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MINNESOTA farm business NOTES



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MEAT RETAILING IN MINNESOTA

F. Ghahraman and P. M. Raup

A major part of Minnesota's agriculture is devoted to the production of animals and poultry for meat. For the past quarter century the sale of livestock for meat has accounted for 40 percent or more of the yearly receipts from cash sales of Minnesota farm products. This source of income is the largest single source of farmers' cash receipts in Minnesota and in recent years has averaged about double the dollar value of dairy product sales.

With meat and meat products so important to Minnesota farmers, it is pertinent to look at the retailing practices and costs involved in getting this meat into the hands of the final consumer.

The U. S. Department of Agriculture estimates that in recent years the farmers' share of the consumer's dollar spent on meat and meat products has averaged about 52 to 54 percent. The farmers' share is higher for beef, generally averaging from 60 to 65 percent; somewhat lower for lamb (57 percent) and still lower for retail cuts of pork (52-53 percent). When greater amounts of packaging and processing are involved, the farmer's share of the consumer's dollar generally falls. It is well below 50 percent, for example, for sausages, canned meats, and specialty meat products.

When a steer, hog, or turkey leaves the farm it is typically many miles and many services away from the consumer's table. It must be transported, sold, slaughtered, stored, and retailed. The most expensive of these functions is the one performed by the retailer. As a percentage of the consumer's meat dollar, retailing costs can vary over a wide range. In recent years they have typically taken 15 to 25 percent of each dollar spent on meat at retail.

How does the grocer or meat market operator determine what prices to charge consumers? A regional study of meat retailing in the Midwest disclosed that the most common method involves the use of **meat pricing charts or guides**.

Table 1. Principal Method of Pricing Retail Cuts of Meat, 117 Minnesota Stores, May 1953

Type of store	Meat pricing charts or guides	Using competitors prices only	Percentage of selling price (margin)	Cents per pounds markup	Percentage markup over cost	Total
	percent of stores					
Independent	23.3	25.6	15.1	17.4	18.6	100.0
Voluntary chain	47.6	4.8	23.8	14.3	9.5	100.0
Chain	40.0	30.0	20.0	10.0	.....	100.0
All types	29.0	23.0	17.0	16.0	15.0	100.0

In Minnesota, these charts were used by 29 percent of the 117 stores studied. The charts are set up to indicate the prices which the retailer should ask for each cut of meat if he is to obtain his desired gross margin. In preparing these charts standard methods of cutting and trimming are assumed and average retail prices are used to determine the relative importance of the various cuts.

Other principal methods of meat retail pricing are: (1) competitors prices, used by 23 percent of the stores; (2) margin or percentage of selling price, used by 17 percent of the stores; (3) cents-per-pound markup, used by 16 percent of the stores; and (4) percent markup over cost, used by 15 percent of the stores (table 1).

The stores that sell large volumes of meat typically use charts or guides as their principal method of pricing. Few of them use cents per pound markup, or percentage markup, or percentage markup over cost. For example, 40 percent of the stores with weekly meat sales of over \$2,500 use pricing charts and guides, whereas less than 7 percent use cents-per-pound or percentage markup over cost. Among the stores with less than \$750 of weekly sales, on the other hand, less than 30 percent use charts and guides but 21 percent use cents-per-pound markup and 14 percent use percentage markup over cost.

The stores in this study were divided into three different types: (1) "independent," (2) "voluntary chain" (often

locally owned), and (3) "chain." The chain stores and the voluntary chains most frequently base their pricing methods on charts and guides. Less than one-fourth of the independent stores used this procedure. None of the Minnesota chain stores used percentage markup over cost as their main method of pricing.

The average gross margin attempted by the 117 stores in this study was 18 percent of the value of total meat sales. In most of the cases, however, the actual gross margin is less than the attempted margin. Voluntary chain stores have a higher attempted margin than independent or chain stores. This margin is 19 percent of total sales for voluntary chains, about 18 percent for independent stores, and 17 percent for chain stores (table 2). Margins attempted for different types of meat vary from 18.7 percent for poultry to 27.5 percent for sausage meats. There was little difference in attempted margins among the large-volume and small volume stores.

