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MINNESOTA farm business NOTES



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MINNESOTA PCA'S SHOW RAPID GROWTH

Reynold P. Dahl and Willis E. Anthony

The production credit associations (PCA's) have helped provide the increased credit needed by farmers. Their loans have increased steadily during the past decade; however, a study of their operations indicates the importance of increasing their capital at a faster rate.

There are 21 PCA's in Minnesota. They were organized under the Farm Credit Act of 1933 as local cooperatives of farmer-borrowers. A borrower becomes a member of the PCA through the purchase of stock in the association approximately equivalent to 5 percent of his loan. Members elect a board of directors that is responsible for managing the PCA.

The federal government provided the original capital of the PCA's. All of the federal capital has been retired in Minnesota PCA's; hence, they are now owned entirely by farmer-members.

These loan cooperatives obtain most of their loan funds through rediscounting their loans with the district Federal Intermediate Credit Bank. The latter obtains funds through the sale of bonds in the money markets.

The Federal Intermediate Credit Bank was a corporation wholly owned by the government until 1957. The PCA's are now acquiring ownership of this bank by outright purchase of stock and through patronage refunds distributed out of the bank's earnings. This program is now well under way.

Loan Volume Increases

The average loans outstanding in Minnesota PCA's on December 31, 1960 were more than four times greater than 10 years earlier. They increased from \$645,000 to \$2,794,000 during this period. Average total assets per association rose from \$809,000 to \$3,225,000 (table 1).

Loans rediscounted, the main liability of the PCA's, rose from \$560,000 to

\$2,568,000. These loans rediscounted represent a liability to a PCA because the association endorses the promissory notes evidencing the loans before they are accepted by the Federal Intermediate Credit Bank. This means that, should there be a loss on the loan, such loss must be absorbed by the PCA.

The difference between loans outstanding and loans rediscounted represents loans that a PCA has made out of its own funds. Most of these are either small loans or loans not eligible for rediscount with the Federal Intermediate Credit Bank. Rediscounted loans represent a higher proportion of total loans today than 10 years ago. Hence, most of the increased loan volume of PCA's has met the credit standards of the Federal Intermediate Credit Bank for rediscounting.

The average total net worth, or total capital, of the PCA's increased from \$160,000 in 1950 to \$404,000 in 1960. This is an increase of 150 percent but less than half of the rate of increase in total loans. Hence, the ratio of loans to capital increased from \$4 in loans for every \$1 in capital in 1950 to \$7 to \$1 in 1960. Many PCA's are approaching the statutory limit of the Federal Intermediate Credit Bank which cannot lend in excess of 10 times total PCA capital.

Class B stock, which active borrowers purchase to the extent of 5 percent of their loan, increased more than Class A stock or retained earnings during the past decade and is now the largest single capital item.

The PCA's have made an effort to increase their capital through the sale of non-voting class A stock to members and others. Such stock nearly tripled during the past decade but it represents a smaller proportion of total capital today than it did in 1950.

Retained earnings rose from \$74,000 in 1950 to \$129,000 in 1960, the smallest rate of increase of the three capital items. Retained earnings indicate the

extent to which an association could absorb losses on loans, in excess of the provision for loan losses, without sustaining an impairment of the members' stock. It is in this item that the PCA's have made the slowest financial progress.

A look at the income statements of the associations indicates some reasons for the relatively slow growth in retained earnings.

Profit Margin Declines

The average net earnings of Minnesota PCA's rose from \$9,000 in 1951 to \$12,000 in 1960—an increase of 33 percent (table 2). This is a modest increase in earnings when compared to the large increase in loans outstanding during the decade.

Net earnings as a percentage of gross income in the associations declined from 19 percent in 1951 to 6 percent in 1960. The main reason for this decline was a decline in the gross margin on loans; i.e., the amount the interest received on loans exceeds the interest paid for the loan funds to the Federal Intermediate Credit Bank. Interest on loans accounts for over 80 percent of the gross income of the PCA's. Interest on loans increased by almost 300 percent during the decade. However, interest paid by the PCA's to the Federal Intermediate Credit Bank, their most important operating expense, increased by almost 800 percent.

In the latter part of the decade interest rates in the money markets rose substantially. The demand for funds was pressing the available supply in the money markets and pushed interest rates up. This was due in part to the actions of the Federal Reserve System in making less funds available as a step in curbing inflation.

The Federal Intermediate Credit Bank had to pay higher interest rates on its bonds. As a result it had to charge a higher rediscount rate to the

(Continued on page 2)

associations. The interest rate charged by the PCA's to its borrowers was not increased as much as the rediscount rate. So the PCA's were caught in a cost-price squeeze much like their farmer-borrowers.

