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MINNESOTA farm business NOTES



Agricultural Cooperation

O. B. Jesness

Minnesota has more farmers' cooperatives than any other state and ranks high among the states in membership and volume of business. Studies of such enterprises consequently play an important part in the program of the Department of Agricultural Economics. This review presents highlights of the work of the Department in this field.

The earliest activities of what is now the Institute of Agriculture, University of Minnesota, relating to farmers' cooperatives, were mainly of an Extension nature even though they preceded the establishment of the present Agricultural Extension Service.

For example, the late Professor T. L. Haecker, former head of the Department of Dairy Husbandry, took an active part in stimulating interest among Minnesota farmers in organizing cooperative creameries in the 1890's, when such enterprises were relatively new. Farmers' Institutes, a forerunner of the Agricultural Extension Service, gave attention to agricultural cooperation. One of the Farmers' Institute annuals (No. 26 for 1913) reviewed cooperation and cooperative developments.

The Division (now Department) of Agricultural Economics was established in 1912. An act of the legislature in 1913 requested the University to assemble information on farmers' cooperatives. This provided stimulus for a survey of farmers' cooperatives by means of mailed schedules for the year 1913.

Results were published in 1914 in Experiment Station Bulletin 146, *Statistics of Cooperation Among Farmers in Minnesota*. A total of 2,013 associations were reported. Not all of these were engaged in marketing or purchasing as some 600 telephone and 154 mutual fire insurance associations were included. The survey reported 614 co-

This is the second of two issues commemorating the Minnesota Centennial and honoring three recent retirees of the Department of Agricultural Economics. Each of the former professors has agreed to review the work of the Department in one of his fields of interest. Dr. George A. Pond reviewed the history of this publication in the July issue. This month Dr. O. B. Jesness and Dr. Rex W. Cox discuss the research work of the Department in cooperatives, prices, marketing, and consumption.

operative creameries, 270 farmers' elevators, and 115 livestock shipping associations. The estimated volume of business for 1913 was over \$60 million.

A series of station bulletins relating to cooperatives were published between 1915 and 1920. These drew on the initial survey or on similar follow-up mail surveys. Two bulletins (numbers 152 and 164) dealt with farmers' elevators. One (166) centered on cooperative creameries and another (156) on livestock shipping associations. One (167) discussed cooperative buying clubs and another (171), cooperative stores. A follow-up of the first general survey, presenting statistics of cooperation from 1913 to 1917, was published as bulletin 184 in 1919.

Publications after 1920 reflected increasing attention to analyses of organizational and operating problems. Bulletins appearing between 1921 and 1927 included one (195) relating to cooperative potato marketing, one (201) to livestock shipping associations, two (221 and 251) to farmers' elevators,

one (231) to creameries, and one (233) to eggs and poultry.

One bulletin (211), published in 1924, discusses cooperative central marketing organizations. It reflects the widespread interest of the early 1920's in the extension of cooperatives into central markets and in organizing cooperatives to gain supply control, advocated by Aaron Sapiro and his followers. This rather comprehensive publication undertook an evaluation of the possibilities and problems of large-scale cooperatives.

Around 1920, there was considerable development of cooperatives beyond the local stage in Minnesota. The Twin City Milk Producers Association was started in 1916 and the Central Livestock Association in 1920. Land O' Lakes Creameries had its start in the organization of district associations to improve quality and standardization, consolidate shipments, and purchase creamery supplies. The central organization was incorporated in 1921 as the Minnesota Cooperative Creameries Association, and changed its name to Land O' Lakes Creameries when it undertook active marketing operations in 1924.

There also was expanding interest in terminal grain marketing during this period. Two large-scale potato marketing associations and a cooperative egg and poultry association were undertaken but encountered difficulties and were discontinued.

The general survey of cooperatives was continued and a bulletin (202) in 1922 reviewed the period from 1917 to 1922. This bulletin reported a total of 2,060 selling and 210 buying associations. The leading numbers were 655 livestock shipping associations, 645 cooperative creameries, and 483 farmers' elevators. Cooperative oil associations were just starting at that time so only 6 were listed.

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The shift in research emphasis from gathering numerical data to study and analysis of problems of organization, operation, management, and financing which became apparent about 1920 has continued and broadened. Increasing reliance has been placed on data obtained by personal visits and interviews in the field and from annual and audit reports. A study of Land O' Lakes Creameries was published as Station Bulletin 244 in 1928. An analysis of local elevator organization (251) appeared in 1929 and a later study (407) was published in 1951. A creamery business analysis (322) was followed by a detailed study of a sample of 175 representative cooperative creameries (333).