All of the stores studied used more than one source of meat supply. The most common method is to buy from peddler trucks operated by meat wholesalers or owned outright by packing plants. More than 75 percent of the stores use this method, although not necessarily as their main method.

Next in importance is the placing of orders with traveling sales representatives of packing plants. This is used by

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MINNESOTA'S WATER PERMIT SYSTEM

MINNESOTA farm business

NOTES

F. Ghahraman, G. Meyer, and P. M. Raup

Although Minnesota is the land of 10,000 lakes, its water supplies are not unlimited and their use is subject to certain controls. One reason for these controls is the rapidly increasing importance of water in recent decades. The people of Minnesota used an estimated 424 million gallons of water per day in 1950. By 1975 this average daily rate of use is expected to increase to 626 million gallons, or approximately 50 percent above the 1950 level.

For the past 20 years Minnesota law has required a permit for the use of water outside municipalities. This system originated in 1937 when the legislature authorized the Commissioner of Conservation to guide and regulate the uses of water through the issuance of permits.

The general policy under which this system operates is set forth in Minnesota Statutes, Chapter 105.38, in these words: ". . . subject to existing rights all waters in streams and lakes wholly within the state and such portions of all boundary streams and lakes as lie within the state, which are capable of substantial beneficial use, shall be public water, and shall be subject to the control of the state . . ."

The exercise of control rests with the Division of Waters of the Department of Conservation. The numerous duties and responsibilities of the Division of Waters include the review of proposals for public drainage systems, flood control, harbor and dam construction and maintenance, as well as the issuance of permits for water use.

The law requiring permits is contained in Minnesota Statutes, Chapter 105.41 according to which it is unlawful to appropriate or use waters of the state, whether surface or underground, without previously obtaining the written permission of the Commissioner of Conservation. This does not apply, however to the use of water for: (1) domestic purposes serving at any time less than 25 persons, (2) any purpose originating within the geographical limits of any municipality and (3) any beneficial uses and rights in existence on July 1, 1937.

The Division of Waters has interpreted the exception for domestic purposes to include irrigation of five acres or less. Anyone planning to irrigate more than five acres, and to appropriate water for that purpose from a lake, river, or well, is first required to obtain a written permit from the Commis-

sioner of Conservation through the Division of Waters. If he fails to obtain a permit and irrigates without one, he is subject to prosecution for the commitment of a gross misdemeanor.

The procedure for obtaining a permit starts with the filing of an application with the Division of Waters. The application forms vary with the type of request. For example, permits may be requested to appropriate water, to work in the beds of public waters, or to cross lands or public waters.

When a permit to appropriate water is desired, the following items are requested in a notarized application:

(a) Source of the water, i.e. surface or underground, etc.

(b) The location of the point of appropriation including a map showing the source of water, area to be irrigated, etc.

(c) The use for which the applicant wishes to appropriate the water.

(d) If for irrigation, the number of acres he wishes to irrigate.

(e) The amount of water to be used, in terms of maximum hours of appropriation per day, days per month and hours per year; the capacity of the pump used, if any, in gallons per minute, and the number of million gallons and acre feet per year. The applicant is also required to indicate whether it will be continuous or seasonal pumping.

If an application is correctly filled out, in the majority of cases the applicant will receive his permit promptly. If the application is incomplete, and more information is needed, a delay of several months may result. County Agricultural Agents and business firms supplying irrigation equipment are often able to help an applicant fill out his permit application.

When the application is received by the Division of Waters it may be approved as submitted, or it may be amended to include restrictions or limitations on the amount of water that can be withdrawn. Rarely is a permit denied. In the 20 years from 1937 to July, 1957 only 5 applications to appropriate water for irrigation have been denied. These were denied because the lands to be irrigated were not riparian (adjacent) to the water source.