In the years 1956 and 1957 the average net earnings of Minnesota PCA's were only \$3,454 and \$1,399, respectively. During the 10-year period the 21 PCA's had net earnings totalling \$1,917,000. They paid \$261,000 to members as cash dividends on stock, \$9,000 was distributed as patronage refunds, and \$1,169,000 was retained. The remaining \$478,000 was paid in income taxes.

The latter is a substantial amount and indicates that these cooperatives did not have an undue tax advantage over their competitors. They were exempt from income taxes only in their earlier years when they had government capital.

Earnings distributed as patronage refunds are not subject to tax, but these have been small. The PCA's have chosen not to distribute a large proportion of their earnings as patronage refunds or to allocate their retained earnings to the patrons.

The PCA's are achieving a significant place in the financing of Minnesota farmers. Their loan volume has grown rapidly during the past decade, but their capital growth has been less impressive. If they are to continue to expand loans, the PCA's must find ways to increase their capital. As pointed out previously, they cannot borrow from the Federal Intermediate Credit Bank in excess of ten times their capital. Adequate capital is also important for financial strength in the event of loan losses. The PCA's must absorb the full loss on loans should they occur. Although such losses have been nominal to date, they may become heavier in the future. As agriculture has become more complex and the size of loans has increased, errors in management judgment on the part of borrowers and lenders could prove costly.

If PCA members are not prepared to contribute more capital to their associations directly, then retained earnings

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become the primary means of building capital. Therefore, it is important for the PCA's to have an adequate gross margin on loans.

In recent months, interest rates in the money markets have softened. This has enabled the Federal Intermediate Credit Bank to reduce its rate to the PCA's to 4 percent from an earlier high of 5.75 percent. Recognizing the importance of building their capital, however, the PCA's have not in turn reduced their rates to farmers as much.

On March 1, 1961, the rate of 10 PCA's to farmers was 6.5 percent; 3 were charging 6.75 percent, and 8 were charging 7 percent.

Their gross margin on loans is higher today than a year ago. This should enable them to build capital at a more rapid rate than in the past decade.

Table 1. Average balance sheet, 21 Minnesota PCA's, December 31

Assets	Thousand dollars	
	1950	1960
Loans	645	2,794
Less: Loss provisions	2	41
Net loans	643	2,753
Bonds	133	301
Cash	11	21
Other assets	22	150
Total assets	809	3,225
Liabilities		
Loans rediscounted	560	2,568
Notes payable, FICB	81	187
Other	8	66
Total liabilities	649	2,821
Net Worth		
Capital Stock		
Class A	27	78
Class B	59	197
Retained earnings	74	129
Total net worth	160	404
Total liabilities and net worth	809	3,225

Table 2. Average income and expense statement, 21 Minnesota PCA's, year ending December 31

	Thousand dollars	
	1951	1960
Income		
Interest on loans	40	174
Interest on securities	3	10
Loan service fees	5	15
Patronage refund (FICB)	0	6
Total	48	205
Expense		
Interest	16	138
Salaries	13	29
Other operating expense	7	18
Losses and provisions	3	8
Total	39	193
Net earnings	9	12

Consumer Knowledge of Beef Grades

Dale C. Dahl

"Jack Spratt could eat no fat while his wife could eat no lean."

The modern day Jack Spratt is able to satisfy his desire for lean meat by purchasing a particular "grade" of beef. The grade of beef he would choose would not be USDA Prime because Prime grade beef has a high degree of fat content. Mrs. Spratt, however, would probably want this grade in her diet.

Beef grades frequently are quoted in the following order: Prime, Choice, Good, Standard, Commercial, Utility, Cutter, and Canner. It is easy to infer from this ordering that Prime grade beef is "best," Choice is "second best," Good is "third best," etc. *But it is fallacious to make such an inference.*

Jack Spratt would not agree that Prime grade beef is "best," nor would many modern day beef consumers. Instead they might argue that Standard grade beef is "best" because it has a lower fat content than Prime. These people would not be incorrect, because *grades do not tell the consumer what is best.* It is the consumer who decides what is best for himself. Grades merely provide a means by which the consumer can make intelligent choices based on his own preference scale of "best" to "worst."

Consumer preferences for meat vary between individuals by geographic areas, income class, urbanization, religion, and by national origin. Preferences also vary by the "use" that is made of the meat purchased.

The Purpose of Grading

Grading is a method of classification. Beef is classified into categories or grades in which the physical features of the meat are similar.

