

630.1
I09r
no. 417

How Do Iowa Farmers Obtain and Use Market News ?

by J. Parry Dodds and K. R. Marvin

Department of Technical Journalism



AGRICULTURAL EXPERIMENT STATION, IOWA STATE COLLEGE

RESEARCH BULLETIN 417

NOVEMBER, 1954

AMES, IOWA

Market points farmers selling cream or whole milk and eggs paid attention to	145
Did others get cream and egg market news for farmers who sold cream, whole milk or eggs?	145
Newspapers	147
Telephone	147
Other media	147
Marketing practices of farmers selling cream or whole milk	147
Marketing practices of egg sellers	148
Changes farmers wanted in market news	148
Kind of market news reports farmers preferred	148
Suggested changes for market news	148
For more complete reports	148
For more trend information	149
On market news scheduling	149
On current market news presentation	149
Demand for outlook information	149
Appendix A (survey procedures)	149
Foreword	149
The sampling plan	150
The universe	150
Definition of terms	150
Selection of a sample of area sampling units	151
Sampling within the segment	151
Units of observation	152
Eligible respondents	152
Call-backs	152
Treatment of noninterviews in the field	152
Obtaining the data	153
The questionnaire	153
Objectives of the questionnaire design	153
Construction and testing	153
Interviewer training	154
Control of field work	154
Pre-editing and review	154
Sample check	154
Nature of the resultant sample	154
Farms	154
Operators	155
Producer-marketers	155
The data	155
Notes on the questionnaire	156
Note on the effect of farm substitution on the data	157
Editing and processing the data	157
Editing	157
Coding	158
Punching and verifying cards	158
Tabulation procedure	158
Methods of estimation and measures of reliability	159
Unbiased estimates of totals and sampling errors for the Iowa open-country zone	159
Estimation of totals	159
Estimation of sampling errors	160
Biased estimates of totals	160
Appendix B (illustrative material)	163
Questionnaire	163
Orientation	163
The farm	163
Operator	164
Partner supplement	164
Hogs	164
Cattle	165
Corn	165
Soybeans	166
Cream and whole milk	167
Eggs	167
General information	168
Check sheet for noninterviews	168

SUMMARY

NATURE OF STUDY

How farmers get market news and what changes they suggest in the handling of market news is the subject of this study. The information herein was primarily obtained from a survey of 600 Iowa farmers interviewed in April and May 1949. It deals with the way farmers used market news in their last sale of any of six selected commodities before the interview. The importance of this information is indicated by the fact that, in 1948, the six commodities selected accounted for 90 percent of Iowa's cash farm income of \$2,121,172,000.

Practically every farmer in the survey had some way of getting day-to-day market news besides personal contact. As of Jan. 1, 1949, 97 percent had radios in working condition, 42 percent had radios in cars and 13 percent had radios in other farm buildings. Eighty-four percent had telephones with which they might get specific market reports and in some cases establish firm prices for their salable products. Eighty-nine percent received daily newspapers which carried market reports for several points.

Ninety-four percent of the farmers received farm papers and farm magazines regularly; 72 percent received Sunday editions of daily newspapers; and 64 percent were getting weekly newspapers at the time of the survey. Farm papers and magazines and the farm sections of daily, Sunday and some weekly newspapers reviewed and predicted market trends of prices and receipts in comparison with past weeks or months.

Only 0.3 percent of the farmers told interviewers they had no way of getting day-to-day market news or general marketing information. In fact, 75 percent of the farmers surveyed received daily newspapers and also had radios in working order and telephones.

Each medium has some advantages. Radio is fast and timely. Newspapers can give detail and analysis. The telephone can verify local markets. Marketing letters can be selective in audience and specific in content. Printed news has greater permanence than oral.

The questionnaire was arranged to take up each of the six commodities separately for two reasons: (1) because many farmers had not sold all of the six commodities recently; and (2) because sources of market news, needs for it and practices in handling it differ according to commodities. Consequently, much of the summary and discussions which follow are segregated under commodity headings.

HOW FARMERS SELLING HOGS USED MARKET NEWS

Most farmers listened to radio hog market news at noon. About half heard some hog market

news between 8:34 and 11:00 a.m., the early hours of trading on most markets.

Hog sellers listened to hog market reports about twice a day. The noon farm program on WHO, Des Moines, had the most listeners (41 percent). The second and third largest numbers of hog sellers listened to two WOI, Ames, programs at 10:30 a.m. and 9:45 a.m. daily. Interior and terminal hog markets were broadcast on all three programs.

