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farm business NOTES

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A Half Century of Minnesota Farm Business Notes

George A. Pond

Fifty years have passed since the first issue of *Minnesota Farm Business Notes* was published. In February 1914, it first appeared as *Farm Management Service Notes.* Now, at the half century mark, let us look backward to the origins of this publication.

Minnesota Farm Business Notes grew out of early farm management research. The first research project in agricultural economics in the state was initiated in 1902 under the leadership of Willet M. Hays and Andrew Boss. These two agronomists wished to determine the costs of producing farm products so that they might help farmers select the most profitable crop and livestock enterprises.

They enlisted farmers' cooperation in three Minnesota areas. Each farmer provided detailed records of costs and production on his farm over a period of years. Information was later obtained from other regions of the state.

Results of these studies were not published until data was assembled for several years. The first bulletin based on these studies was published in 1906. Primary emphasis was given to average costs of production.

Frank W. Peck, who was appointed head of the Cost Accounting Section, Division of Agronomy and Farm Management in 1912, was concerned about the long delay in the release of this information. To make research results more immediately available, as well as more useful to farmers and extension workers, Peck initiated a series of one-page circulars. These gave the results of various phases of cost studies—results that farmers could use directly in planning profitable utilization of resources. These circulars were brief and concise; each dealt with a specific phase of farming. The subject for the first issue was "The Average Farmer's Income in Minnesota."

Altogether 16 one-page issues, under the title *Farm Management Service Notes,* were published from February 1914 to April 1918. Farmers and extension workers were pleased with these publications. However, World War I activities in 1918 made it necessary to discontinue current research in farm management; publication of *Farm Management Service Notes* was dropped.

Postwar Changes

Some farm management research was resumed in 1919. Farm cost studies were resumed in 1920 under my direction. Since I had served under Peck prior to the war, I was interested in current use of such research results.

It was not until April 1924, however, that Boss and I resumed publication of this series. The title was then *Minnesota Farm Management Service Notes.*

This series was issued monthly on a somewhat expanded scale. Each issue contained three or more mimeographed pages and frequently carried more than one article. Extension specialists in farm management joined with the research staff to support the new series and to prepare material.

To give this publication a striking means of identification, it was put out on pink paper. This was suggested by Boss who said, "We have long been painting the farm picture in too gloomy colors—it is time we presented it in a more cheerful hue." So this publication soon acquired the popular title "The Pink Sheet."

In July 1928, work in farm management and agricultural economics was consolidated in the Division of Farm Management and Agricultural Economics (now the Department of Agricultural Economics). "The Pink Sheet" was retained for rapid release of research results. The title was changed to *Minnesota Farm Business Notes.*

In July 1938 a shift was made to four two-column printed pages. The first three pages were devoted to articles dealing with research in progress and current economic developments. The fourth page was devoted to price and outlook information. The title was shortened to *Farm Business Notes.*

The format was again changed in January 1952 to three columns per page; the old title of *Minnesota Farm Business Notes* was also restored. Starting in 1958 the last page was devoted to discussion of current topics in outlook.

Farm Management Predominates

The subject matter fields covered have changed somewhat during these 50 years. But this change has been smaller than might be expected considering the change in personnel inter-

Table 1. Distribution of articles by subject matter fields, *Minnesota Farm Business Notes*

Field	Issue number* 1-69	70-396	397-458
	percent		
Farm management	41	31	29
Marketing	16	20	19
Outlook	9	10	22
Prices	6	5	8
Agricultural policy	5	6	7
Farm finance	4	5	2
Land economics	4	5	2
Cash income of farmers	3	4	1
Farm tenancy	2	3	.....
Taxation	2	2	1
Miscellaneous	8	9	9
Total	100	100	100

* Issues numbered:
1-69 —February 1914-August 1928
70-396—September 1928-June 1958
397-458—July 1958-December 1963

Table 2. Summary of authorship, *Minnesota Farm Business Notes*, February 1914-December 1963

Authors of signed articles	No. of articles	No. of pages*
S. A. Engene	100	86
G. A. Pond	79	123
T. R. Nodland	62	39
E. F. Koller	61	62
R. W. Cox	48	45
W. C. Waite	47	62
A. A. Dowell	42	44
O. B. Jesness	39	62
Andrew Boss	27	65
W. H. Dankers	25	26
P. M. Raup	24	22
W. L. Cavert	20	27
L. F. Garey	17	24
D. C. Dvaracek	17	19
A. T. Hoverstad	16	23
G. A. Sallee	16	19
W. P. Ranney	16	18
F. W. Peck	16	12
R. P. Dahl	15	13
G. E. Toben	14	12
H. C. Pederson	13	15
J. B. McNulty	13	11
22 authors—10 or more articles each	727	829
12 authors—6-10 articles each	91	86
146 authors—1-5 articles each	299	286
Total—180 authors	1,117†	1,201

* Printed page equivalent; allocated to each author.

