that lowering standards caused some decrease in average weight with less fat because of earlier marketings. The average weight of all lambs slaughtered in 11 important western range states was 2 pounds lighter in 1960 than in 1959.

Closely associated with this is some change in the seasonal distribution of slaughter. Slaughter in August of 1960 and 1961 was one-fourth greater than in 1959. It exceeded the August slaughter of any year since 1946. Earlier marketings indicate that more lambs are being marketed directly from ranges instead of going on feed.

Price Effects

Some segments of the industry were concerned that lowering grade standards would unfavorably affect farm prices. However, from 1947 to 1960, 97 percent of the yearly variation in U.S. average lamb prices at the farm was explained by per capita consumption of lamb, beef, veal, pork, and poultry; and personal income. Most variation in lamb prices was explained by beef and veal consumption. The quantity of lamb was less significant.

The predicted U. S. farm price in 1960 was less than 2 percent above the actual price in 1960. On this basis, there is little evidence that the 1960 standards change affected lamb prices.

Price differentials between grades also widened on most public markets in 1960. The general widening of price differentials between live grades indicates that the new standards were more meaningful to the trade. Equity among producers can be improved by allowing the market to better reflect quality differences.

Conclusions

Evidence indicates that the change in grade standards was generally desirable. For retailers and other firms using Federal grades, U.S. Choice is now a more desirable grade. Its use may be expected to increase.

But more important, production of lamb of this quality will be encouraged. Any changes that lead to production of a better product and expand the market for lamb are in the producers' interest. At the same time continued research is needed to identify lamb characteristics which provide greater consumer acceptance. On this basis, further changes in lamb standards may be necessary.

Changes in Minnesota Grain Marketing Industries

Robert Evenson and Reynold Dahl

Grain marketing and processing industries are important in the Minnesota economy. Minneapolis and Duluth are two of the largest U.S. terminal grain markets. The Minneapolis market is the nation's largest grain-merchandising center. Major Minnesota grain-processing industries include flour milling, oilseed processing, malting, and feed manufacturing.

In recent years changes occurred in the organization and structure of the grain industry. Changes in Government programs, transportation technology, and demand for grain products were motivating forces. This article discusses some preliminary findings of a study of these changes.

Decline in Flour Milling

Minnesota, once the nation's leading flour producer, now ranks third—behind Kansas and New York. The number of major flour mills in Minnesota decreased from 26 to 22 during the 1954-1960 period. The volume of grain processed into flour of all types decreased from 73 to 66 million bushels from 1954 to 1960. Minnesota's production now accounts for about 11 percent of national milling volume (table 1).

Most flour produced in Minnesota is milled from spring wheat grown in Montana, North Dakota, South Dakota, and Minnesota. Several mills grind durum wheat and produce most of the nation's durum flour. Minnesota mills also produce about half of the nation's rye flour.

The nine plants in the Twin Cities account for approximately half of the state's total flour production. Six plants in the Mississippi River area from the Twin Cities to southeastern Minnesota account for another third. Plants through the rest of the state have declined in number from 11 to 7.

The decline in Minnesota's importance, specifically Minneapolis, in flour milling has taken place for many years. At the turn of the century, Minneapolis was the only major center of flour production in the United States. The development of cheap water transportation on the Great Lakes led to the rise of Buffalo, New York, as a major milling center. Since wheat, but not flour, could be transported on the Lakes, much milling at Buffalo took place at the expense of Minneapolis.

The development of hard winter wheats led to rapid expansion of wheat production and subsequent milling expansion in the southwestern Great Plains. By the early 1930's Buffalo surpassed Minneapolis, and Kansas City was almost as large. This production shift occurred even though total flour production changed little in the last 50 years. The decline in per capita consumption was offset by population increases.

From the 1930's to the present the industry saw a trend toward centralization. Major firms came into control of an increasing proportion of total flour production.

Oilseed Crushing: Soybeans Up—Flaxseed Down

The oilseed-crushing industry constitutes a major portion of Minnesota's grain-processing industry. Ten plants processed 49 million bushels of soybeans and flaxseed in 1960—a 20 percent increase over the 41 million bushels of 1954.

The Twin Cities area accounted for two-thirds of total production in 1954. Shifts in plant capacity and location, however, left the area with 44 percent of total capacity in 1960. The remaining plants are concentrated in southern Minnesota.