Sixty-seven percent of the hog sellers had someone listen to hog market news for them when they couldn't be at a radio at market news broadcast times.

Sixteen percent mentioned reading about hog markets in the *Des Moines Register*. This was the newspaper mentioned most. Farmers selling hogs used 28 other dailies for market news.

Sixty-five percent of the hog sellers said that, in general, they paid attention to terminal hog market places, and 57 percent paid attention to interior hog markets on the radio and/or in newspapers. About half of the hog sellers paid attention to but one market when preparing to sell hogs. The other half paid attention to two or more market places.

Although nearly all hog sellers had telephones, less than half telephoned buyers on their most recent selling day. Two-thirds of these called just one buyer that day. The other third called two or more buyers.

Farmers who sold larger lots of hogs were more likely to use all three media (newspapers, radio and telephone) for market information than those who sold smaller lots.

Other sources farmers used included the *Chicago Drovers' Journal* and *Omaha Journal-Stockman*. These are daily livestock exchange newspapers. Farmers also used newsletters about the markets mailed by commission firms located at livestock exchanges.

Hog sellers were asked, "As the time to sell drew near, what way of getting market news did you depend on most?" Eighty-six percent said they "depended most" on radio.

Farmers getting ready to sell hogs must make three important decisions before selling. What weight would be most profitable? On what day would demand be highest? What market or buyer will pay most, considering delivery costs? Radio was believed most helpful by farmers in selecting selling weight and time. Telephone calls to buyers were the greatest help in deciding on the buyer.

HOW FARMERS SELLING CATTLE USED MARKET NEWS

Nearly all cattle sellers had telephones, but only 16 percent actually called buyers the day they sold their last lot of cattle. Two-thirds of

those called one buyer; the other third called two buyers on the day of sale.

Slightly over half of the cattle sellers who listened to some radio market news for cattle from day to day before selling heard such market reports two or more times daily. About a quarter of all farmers selling cattle listened to the WHO, Des Moines, noon farm program, and about 10 percent listened to the 10:30 a.m. cattle markets on WOI, Ames. These were the most commonly mentioned cattle newscasts. A little less than half of the cattle sellers had others listen to cattle market news programs when they couldn't be at a radio.

One-third of the cattle sellers read cattle market news in daily newspapers. Over one-third of these used the *Des Moines Register* before selling. Twenty-one other dailies were named.

Cattle sellers were asked for all cattle market points they "paid attention to" on radio and in newspapers. Most of them (72 percent) paid attention to cattle prices at terminal market places. Thirty-five percent paid attention to prices at interior packing plants and concentration yards in Iowa and southern Minnesota when listening to radio or reading newspaper market reports.

A few cattle sellers read market news in such terminal livestock exchange newspapers as the *Chicago Drovers' Journal* and the *Omaha Journal-Stockman* and in the newsletters published by livestock commission firms selling cattle for farmers on terminal livestock exchanges.

Two-thirds of the cattle sellers "depended most" on radio for cattle market information as the time to sell drew near. Also, more farmers gave credit to radio market news than to any other source for information which helped them in selecting the selling weight class and time for their cattle. More cattle sellers selected a selling place by telephoning buyers and talking with businessmen and neighbors than by any other means.

HOW FARMERS SELLING CORN AND SOYBEANS USED MARKET NEWS

The leading radio program for grain-marketing listeners was the noon farm program on WHO, Des Moines. Second was the 10:30 a.m. market news program on WOI, Ames. Thirty-seven other programs were named by a few farmers selling corn or soybeans.

Most of the farmers who listened to any corn or soybean reports listened during the noon hour. One-third of the corn or soybean sellers had others listen to grain market news when they couldn't be at a radio.

Half of the grain sellers called buyers the day they sold. About two-thirds of these phoned but one buyer and one-third called two.

The *Des Moines Register*, which was received by the largest number of farmers, was the leading newspaper used for grain markets. Grain

sellers mentioned 13 other daily newspapers as read for corn or soybean market reports.

About 50 percent of the farmers selling grain said that, in general, they pay attention to newspaper or radio reports of terminal grain market places. About 30 percent paid attention to local grain prices, and over 20 percent paid attention to interior grain market points. Most farmers watched only one market. Twenty percent or more named two specific markets, and around 15 percent of the grain sellers said they didn't pay any attention to grain markets in newspapers or on the radio.

Grain sellers were asked, "When you were thinking of selling this corn, what way of getting market information did you depend on most?" About 40 percent depended most on radio market news and somewhat fewer on telephone calls to buyers.