† Exceeds the total number of articles of 960 because of multiple authorship.

ested in them. A general classification of articles by subject matter field is given in table 1 but, of course, many articles touch several areas.

Farm management articles were the most numerous in the first 69 issues. The authors were farm management research and extension men who drew mainly upon results of their research. But the scope of the other articles indicates that the farmers and extension workers were then interested in a wide range of problems as they are now.

All staff members in the Department of Agricultural Economics were asked to contribute to the next 327 issues. The proportion of farm management articles declined somewhat. Articles in a broad range of topics, but particularly marketing, increased.

In the last 62 issues, the number of outlook articles markedly increased. This change was due largely to a shift in policy: the fourth page of each issue is to contain discussion of the outlook for agricultural commodities and resources. Emphasis on prices and agricultural policy also increased.

FARM MANAGEMENT RESEARCH IN MINNESOTA

G. A. Pond, S. A. Engene, and T. R. Nodland

Interest in farm management research began soon after the establishment of the Minnesota Agricultural Experiment Station. Research workers heard farmers asking, "How can I increase my earnings? What crops shall I grow? What are my costs?"

The first organized attempt to answer these questions was the establishment of a series of rotation experiments in 1894. These experiments were planned by two agronomists: Willet M. Hays and Andrew Boss. The experiments gave valuable information about yields for different crops and under different conditions. But research workers soon found that it was also necessary to know the costs and returns for each of these crops.

Hays and Boss then began to record information about labor and other costs on the rotation plots. However, they realized that costs based on plots of one-tenth acre each were not representative of farm conditions. In fact, they apparently considered these data to be of such little value that neither the original records nor any summaries were preserved.

These men next developed the idea of obtaining representative costs and returns from farmers. In fall 1901 they drove in a buggy to Northfield where they interviewed 45 farmers. From this group they found 15 who were located near each other and were willing to provide daily information about their crop operations. The task of assembling cost data started on these farms and on comparable groups of farms in the Marshall and Halstead areas in 1902. This type of research continued, with only two interruptions, until the end of 1953.

The study originally provided only information about crops. However, work with these farmers showed that crops were but a part of a farm unit; information was needed in regard to the entire farm.

Records of farm operations were obtained by fieldmen (students who dropped out of college for a short period) who visited the farm daily. They obtained information on such things as inventories, purchases, sales, products used in the house, crops grown, feeds used, and labor used.

The study's major objective was to find the average costs of production of major commodities in a community. The researchers believed that results would guide farmers in selecting the most profitable combinations of farm enterprises.

With this emphasis upon average costs, no summary of data for individual farms was returned to the farmer; this might cause the farmer to change his operations, and his operations would no longer be typical. For the same reason, fieldmen were instructed not to advise farmers, even when farmers asked them specifically.

No information about these studies was released until several years of data were obtained. This allowed time to average out weather conditions and their effects on costs. The first bulletin based on these studies was published in 1906, the second in 1910.

A total of 960 articles, with 1,201 printed pages or its equivalent in mimeographed material, have been published. In addition, 354 pages of price statistics and outlook discussions have been presented.

Many Authors Contributed

A total of 180 persons wrote the 960 articles. Of these, 22 contributed to more than 10 articles each. The names of these persons, the number of articles, and the pages of material contributed by each are shown in table 2.

Twelve men contributed to 6 to 10 articles each; 146 men contributed to 5 or less. Many who contributed to only a few articles were junior staff members who remained with the University for only a short time.

Minnesota Farm Business Notes has contributed to the early dissemination of research results. More complete publications have presented important details of the research results—but at a later date. The need for rapid release of information continues. Brief articles, released as the work progresses, can help to meet this need.

Introduction of the Survey

Research in Minnesota, however, was to be influenced by two other developments. The first development was started by George F. Warren of Cornell University. He utilized the survey method to obtain information from many farmers by a single interview with each.