Follow-up studies have assembled progress reports for these same organizations over the years, supplying an excellent review of trends and developments. A study (331) of the Twin City milk market gave considerable attention to the organization and operations of the Twin City Milk Producers Association.

Prior to the consolidation of the work in farm management with that in other lines of agricultural economics in 1928, the *Minnesota Farm Business Notes* (see issue for July, 1958) concentrated on the results of farm management research. The reorganization led to broadening the scope of this publication. Since then upwards of 40 articles have dealt with farmers' cooperatives. The topics and approach of these articles illustrate the increasing attention which has been given to internal and operating problems in the Department's research program relating to cooperatives.

One reason for less dependence on annual reports assembled from cooperatives by mail was that the U.S. Department of Agriculture undertook a similar survey on a national basis about the same time this was developed in Minnesota. To have continued the Minnesota survey would have meant duplicating effort and reporting. Moreover, the data obtained from mailed schedules necessarily are limited and incomplete. Field interviews provide much greater detail.

The Cooperative Division of the Farm Credit Administration (now the Farmer Cooperative Service in the U.S. Department of Agriculture) made a census of farmers' cooperatives in the United States for 1936. State agencies in various states, including this University, cooperated in the field

work. This supplied a more complete picture of the cooperative movement than previously available.

The Department of Agricultural Economics made a comparable but even more comprehensive survey of cooperatives in Minnesota for 1950. Bulletin 412, *Statistics of Farmers' Cooperatives in Minnesota, 1950*, presents a wealth of statistical detail regarding cooperatives by lines of activities and by counties. It gives information on organization, incorporation, membership, patronage, business volume, management, financing, distribution of returns, and other features. This is the most intensive and exhaustive study of its kind. It, together with the one for 1936, provides many useful benchmarks from which to measure trends and changes in the future.

The 1950 study indicates fewer rather than more farmers' cooperatives in some lines. This does not signify a decrease in the importance of farmers' cooperatives but rather adaptation to changing conditions and needs. The volume of business, membership, and patronage show growth.

There were a total of 1,341 associations, of which 1,008 were primarily in marketing, 300 primarily in purchasing, and 33 in related services. The total volume of business of these organizations exceeded \$1¼ billion. After allowing for duplications and out-of-state business, a net volume of \$640 million of products was handled for Minnesota farmers. This net total is 10 times the estimate for 1913.

Data from this comprehensive census provided material for specialized studies. Thus, a subsequent bulletin on dairy cooperatives (420) and one on farm supply cooperatives (421) drew heavily on this source.

The research program of the Department adapts to changing conditions and needs. The work relating to cooperation is designed to find answers to actual problems, so practical rather than theoretical and philosophical aspects are emphasized.

In the initial stages, interest centered largely in the problems of organizing local cooperatives. Progress of the movement was measured in terms of numbers. Improved transportation, changing marketing methods and outlets, and other factors have altered the picture materially.

Cooperative creameries attained their peak in numbers about 50 years ago. At that time patrons brought their milk or cream to the nearby creameries with horse-drawn vehicles. Now creameries assemble raw milk by truck, enlarging

decidedly the area from which products may be drawn. The number of plants is decreasing while volume per plant is increasing.

The improvement in highways and development of motor trucks have made central livestock markets more directly accessible to farmers. Many shipping associations formed largely for assembly and loading of stock have discontinued operations. The business of farmers' elevators has changed with the shift of Minnesota agriculture from cash grain farming to livestock farming, replacing the reduction in cash grain by expansion in sidelines such as farm supplies and services.

The increased importance of purchased farm production supplies has invited some research attention to cooperative purchasing, particularly in the handling of such requirements as automotive supplies, feeds, and fertilizers. The organization of wholesale cooperatives to serve locals in the procurement of supplies has opened up additional research opportunities.

Larger volume of business with more capital for facilities and operation has led to added attention to problems of capitalization, financing, credit, and management. Bulletin 430, relating to accounts receivable credit in supply cooperatives, is an illustration.

Agricultural cooperation also is included in the teaching program of the Department. An early seminar led to papers on marketing in Studies in the Social Sciences, No. 4, published in 1915. Two of the papers dealt with cooperative marketing. Courses relating to agricultural cooperation and to the management of cooperatives are given regularly. Cooperatives are considered as part of the market organization in several commodity marketing courses. A number of candidates for advanced degrees have studied cooperatives for their thesis projects.

The Department likewise engages in considerable public service in answering correspondence, in supplying information to farmers and other visitors to its offices, and in participating in conferences and meetings. The major share of the off-campus work naturally is handled by the Agricultural Extension Service.

The aim throughout has been not to view cooperatives as a special case but rather to deal with them objectively as a form of business enterprise established to serve farmers. Many of the results of research studies of operations and problems of cooperatives apply to other concerns in its same or related lines.