When the application is approved the permit as issued generally contains the following provisions: (1) The permit may be terminated at any time if it is in the best interests of the state or if the conditions are violated. (2) A re-

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quirement is set forth which states that records must be kept of the amount of water pumped each year. (3) A clear statement is made as to the maximum amount of water (in acre feet) that the permittee is allowed to use each year.

The present practice of the Division of Waters has been to fix this maximum annual amount of water at an average allotment of 6 inches of additional water per acre. For example, if 20 acres are to be irrigated, the maximum annual allotment would be 10 acre feet. In general, if an irrigator requests less than 6 inches of additional water per acre per year he will be granted the 6-inch allotment, or more than he requests.

If he asks for more than 6 inches per acre per year, his permit will be reduced to the 6-inch maximum. There is no restriction in the permit itself as to when this maximum amount of water may be taken. An irrigator may use up his allotted amount in a few days or weeks of steady pumping or by sporadic pumping throughout the season.

Game wardens in some instances serve as the enforcement arm of the Division of Waters. When the permit is sent to the applicant, he is asked to notify the local game warden before beginning to use any water. At the same time the local game warden and the area supervisor of the State Game Warden Service are notified. The Game Warden may also inspect the irrigation system after it has begun operating.

The Division of Waters does not require an irrigator to maintain a metering device on his pump to measure the amount of water he appropriates for irrigation. Metering of water is required on most permits for mining and industrial appropriation. The farmer is required to maintain pumping records, and file them each year with the Division of Waters. The pumping records include a record of the number of hours, the gallons per minute, and the total gallons pumped at each date of pumping. If pumping records are not kept and filed with the Division of Waters,

the Water Division may terminate the irrigation permit.

During the 20-year period between 1937 and July, 1957, about 3,000 water permits have been issued in Minnesota. The number issued each year has varied from less than 50 in 1937 to more than 400 in 1957. The total number of permits issued per county varies from one in Stevens to 163 in St. Louis and 470 in Hennepin. Only 571 permits, or about 19 percent of the total were for water appropriation.

The Water Division also issues permits for work in state waters, such as shoreline improvement, channel changes, dam construction, and utility and highway bridges crossing over state waters.

Of the 571 appropriation permits, 304, or 53 percent, were for irrigation, and 136 permits, or 21 percent, were for industrial uses. Two-thirds of the industrial permits were for mining uses. Although irrigation did not assume an important role in Minnesota until about 1950, still the total number of permits issued for irrigation has been more than

twice the number of those issued for industrial uses, 1937-1957.

The main reason why irrigation permits are a relatively large fraction of total permits is that Minnesota law does not authorize the Conservation Department to control water uses within the geographical limits of any municipality. Most of the industrial uses of water take place within municipalities, and therefore do not require permits from the state. The 136 permits issued for industrial use between 1937 and 1957 were for uses outside municipalities, and cover a comparatively small fraction of total industrial water uses in Minnesota.

The irrigation permits granted from 1937 to July, 1957 are not concentrated in any particular area of the state. They are rare in the northern and south-eastern counties. In southwestern Minnesota no county has more than five farmers irrigating with a permit, and in most counties there are only two or three. There are a few counties, however, in which a comparatively large number of farmers have been granted

irrigation permits. The following 8 counties have 10 or more farmers who obtained permits to irrigate at some time during the period 1937-1957:

County	Number of Permits
Sherburne	30
Hennepin	27
Ottertail	21
Clay	18
Freeborn	14
Becker	11
Stearns	11
Wright	10

In only eight other counties: Aitkin, Anoka, Grant, Meeker, Mower, Norman, Polk, and Pope, had more than five permits for irrigation been obtained prior to July, 1957. On the other hand, there are 37 counties in which no irrigation permits have been granted, or only a single permit. The majority of these permits have been obtained since 1950.

With the increasing importance of water in the maintenance of high levels of agricultural output, it can be anticipated that the number of applications for irrigation permits will continue to increase.