Telephone calls to buyers helped nearly half of the grain sellers decide on a buyer, although only 10 percent of the corn sellers and 5 percent of the farmers selling soybeans used telephone calls to buyers to help in deciding when to sell.

Insufficient price information about local markets limited the value of radio to farmers selling grain.

HOW FARMERS SELLING CREAM OR WHOLE MILK AND EGGS USED MARKET NEWS

Most of those who heard radio cream or egg market news regularly listened at noon. A few listened to midmorning broadcasts of cream and egg prices.

No newspapers stood out as sources of cream or egg market information. Twenty-one daily newspapers were mentioned. Some local weekly newspapers also were named as sources of egg prices.

When the cream and whole milk sellers were asked, "Which one of those (media) do you depend on most for price and market information?" about the same proportions (16 to 18 percent) named "other farmers or neighbors" and calls to buyers. Over a quarter of the egg sellers depended most on neighbors and other farmers for marketing information; one-fifth depended most on phoning buyers. Nearly the same proportions of egg sellers and cream or whole milk sellers (10 percent or more) depended most on radios for market news.

Farmers asked for more information on the radio and in newspapers about local egg and cream markets.

KINDS OF MARKET NEWS REPORTS PREFERRED

Sixty-eight percent of the farmers who sold any of six commodities said they preferred a radio or newspaper report which provides "a complete summary of the market, including top, range and low." Eighteen percent said they preferred a radio or newspaper report which tells the "price range for the grade making up the bulk of sales." Ten percent preferred a report

of the "top price for the day on a single market or the top market."

The complete summary has a clear-cut advantage from the farmer's viewpoint since it is most likely to give him information on the particular product and grade which he has for sale.

FARMERS SUGGESTIONS FOR CHANGING MARKET NEWS

About 12 percent of the farmers who sold any of six commodities in 1948 wanted market reports on more grades of commodities, information on more of the commodities they sold or more information on local markets near their farms. A few farmers sought more explanations of change in market prices.

Some requested earlier market news broadcasts, and others sought more market summaries at times farmers are normally in their houses. A few suggested a need for greater accuracy in broadcasts and newspapers, more understandable use of market terms and more up-to-date reports.

Most of these comments and suggestions applied to all commodities. Cattle, however, were singled out for comment more than any other commodity. Farmers asked for more adequate information on markets for all grades of cattle.

OUTLOOK INFORMATION

Three-fourths of the farmers were interested in getting some outlook information. Forty-five percent wanted to read outlook material weekly, 15 percent daily. They ranked the twice-monthly farm papers first, then monthly farm magazines and radio as their most used sources of outlook information in that order.

CONCLUSIONS

Farmers would get better market information if radio broadcasters, newspaper editors and buyers of farm products would take some of the following steps:

RADIO BROADCASTERS

1. Check broadcasting schedules against all other stations serving major segments of the same listener area to determine (a) whether any stations are giving complete midmorning re-

ports and (b) whether any stations are giving complete market news broadcasts at any time.

2. If there is any station providing midmorning reports, consider supplementing those services by a complete local market news broadcast that would provide listeners nearby with information the other station doesn't offer. This program might come immediately before or after the other report. It would necessarily be shorter since it covers but one city's market.
3. If there are no stations providing complete reports either midmorning or later, consider developing a complete midmorning report (preferred) or a complete report later, perhaps at noon. The former type has attracted considerable midmorning listenership to WOI at Ames. The latter, complete for the Sioux City market only, has attracted considerable Iowa listenership for WNAX, Yankton, S.D., at noon.
4. If there are sufficient complete markets news programs (including local markets) serving the listenership area, then it would be better for other stations to ignore market news rather than to present summaries which might be too brief and perhaps misleading.
5. Provide reliable agricultural outlook information regularly.

NEWSPAPER EDITORS

1. Since four-fifths of the daily newspaper subscribers among farm operators take but one paper, consider publishing regularly as complete market news (obtained on the news wires) as time, space and costs will justify.
2. Gather and publish the local market news regularly.
3. Provide reliable agricultural outlook information regularly.

FARM PRODUCT BUYERS

1. When telling farmers the prices being paid, use the same descriptive terms as are used on radio and in newspaper reports. This will enable farmers to place values on their products after getting market information from buyers, radio or newspapers.

How Do Iowa Farmers Obtain and Use Market News?

BY J. PARRY DODDS AND K. R. MARVIN

INTRODUCTION

THE PURPOSE OF THIS STUDY

This is the report of a field study of the principal ways Iowa farmers get and use market news. The survey planning began in August 1948 under Iowa Agricultural Experiment Station Project 1031, "Effectiveness of Assembling and Disseminating Agricultural Marketing Information" and under United States Department of Agriculture, Production and Marketing Administration, Research and Marketing Act Project RM:C-55. These were joint projects in 1948-50. In 1950-51 the research was continued under contract with the Production and Marketing Administration.