Soybean crushing doubled during the 1954-1960 period. The total crush increased from 15 to 31 million bushels. Minnesota ranks sixth in soybean crushing. It increased its proportion of total U.S. crushing from 6 to 8 percent.

Flaxseed crushing, however, markedly declined both nationally and in Minnesota—the major flaxseed-processing state. Minnesota's crush declined 27 percent, from 25 to 18 million bushels during the period. Minnesota processed 78 percent of the 1954 national crush of 32 million bushels and 92 percent of the lower 20 million bushel 1960 crush.

Domestic and foreign consumption of soybean products increased rapidly since 1940. The flaxseed industry, on the other hand, experienced a decline in demand for linseed oil. Recent development of new linseed oil paints, however, may halt this trend.

Malt Production Increases

Minnesota's malting industry experienced a substantial increase in volume processed during 1954-1960. Malt production increased 57 percent, from 11 to 18 million bushels.

In 1954, 64 percent of the malting capacity was located in the Twin Cities. Most of the increase took place in the remainder of the industry concentrated along the Mississippi River in southeastern Minnesota. The Twin Cities' share dropped to 40 percent in 1960.

Minnesota ranks second to Wisconsin in malt production. Its share of national production, however, increased substantially—from 13 to 18 percent.

This substantial increase can be partially attributed to growth in Minnesota's malt liquor industry. Data from the Department of Commerce indicate that Minnesota's malt liquor industry expanded by 20 percent during the 1954-1958 period. The population expansion in western United States also gave impetus to the malt industry. Most of Minnesota's shipments go there.

Terminal Feed Industry—Unchanged

Only feed manufacturers with 50 tons or more daily processing capacity who sold feed primarily through wholesalers were included in this study. Hence, only the larger terminal processing firms are included.

In 1960, 14 plants qualified as terminal feed processors. They utilized 8.5 million bushels of grain. In 1954, 11 plants processed 8.3 million bushels.

Few significant changes in the terminal feed industry were evident. A trend toward decentralization in feed manufacturing resulted in the bulk of commercial feed production taking place in small processing plants near livestock production areas.

Table 1. Grain processing in Minnesota, 1954 to 1960

	Minnesota production		U.S. production		Minnesota as a percent of U.S. production		Rank among states
	1954	1960	1954	1960	1954	1960	
	million bushels grain						
Flour milling	73	66	525	592	14	11	3
Oilseed—soybeans	15	31	249	401	6	8	6
Oilseed—flaxseed	25	18	32	20	78	92	1
Malting barley	11	18	88	98	13	18	2

Table 2. Storage capacity and average inventory, Minnesota terminal elevators and processors

	Storage capacity		Average inventory	
	1954	1960	1954	1960
	million bushels			
Terminal elevators	124	160	92	96
Storage elevators	7	14	7	13
Processors	39	50	23	28

Total Grain Processing Expands

Minnesota's important grain-processing industry expanded significantly during the 1954-1960 period. Total grain processed increased from 133 to 143 million bushels. The decline in flour milling and flaxseed crushing was more than offset by expansion in the malting and soybean-crushing industries.

Merchandising of Major Importance

Minnesota holds an important position in the grain-merchandising industry. In terms of grain receipts, Minneapolis has been the nation's largest cash grain market for many years. In 1960, 282 million bushels of all grains (excluding flaxseed) were received at the Minneapolis-St. Paul market.

Duluth-Superior ranked third in importance, behind Chicago. It received 185 million bushels of all grains excluding flaxseed. This market experienced a substantial increase in grain receipts with the advent of the St. Lawrence Seaway.

The actual merchandising (physical handling) of grain in Minnesota increased by 72 percent during the 1954-1960 study period. Merchandising in Minneapolis-St. Paul increased by 81 percent. This was the result of increased processing, storing, and exporting.

Storage Capacity Increases

The Minneapolis-St. Paul market has the nation's largest elevator capacity with nearly 130 million bushels storage capacity. Duluth-Superior ranks fifth among major markets in storage capacity.

Terminal merchandising elevators account for nearly three-fourths of total storage capacity (table 2). Storage capacity increased by 28 percent during the 1954-1960 period for both terminal elevators and grain processors.