The basic criteria used to classify beef include: (1) age of the animal, (2) physical amount and texture of the meat tissue present, and (3) the "marbling" of fat within the meat.

Meat from younger animals that is lightly textured with ample marbling is often graded Prime. Cutter and Canner grades, on the other extreme, are from older animals with heavily textured meat and little marbling.

Prime grade meat, due to the characteristics associated with it, is tender,

juicy, and flavorful to many beef eaters. It is used primarily by hotels and restaurants. Canner and Cutter grades of beef are used by food processors to prepare canned meat products.

Grades help producers and subsequent handlers direct the flow of beef with varying characteristics to those markets where the "use" value and price is the highest. This reduces marketing costs by eliminating expensive and time-consuming inspection by lot and "higglings" over price.

Grades also serve as a mechanism by which consumer choices can be quickly and accurately reflected to the producer by a change in price. Should hotels and restaurants want more Prime grade beef, this is reflected to the producer by an increased price offered for this grade. In this way grades tend to make prices more meaningful and "efficient" in reflecting changes in consumer demand.

Grading also serves as a means by which consumers can make intelligent choices in purchasing beef.

Grading is part of the language of marketing. It allows the consumer and producer to communicate with one another through the complex marketing system that separates them. The overall purpose of grading is to facilitate this communication in both directions.

But to communicate effectively, the language used must be understood by both parties.

Consumer Knowledge

Do consumers know what the federal grades for beef are? And do they use grades in selecting the beef they purchase?

The Departments of Animal Husbandry and Agricultural Economics surveyed people attending the Minnesota State Fair in 1960 to find answers to these questions. Over 5,700 people visiting the Meat Booth filled out questionnaires designed to test consumer knowledge of beef grades.

Over one-half of the respondents lived in the Twin City metropolitan area and about 30 percent of the group came from farms or small towns of less than 5,000 population.

All respondents were asked: "Do you usually buy your beef—

	Percent
Prepackaged at a self-service market?	36.5
Cut and wrapped to order by a butcher?	32.9
In wholesale cuts, cut and wrapped at a locker plant?	13.6
Butcher and process your own?"	16.9

The response to this question is indicated in percentage terms in the preceding column.

Self-service market purchasing was most predominant in larger cities, but city residents also availed themselves of butcher service to a large extent. The rather high incidence of people using the services of a butcher may mark an increased trend of self-service markets in providing butcher service to their customers.

To test the extent of consumer knowledge of beef grades, the following five USDA grade names were listed: Standard, Choice, Utility, Good, and Prime. Mixed with this list of federal grades were the following terms: quality, economy, extra choice, grade A, and fancy. The respondents were asked to identify which of these ten terms were used in federal grades for beef.

Only one in fifty correctly identified all five terms as those used in federal grading. Most of the respondents identified only one term correctly, but nearly one-eighth of the group failed to identify any of the terms correctly.

Choice was recognized as a grade by nearly three-fourths of the respondents. About 45 percent recognized Prime as a federal grade and 30 percent identified Good. Less than one-fourth checked Utility and only 12 in 100 believed that Standard was a USDA grade. The low incidence for Standard being identified as a grade may be due to the rather recent inclusion of it in the grading system as of 1956.

Choice and Good were identified relatively more frequently in larger cities, and Choice was known more to those who made beef purchases in self-service markets. But there was no relationship between where people lived or where they bought their beef and the number correctly identified.

Those with higher incomes did identify more grades correctly than those from lower income groups.

It may be concluded that this group of consumers exhibited an important lack of information concerning what the federal beef grades are except for their ability to identify Choice as a USDA grade. In general these consumers looked upon beef grades as Choice and "all other."

Since beef grades are generally unknown to these consumers, **what are the choice factors that they use in selecting their beef?** The following list was provided from which the respondents were asked to select the *single* most important factor they consider in selecting the beef they purchase: price, color, recommendation of butcher, de-

gree of fat, bone content, grade, reputation of store, and marbling.

One-third of those responding used grades as the most important choice factor, one-fifth checked degree of fat, and one-eighth thought marbling was of primary importance.

Those using grades as a purchasing criteria correctly identified proportionately more federal grades than those using other choice factors (except marbling), but 12 percent of this group did not identify any of the federal grades and 30 percent could identify only one grade, usually Choice.

On the other hand, those using marbling as a selection factor correctly identified more grades than those using grades as a criteria. These people were generally in higher income categories than other respondents.

Those considering degree of fat important in beef buying were predominantly from the lower income groups.

In general those using color, price, bone content, and degree of fat as choice criteria were from the lower income brackets while those using the other criteria were from higher income classes.