With fewer data about each farm, Warren put less emphasis upon costs of individual enterprises. Instead, he emphasized the earnings of each farm and factors that seemed to be correlated with earnings.

Boss initiated a similar study in the Northfield area in 1913. This study was supervised by W. L. Cavert with the assistance of S. B. Cleland, L. S. Robertson, and F. A. Corniea. Study objectives were: "(1) to determine what profits, if any, farmers are making, (2) to determine the factors that influence and limit profits . . .; (3) to obtain data as a basis for definite and concrete suggestions to farmers . . ." This emphasis upon the entire farm and upon service to the farmer influenced research increasingly over the following years.

Service to the Farmer

The second development was initiated by workers in the U. S. Department of Agriculture. They started a system of records in which all data were recorded by the farmer and were mailed to a central office for tabulation. Emphasis was given to assisting the farmer as well as obtaining information for research.

Work of this type in Minnesota was initiated by Frank W. Peck in 1913. Data obtained were not adequate for publication. But the experience gained provided guidance for later work.

Classroom use of results showed that data regarding resources needed for each enterprise were more valuable than average cost data. Resource data could be used in planning improvements on a given farm.

These developments focused attention on the real problem facing farmers—what changes to make in operations and how will they affect earnings? Out of this grew substitution budgeting—a widely used method for evaluating effects of changes.

Postwar Developments

Pressures of war activities closed the cost accounting projects in 1917. Work was resumed in 1920 but with several important changes:

1. Farmers recorded all data.
2. Data for each year were published in mimeographed form shortly after the end of the year.
3. Data for each individual farmer, as well as averages, were published.
4. Help in farm planning was given to each farmer who requested it.
5. Emphasis was placed upon data for farm planning rather than upon average production costs.

With the increasing interest in the farm as a whole, a new project was started on January 1, 1928 based on research in Illinois. The project also involved records from individual farmers but not labor records. This omission greatly reduced the record keeping task for the farmer and the job of summarizing data. The cooperation of 124 farmers in six southeastern Minnesota counties was obtained.

Analysis for the Farmer

Research workers had two general objectives in initiating this project. The first was to develop a record system and method of analysis that would make records useful to the individual farmer. Correlations were run between measures of earnings and many measures of farming organization and efficiency. Out of this evolved a set of measures that have proven valuable, even though not ideal.

Results were sufficiently effective that the farmers wished to continue this work after the first 3-year period and were willing to pay part of the cost. This work is still continuing, now under the name of the Southeast Minnesota Farm Management Service.

The second objective was to provide information for farm planning and for studying various practices and methods of operation that might make farming more profitable. Several bulletins and articles were based directly upon these data. The data also contributed to other publications and were used as illustrative material for extension and resident teaching.

A similar farm management service was established in southwestern Minnesota in 1940; this also is operating at the present time.

A further extension of this farm accounting system is now under test. The feasibility of using modern high speed computers in order to provide summaries more quickly, and possibly more economically, is being evaluated.

The first research projects in farm management were directed to answering questions raised by farmers. Many problems have been difficult to answer; the tools and knowledge available to researchers are limited. The accumulation of knowledge and development of analytical methods and physical equipment are making it possible to speed progress in the solution of these problems. However, economic change is constantly raising new and difficult problems for the researcher in farm management.

RECENT PUBLICATIONS

Demand and Price Analysis of the U. S. Soybean Market. Tech. Bull. 244. James P. Houck. 80 pages.

Equilibrium Analysis of Income-Improving Adjustments on Farms in the Lake States Dairy Region, 1965. Tech. Bull. 246. 56 pages.

Interplant Milk Transportation Costs. Sta. Bull. 465. Russell G. Thompson and E. Fred Koller. 24 pages.

Income-Improving Farm Adjustments in Southeastern Minnesota. Sta. Bull. 466. W. B. Sundquist, L. M. Day, and H. R. Jensen. 28 pages.

Cost Advantages to Size of Farm in Red River Valley Farming. Sta. Bull. 469. L. C. Rixe and H. R. Jensen. 16 pages.

Agricultural Bargaining Power: Some Factors to Consider. Spec. Rept. 10. M. K. Christiansen, G. A. Donohue, D. F. Fienup, H. R. Jensen, and H. G. Routhe. 6 pages.