Commercial and government storage for other than a plant's own inventory is largely concentrated in terminal elevators. The increase in storage capacity

(Continued on page 4)

THE OUTLOOK CORNER

Kenneth E. Egertson

Adjustments recently occurred in both the total number of stock sheep on U.S. farms and ranches and in the relative importance of sheep production areas.

Stock sheep numbers reached a peak of 49.3 million head in 1942. Numbers then trended downward to a low of 26.2 million head in 1950. Some major causes for this decline were:

1. Decreased demand for wool and lamb meat after World War II.
2. Increased competition for lamb and wool markets from foreign countries.
3. Stronger competition from other farm enterprises, especially beef cattle on western ranges.

Since 1950, stock sheep numbers gradually increased. The table compares the average yearly stock sheep inventory in 1950-1952 with 1960-1962. An increase of 1.07 million head, 4 percent, took place on U.S. farms and ranches between these periods.

The relative importance of various geographic areas also changed. This is measured by the percentage of total U.S. stock sheep inventories in each area (see the table).

The western area is composed of 12 states—from the Pacific east to Montana, Wyoming, Colorado, and Texas. This area is the range sheep production area of the United States, important for both wool- and meat-type sheep. It registered a 3-percent reduction in stock sheep numbers. Although still the most important sheep area, its percentage of the U.S. total stock sheep inventory dropped from almost 68 percent in 1950-1952 to 64 percent in 1960-1962.

A downward adjustment of 10 percent in numbers also took place in the south-central area—composed of seven southern states. This area had almost 5 percent of the total U.S. stock sheep inventory in 1950-1952 and 4 percent in 1960-1962.

Increases were registered in both the eastern and north-central areas. The eastern area—15 states bordering the Atlantic plus West Virginia and Vermont—increased inventories by 5 percent. But, it showed no significant gain in the percentage of the U.S. total inventory.

A marked 25-percent increase took place in the north-central area—basically the 12 Corn Belt states. Sheep production here comes largely from native ewe flocks. The increase in numbers boosted this area's total percentage of U.S. stock sheep from 23 percent 10 years ago to 28 percent in 1960-1962.

The Minnesota trend in stock sheep numbers followed closely that of the north-central region. Stock sheep inventories increased by 152,000 head, 23 percent between the two time periods. Within the state, only 13 of 87 counties had a percentage decrease in stock sheep numbers. Ten of these counties were in the eastern half of Minnesota.

THE OUTLOOK

Stock sheep numbers on U.S. farms and ranches on January 1, 1962 were 4 percent less than a year earlier. This decrease was largely in response to unfavorable slaughter lamb prices in 1961 —the lowest average in 15 years. Some improvement is expected in the price average this year, along with improved range conditions. The liquidation is, therefore, likely to be halted by January 1, 1963.

However, a longrun look at the sheep picture does not indicate a rapid expansion in sheep numbers. The build-up in cattle numbers and limited range feed supplies will limit the rate of sheep expansion in the west.

The price level needed, relative to that of competing farm enterprises, to encourage a rapid expansion in stock sheep numbers in native states is not likely to develop in the next several years.

Stock sheep numbers by regions

Area	1950-1952 Yearly average	1950-1952 Percent total	1960-1962 Yearly average	1960-1962 Percent total
	million head		million head	
West	18.41	67.8	17.97	63.6
North central	6.37	23.4	7.94	28.2
South central	1.26	4.7	1.14	4.0
East	1.13	4.1	1.19	4.2
United States	27.17	100.0	28.24	100.0
Minnesota	.64	.....	.79	.....

Grain Marketing—

(Continued from page 3)

by processing firms is largely attributable to increases in processing capacity. Some increase in storage capacity by terminal elevators came about because of increased merchandising volume.

Increased Government storage no doubt led to the 85-percent increase in capacity by elevators engaged only in storage operations. These plants, however, do not represent a major portion of Minnesota's grain storage capacity. The increase in storage capacity associated with Government grain storage was largely in terminal elevators. Considering the expanding Minnesota grain industry this increase was modest.

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

Agricultural Extension Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
SKULI RUTFORD, Director
Cooperative Agricultural Extension Work,
Acts of May 8 and June 30, 1914
OFFICIAL BUSINESS
7-62 2,350

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300