Prices, Marketing, and Consumption

R. W. Cox

This review of the work of the Department of Agricultural Economics in the closely related areas of prices, marketing, and consumption aims to point out the more important phases of research in each of these areas.

Prices

The earliest research in the area of prices began during the 1920's. In this period a marked interest developed among agricultural economists and others to use some of the newer techniques in attempting to forecast prices of agricultural products.

One of the earliest studies along this line was reported in Minnesota Bulletin No. 10, 1924, *Factors Determining Potato Prices in Minneapolis and St. Paul*. A similar bulletin was issued a few years later. With the exception of one other study, *Factors Affecting Corn Prices*, research in prices has been confined mainly to other phases.

One of the phases which has received special emphasis is development of a series of indexes of Minnesota farm prices, marketings, and income. The need for such series was evidenced by a demand for a historical account which would show the trends of prices, marketings, and income and which could be used for the comparison of farm prices with other price series.

The first compilation for Minnesota included the years 1910-1927 and was among the first of a comprehensive nature prepared by any state. The work on indexes has continued through the years. From time to time changes have been made in the commodities included and in the base period—that is, the years used as a basis for comparison.

For example, during the late 1930's the index series were revised, the base period was changed from 1910-14 to

1935-39. Also, indexes were prepared for the various types-of-farming areas in Minnesota. At the present time, the index of prices received is being revised. The revision involves changing the base period to 1947-49 and adding commodities which recently have become relatively important in the Minnesota agricultural economy. An index of prices paid by Minnesota farmers is now being developed and will soon be published with other price information relating to Minnesota agriculture.

Current monthly indexes of prices received for Minnesota farm products are published in *Minnesota Farm Business Notes*. This publication also includes articles on future prospects or outlook material for various commodities prepared by members of the staff in Agricultural Economics. The reader, therefore, has access not only to past and current information, but also to probable future trends.

The Department also has maintained records of Minnesota cash farm income and expenses on an annual basis. From time to time, a balance sheet of Minnesota agriculture has been prepared which provides not only information on the assets, liabilities, and net worth of agriculture, but also on the sources and use of income.

Recently, the Department of Agricultural Economics, in cooperation with the Minnesota and U.S. Departments of Agriculture completed a comprehensive survey of Minnesota farmers to obtain a detailed account of all production and living expenses. This, when published, will provide more adequate information on Minnesota farmers' economic status than has before been available.

Studies of the changes in prices and marketings of various commodities during the season also have been made. This has resulted in a compilation of seasonal indexes which show the average seasonal variation over a period of years.

Another phase of price research which was started a number of years ago and which has continued to the present time is the study of purebred cattle prices. Several publications have been issued which present the past, current, and probable future trends of these prices.

A recent study which has important implications for producers, distributors, and consumers relates to quantity discount pricing of fluid milk sold at

retail. One of the objectives was to determine the response of consumers to specified price discounts applied to purchase of milk of varying volumes.

Marketing margins are of concern to many people. The Department has conducted a number of studies on this subject. One of these related to the determination of the Minnesota farmers' share of the consumer's dollar spent for food. Another involved the measurement of costs and margins in marketing farm products through public eating places.

Other research work in the area of prices includes studies in the pricing of milk, butter, and nonfat milk powder and an evaluation of the present methods of pricing at the local and central markets. Many studies of demand and supply relationships, including estimation of price and income elasticities, have been made.

Some projects cannot be classified as strictly within either the price or marketing areas. The results of such studies, however, have implications which apply to both areas. This is well illustrated by a recent study relating to the economic analysis of the impact of government program on the potato industry of the United States. This type of analysis may be considered a forerunner of similar analyses dealing with other commodities whose prices are supported by government.

Marketing

A significant proportion of the research work in marketing has dealt with cooperative marketing. The importance of cooperative institutions and the changing nature of the research work relating to them have been adequately portrayed in the article by Dr. Jesness.

As has been indicated, more and more attention in recent years has been focused on efficient management and operation of marketing agencies. The reason is obvious. With rising costs and more intense competition, these factors, probably more than any others, determine the success or failure of a marketing institution—cooperative or otherwise.