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the outlook corner

Soybean Price in Relation to Oil and Meal

Reynold P. Dahl

Many farmers have held their soybeans this year in anticipation of a rise in prices. Therefore, let us analyze the factors influencing soybean prices and the prospects for price increases during the remaining crop year.

When soybeans are processed they yield two joint products: soybean oil and soybean meal. A bushel of soybeans normally yields 11 pounds of oil and 48 pounds of meal. The demand and market value for soybeans are derived entirely from the demand for oil and meal.

As shown in the table the price of soybeans has increased relative to the total value of the products—oil and meal—in recent years. As a result the spread between the soybean price and the value of the products has declined to a record low. Back in 1958 the average price of soybeans was 22 cents below the value of the oil and meal equivalent of a bushel of soybeans. In February of this year the spread averaged only 1 cent.

The spread between the value of the products and the price of soybeans is a rough measure of the profitability of crushing soybeans—the crushing margin. This spread must be wide enough to cover costs of crushing soybeans. If not, crushing plants close down. This reduces the crusher's demand for soybeans and soybean prices are likely to fall.

Recent low crushing margins contributed to a reduction of 13 million bushels in the soybean crush during the first 4 months of this crop year compared to 1 year ago. Many crushing plants went to reduced schedules and some plants actually closed down.

Prices of soybeans eased off during January and February; the reduced demand for soybeans for crushing was a principal contributing factor.

Soybeans are also purchased for export. So there is an export demand for soybeans in addition to the domestic demand for crushing.

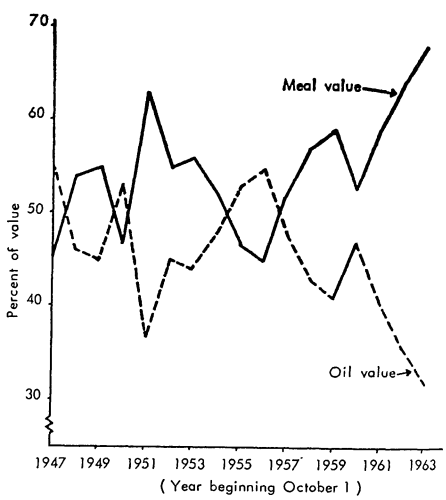
When the price of soybeans is high relative to the products—oil and meal—in the domestic market, the same is true in foreign countries which buy U. S. soybeans for crushing. If the domestic crush of soybeans is reduced because of a low crushing margin, the export demand may also weaken for the same reason.

During the decade 1947-56, soybean oil and meal each contributed about 50 percent to the value of a bushel of soybeans (see figure). However, in recent years meal has contributed a larger share toward the value of soybeans. A record was reached in January 1964 when meal made up 68 percent of the soybean value and oil 32 percent. The price of soybean oil was at a record low while the soybean meal price was at a record high during that month.

The supply of soybean oil has increased faster than the demand so prices have weakened. On the other hand, the demand for meal has increased faster than supply due to increased feeding of protein and more livestock. Therefore, prices of meal went up.

Sales of meal probably have weakened at the high prices which have prevailed early this year. Farmers have had an incentive to use more corn relative to soybean meal in feeding. In addition, they may have shifted to other protein sources. This may indicate that we are reaching a limit in the load which the soybean meal price can carry of a high soybean price.

Unless the rate of crush increases during the remainder of the year, the carryover of old crop soybeans on October 1, 1964 will probably exceed the 15 million bushels currently forecast. It appears that the seasonal peak in soybean prices has been reached for this crop year.



Percent of processed soybean value made up of oil and meal, 1947-63.

Value of oil and meal per bushel of soybeans crushed and price spread with soybeans

Year*	Value per bushel† Oil	Meal	Total	Bean price‡	Difference
			dollars		
1948	1.28	1.52	2.80	2.36	0.44
1958	1.01	1.32	2.33	2.11	0.22
1959	0.91	1.29	2.20	2.08	0.12
1960	1.24	1.42	2.66	2.55	0.11
1961	1.04	1.50	2.54	2.41	0.13
1962	0.95	1.67	2.62	2.53	0.09
January 1964	0.89	1.86	2.75	2.71	0.04
February 1964	0.88	1.78	2.66	2.65	0.01

* Beginning October 1.
† Soybean oil: crude, tank cars, f.o.b. midwest mills; soybean meal: bulk, Decatur.
‡ No. 1 yellow soybeans at Illinois points.

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