MEAT RETAILING—

(Continued from page 1)

61 percent of the stores. One-third of the stores ordered some meat by telephone, but often only in emergencies. Other sources used include buying from packer-owned branch houses (14 percent of the stores), from packing house coolers (12 percent), and independent wholesale houses (8 percent). None of

the chain stores and only 2 percent of the independent stores did any of their own slaughtering (table 3).

Daily Variations in Sales

Uneven distribution of sales by days of the week is one of the characteristics of the meat retailing business. The stores in this study report that 53 percent of their total weekly dollar volume of meat sales occurs on Friday and Sat-

urday. Almost one-third of weekly sales are made on Saturday alone. The remaining 47 percent is about evenly distributed during Monday through Thursday, allowing 2 percent for Sunday. Chain stores have a higher proportion (62 percent) of their sales on Friday and Saturday than either independent or voluntary chains (52 percent).

There is a tendency for the big-volume stores to have a higher proportion of their total sales on Friday and Saturday. This percentage for stores with less than \$750 weekly sales is about 50 percent while for stores with weekly sales of more than \$2,500 it is 56 percent.

The uneven daily distribution of sales during the week increases the cost of meat retailing, which is about 20 cents of the consumer's dollar spent on meat. With labor cost about two-thirds of total meat retailing cost, this means that some 13 cents of the consumers meat dollar is used for the cost of retail labor alone. Since over half of the weekly volume of meat handled is sold on Friday and Saturday, productivity of labor during the rest of the week decreases considerably.

Consumers are the sole cause of this uneven distribution of sales, and they pay for it. As long as half or more of the retail sales of meat are made in two days of the week, it is difficult to achieve the greater efficiency that alone can reduce the marketing margin.

Table 2. Average Gross Margins Attempted for Various Meats, 117 Minnesota Stores, May 1953

Type of store	Beef	Pork	Veal	Sausage meats				Poultry	Fish	Average for meat dept.
				Lamb	Variety	Fish	Average for meat dept.			
percent margin attempted										
Independent	20.9	20.6	20.0	21.1	27.0	22.8	18.4	21.5	17.9	
Voluntary chain	22.0	21.1	21.2	22.1	28.4	23.3	19.4	23.0	19.1	
Chain	19.7	19.8	23.0	21.3	29.9	27.4	17.8	24.6	17.1	
All types	21.0	20.6	21.3	21.3	27.5	23.4	18.7	22.4	18.1	

Table 3. Sources of Meat Supply, 117 Minnesota Stores, May 1953

Type of store	Source of supply						
	Peddler or packer truck	Meat salesman	Order by telephone	Packer owned branch house	Packing house coolers	Independent wholesale house	Own slaughter
percent of stores using each method*							
Independent	72.1	61.6	36.0	12.8	11.6	3.6	2.3
Voluntary chain	76.2	66.7	33.3	0.0	4.8	9.5	0.0
Chain	100.0	40.0	10.0	50.0	30.0	50.0	0.0
All types	75.2	60.7	33.3	13.7	12.0	8.5	1.7

* Percentages add to more than 100 because all stores draw upon more than one source of supply.

Minnesota Farm Prices April and May 1958

Prepared by Larry Denison

Average Farm Prices for Minnesota April 1958, May 1958, 1957, 1956*

	April 1958	May 1958	May 1957	May 1956
Wheat	\$ 2.08	\$ 2.08	\$ 2.01	\$ 2.12
Corn .....	.93	1.03	1.10	1.32
Oats .....	.55	.54	.64	.56
Barley .....	.91	.93	.91	.95
Rye	1.02	1.05	.97	.98
Flax	2.70	2.62	2.84	3.61
Potatoes	1.98	1.32	.39	2.45
Hay	13.50	13.80	15.60	16.20
Soybeans†	2.08	2.05	2.12	2.96
Hogs	20.20	21.20	17.20	15.80
Cattle	21.90	22.90	17.80	15.40
Calves	25.50	29.00	20.00	19.30
Sheep-lambs	19.41	19.19	19.26	19.68
Chickens .....	.148	.149	.103	.163
Eggs .....	.300	.290	.220	.330
Butterfat .....	.62	.62	.63	.63
Milk	2.95	2.90	3.10	3.10
Wool† .....	.33	.29	.51	.40

* Average prices as reported by the USDA.