Conclusion

The people responding to this survey exhibited a serious lack of knowledge concerning federal beef grades. This may be explained in part by the fact that only half of all beef slaughtered in the U.S. is federally graded.

In addition to (or instead of) federal grades, many meat processors use their own "grades" or brand names on beef products of varying characteristics. Many of the brand name "grades," however, overlap the federal grades and provide a source for consumer confusion.

Retailers commonly provide separate brand names at their level of the marketing system to further compound the list of terms used to describe characteristics that the consumer desires in the beef he buys. It is not surprising that the consumer fails to recognize the terms used in federal grades for beef.

If federal grades for beef are to be utilized by consumers in registering their preferences through the marketing system, it is important for consumers as well as producers, to learn the language of grading.

So long as the language of federal grades is unknown to the consumer he must rely on retailers and wholesalers to translate his desires for him into the language of grading. Much of the flavor, however, may be lost in the translation.

THE OUTLOOK CORNER

Future Changes in Beef Grades

The beef-grading system discussed in the article "Consumer Knowledge of Beef Grades" had its beginnings in 1926.

Growth in the use of federal grades has been gradual since then, except for two periods of price control during World War II and the Korean episode when beef grading was compulsory. Today about half of the total slaughter of beef is federally graded.

This means that about two-thirds of the higher grade fresh beef sold to hotels, restaurants, and customers in retail stores has been federally graded. Most of the lower quality beef used for processed meats is not graded.

As the grading system is presently set up, most of the younger steer and heifer beef would fall into Prime, Choice, Good, and Standard grades. Most of the older cow beef would fall in the Commercial, Utility, Cutter, and Canner grades.

If all the beef had been federally graded in 1958, the distribution among the different grades would have been about as follows:

Prime	4 percent
Choice	34 percent
Good	26 percent
Standard and Commercial	15 percent
Utility	11 percent
Cutter and Canner	10 percent

Grade standards are occasionally changed to meet the changing longer-time needs of the market. A new Good grade was added in 1951, and a Standard in 1956. Each was a split-off of a segment that was in the old Commercial grade before 1951.

Again it appears that the demands of the marketplace may require some more changes in present beef grade standards. Improvements are needed if grades are to provide the most effective language in the trade for transmitting the preferences of consumers and the needs of retailers back through the complex marketing system to the producers.

Important variable factors in beef carcasses that affect value are: (1) The

quality of the lean meat—which predicts the expected eating satisfaction; and (2) the yield of lean meat—the proportion of the carcass weight which can be sold as trimmed retail cuts.

Present standards attempt to measure both factors within the same grade; therefore, a grade sometimes represents a compromise. A carcass showing evidence of Prime quality and Good grade conformation (the only factor in the present system which relates to yield) might be graded Choice.

Within the same grade, carcasses can vary as much as \$150 in retail value because of differences in yield of high value retail cuts. A \$50-difference is not unusual.

USDA technicians have learned in their studies of more than 1,000 carcasses that these differences in yield can be predicted quite accurately by using only four factors:

1. Thickness of fat over the rib eye.
2. Size of the rib eye muscle.
3. Amount of kidney and pelvic fat.
4. Carcass weight.

These studies indicate that it would be possible to set up a "dual" grading system providing two separate identifications affecting value—a quality grade and a yield grade.

Present grade names could be used for the quality grades. Conformation

would be considered along with the other factors listed above in determining a yield grade. Yield grades would be indicated by numbers. No. 1 would represent the highest yield and No. 10 the lowest.

On the basis of 1959-60 prices, differences in value between adjacent yield grades of Choice quality would be \$2.87 per 100 lbs. at the retail level, equivalent to about \$1.40 at the live animal level. Among Choice quality animals the value difference between Choice No. 3 and Choice No. 7 would have been \$5.60 per 100 lbs. liveweight. That would be a \$60-value difference on 1,100-pound steers.

The two grades would be determined separately and independently of each other. This would permit grade standards to sort out beef carcasses and live animals much more precisely according to the important value-determining factors—both quality and cutting yield—at the same time.

Under dual grading, retailers could order the yield and quality grades they want. If carcasses of the particular yield grade were not available they could order a substitute lower yield grade, within the same quality designation, at a proper price differential reflecting actual cutting differences between the two yield grades.

Dual grading would provide a more accurate language for price quotations and for conducting trading activities. It would help the marketplace to provide more effective incentives for ranchers and feeders to produce beef animals yielding a higher proportion of lean meat that consumers want, at the several different levels of beef quality they find acceptable.

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