Illustrations of work along this line include analyses of the costs of operation of creameries, fluid milk bottling plants, and other dairy plants. The methods and efficiency of house-to-

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Minnesota Farm Prices June and July 1958

Prepared by Larry Denison

Average Farm Prices for Minnesota
June 1958, July 1958, 1957, 1956*

	June 1958	July 1958	July 1957	July 1956
Wheat	\$ 2.11	\$ 2.07	\$ 2.05	\$ 2.15
Corn	1.07	1.05	1.11	1.35
Oats .....	.52	.52	.59	.61
Barley .....	.92	.91	.83	.95
Rye	1.00	.93	1.03	1.05
Flax	2.62	2.86	2.75	3.03
Potatoes	1.32‡	1.32	1.35	.....
Hay	14.20	13.80	14.00	15.00
Soybeans†	2.04	2.03	2.16	2.39
Hogs	21.20	21.20	18.90	14.50
Cattle	23.10	22.20	19.00	15.60
Calves	26.20	26.20	20.30	18.00
Sheep-lambs	20.11	20.24	19.03	17.10
Chickens .....	.153	.141	.100	.134
Eggs .....	.280	.300	.260	.310
Butterfat .....	.62	.62	.63	.63
Milk	2.90	2.95	3.15	3.20
Wool† .....	.30	.32	.52	.41

* Average prices as reported by the USDA.

† Not included in Minnesota farm price indexes.

‡ Revised.

Average prices received by Minnesota farmers for all commodities declined slightly from June to July. Despite a slight decline in livestock prices, they continued to maintain the all commodities index above levels for comparable months in recent years. The livestock price index for July 1958 is 15 percent higher than in July 1957 and 44 percent higher than in July 1956.

Comparison of June and July Prices

Commodity class	Average July prices as a percentage of average June prices
Crops	98.7
Livestock	98.2
Livestock products	101.2
All commodities	99.5

Indexes for Minnesota Agriculture*

	Average July 1935-39	July 1958	July 1957	July 1956
U. S. farm price index	100	237.8	231.3	228.5
Minnesota farm price index	100	231.4	216.8	204.7
Minnesota crop price index	100	196.4	199.4	217.2
Minnesota livestock price index	100	281.0	244.0	195.5
Minnesota livestock products price index	100	202.3	200.1	207.8
Purchasing power of farm products				
United States	100	97.9	98.5	100.0
Minnesota	100	95.3	92.3	89.6
U. S. hog-corn ratio	13.5	18.1	15.7	10.6
Minnesota hog-corn ratio	15.9	20.2	17.0	10.7
Minnesota beef-corn ratio	14.0	21.1	17.1	11.6
Minnesota egg-grain ratio	20.7	12.2	10.3	11.2
Minnesota butterfat-farm-grain ratio	40.4	35.3	34.1	30.7

* Minnesota index weights are the averages of sales of five corresponding months of 1935-39. U. S. index weights are the average sales for 60 months of 1935-1939.

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house milk delivery was studied recently.

Other research relating to dairy marketing has included the study of trends in the Minnesota dairy industry, inter-market sales of milk in paper containers, and a comprehensive study of the Minnesota dry milk industry.

In the field of livestock marketing, an important place should be given to the work done on marketing cattle and hogs by carcass weight and grade. This study, the most thorough of its kind to date, points the way to improvement in methods of marketing livestock. When the recommendations based on the research work in this area are adopted, the producer of high quality products may have more assurance of a premium price for premium quality.

Other research work in livestock marketing includes studies of livestock auctions and movement of feeder livestock in and out of the state.

The Department of Agricultural Economics, in cooperation with corresponding departments in other North Central States, recently studied the regulations governing grain storage at both local and terminal locations. The purpose of this study was to get a basis for recommending changes in regulations to assure more adequate protections to both the owner of stored grain and to the public warehouse man.

Another cooperative project is a study of local and terminal grain storage facilities and the impact of changing methods of transportation on the destination of grain shipment in the North Central States. With the advent of the truck and its intensive use the picture of grain movement is changing rapidly.

Research work in egg marketing has included studies in improved technique

for marketing eggs with emphasis on an analysis of local management practices, plant operation, and buying station activities. In addition, attention has been given to the economic importance of egg quality and the loss in quality during the time the eggs move from the farm to the consumer.

The Departments of Agricultural Economics and Horticulture have cooperated in a number of projects. Included among these are studies on market outlets for Minnesota fruits, packing Minnesota fruits for market, marketing fresh sweet corn, and an analysis of the processed sweet corn industry.

The market for a large proportion of Minnesota farm products lies outside the state. Studies have been made on the distribution of sales of Minnesota products and on the export market for pork and lard.

Consumption

A number of research studies have been conducted by the Department involving a survey of Minneapolis households. In general, their purpose has been to determine the factors causing variation in rates of consumption of specified products, such as meats, lard, dairy products, and various foods made from oils.

The two most recent studies were an analysis of competition between butter and margarine and an analysis of the competition positions of blue cheese relative to other cheeses.

An extensive study is currently being completed that explores the potentialities of subsidized consumption as a measure for solving the farm surplus problem.

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