† Not included in Minnesota farm price indexes.

Prices received by Minnesota farmers for livestock continued to increase in May and reached their highest level since June 1952. Increases in livestock prices were sufficient to more than offset a decline in crop prices so that the all commodities index showed a 2.5 percent increase in May. Most of the decline in the crop price index resulted from a drop in potato prices from \$1.98 per bushel in April to \$1.32 per bushel in May.

Comparison of April and May Prices

Commodity class	Average May prices as a percentage of average April prices
Crops	95.7
Livestock	105.4
Livestock products	99.0
All commodities	102.5

Indexes for Minnesota Agriculture*

	Average May 1935-39	May 1958	May 1957	May 1956
U. S. farm price index	100	248.1	228.4	227.4
Minnesota farm price index	100	236.0	207.6	212.3
Minnesota crop price index	100	188.1	185.8	215.9
Minnesota livestock price index	100	303.6	237.2	213.8
Minnesota livestock products price index	100	199.3	191.8	210.1
Purchasing power of farm products				
United States	100	102.0	97.1	100.0
Minnesota	100	97.0	88.2	93.3
U. S. hog-corn ratio	13.5	18.9	14.0	11.2
Minnesota hog-corn ratio	15.9	20.6	15.5	12.0
Minnesota beef-corn ratio	14.0	22.2	16.2	11.7
Minnesota egg-grain ratio	20.7	11.8	8.7	12.2
Minnesota butterfat-farm-grain ratio	40.4	34.7	32.1	32.2

* Minnesota index weights are the average of sales of the five corresponding months of 1935-39. U. S. index weights are the average sales for 60 months of 1935-39.

The Outlook Corner — LAND PRICES

Land prices have continued to rise. In Minnesota they have gone up about one-third in the past five years. (See table). These prices have been calculated from estimates made by real estate dealers, farm loan agents, bankers, and others.

Will this trend continue? It is hard to tell, but a look at some of the possible reasons for the strong market of past years will give some ideas.

Average Price per Acre for Minnesota Farm Land

Area	1952	1954	1956	1957
Southeast	\$131	\$139	\$156	\$165
Southwest	175	187	214	230
West Central	96	99	107	122
East Central	58	66	70	77
Northwest	68	72	76	86
Northeast	42	40	42	49
State	107	113	126	138

Land prices have been rising more or less steadily since the mid-30's. This may lead some people to subconsciously expect this trend to continue.

Some forces pushing land prices upward in recent years are more tangible than this.

Farmers buying land to enlarge their farms have been one of the strongest factors. Thirty percent of the sales in the last two years have been to farmers for expansion. More than half of the sales in the northwestern counties have been "expansion" sales.

Investor buyers also have helped to hold up the land market. One sale in six in the last four years has been to investor buyers. They have been most important in the southwest and west central counties.

Improved roads and schools, the spread of electric lines, drainage, improved water systems, and soil conservation improvements have raised the value of farms. Some of these changes have increased the earning power of the land. Others have helped to make the farm a more desirable place to live.

Improved farm management and farming practices have increased earnings possibilities. It is possible that some of these earnings have been capitalized into the value of the land. It has helped the better farmers to bid for land in their neighborhood.

These forces have been "positive," that is, they have increased the demand for land. Some other factors have reduced the amount of land offered for sale; this also tends to raise prices.

The tax liability when farms are sold may have reduced the number on the market and helped to raise prices. Many farmers who retire now bought when prices were low. Rather than sell and pay a high tax, they hold the land.

The "Soil Bank" may also have held some farms off the market the last two years. Farmers have been able to retire on the farm rather than sell out. The "Soil Bank" may also have made the farms more attractive to investors.

The higher interest rates of the last couple of years would normally have weakened prices. A shift to more sales under land contracts may have offset this effect. More than one-third of land sales in 1957 were under land contracts.

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