This report is written for the information of those who gather, process, distribute and use agricultural market news.

THE INVESTIGATION

The survey questionnaire was designed to show what sources of market news farmers had available, how they used market news and what changes they suggested in its handling. Appendices A and B present a detailed description of the survey procedures together with some data on the reliability or precision of the survey results.

Radio, newspaper, specialized market newspaper, telephone and the mailed federal-state market news reports were the principal ways for getting market news to farmers considered in this study.

As indicated by the survey, about 72 percent of Iowa's open-country farmers were receiving at least one Sunday newspaper regularly; 64 percent, at least one weekly newspaper of some kind; 94 percent, at least one twice-monthly or monthly farm paper or farm magazine regularly (see Appendix A, for definitions). One percent of the farmers reported regular reception of market information from commission firms handling live-stock or grain on terminal markets or from other farm products firms.

Market news reports that cover more than 20

farm products are available to Iowa farmers. These products are hogs, cattle, sheep, live poultry including turkeys, eggs, butter and other dairy products, corn, wheat, oats, barley, soybeans, flax seed, rye, lard, grass and legume seeds, wool and certain truck crops in the areas where produced. Ninety percent of Iowa's cash farm income in 1948 came from hogs, cattle and calves, dairy products, corn, eggs and soybeans in that order of value. Consideration of the marketing of those six commodities was believed sufficient to reflect the use Iowa farmers made of market news. Farmers were asked about their last sale of those products¹ if they had sold any in 1948.

The "last sale" approach restricted the farmer to talking about the one sale he would be most likely to recall. The percentages of such sales which occurred each month between Jan. 1, 1948, and the time of interview are shown in table 1, for the sample of farmers.

¹Farmers who had sold cattle or hogs for slaughter or feeder purposes in 1948 reported on their most recent sales of cattle (of any type) and butcher hogs, respectively.

TABLE 1. MONTHS IN WHICH FARM OPERATORS' LAST SALES TOOK PLACE

Month of last sale	Percent of farmers selling:			
	butcher hogs	cattle	corn	soybeans
1948:				
January	1.0*	0.5	3.1	3.4
February	0.6	1.5	1.6	2.0
March	0.6	1.0	0.8	1.4
April	0.4	3.8	3.1
May	0.4	4.6	5.5	1.4
June	0.6	4.3	7.8	1.4
July	0.6	2.5	7.0	0.7
August	0.6	4.1	3.9
September	2.2	4.6	3.9	8.7
October	5.2	6.9	7.0	61.4
November	10.5	6.9	19.5	10.8
December	15.0	11.2	18.8	2.0
1949:				
January	13.4	11.7	8.6	0.7
February	11.3	10.4	4.7	0.7
March	16.4	12.5	1.6	2.0
April	19.8	12.5	3.1	2.7
May	1.4	1.0	0.7
Total	100.0	100.0	100.0	100.0

*These figures do not represent the total amount of trading taking place each month—the survey was not designed to yield that information. Since the interviewing was completed about May 17, there was less opportunity for sales to be reported for that month than for preceding months.

The sample of farmers specified for interview was limited to the operators of 600 farms in open country—that is, in the area which is outside incorporated towns or cities and unincorporated villages. These 600 farms were selected by modern probability methods from all farms in Iowa open country. In 1949 over 90 percent of the farms² in Iowa were in open country.³

Two hundred small areas, each about 1 square mile in size, were chosen for the sample. These were distributed over the state in such a way that at least one and generally two areas were located in each of Iowa's 99 counties. For each of these sample areas, three farms were selected by an objective procedure, and interviews were obtained from their operators and landlords. (See Appendix A for details on the sampling method.)

The interviewing was done mostly in April and May 1949.

Data in this report are presented as percentages of all Iowa open-country farms or farmers, unless some distinct subgroup of farmers is indicated. Because information was obtained for a *sample* of farms and farm operators, these percentages are only estimates for the open-country farm portion of the state. However, since the sample was chosen according to the laws of mathematical probability, it is possible to determine approximately how reliable these estimates are. See Appendix A for information about the reliability or precision of totals estimated from the survey data and how close to those estimates the true values⁴ can reasonably be assumed to be.

In 1948 about 96 percent of all Iowa open-country farmers had sold one or more of the six commodities studied in the survey. Considering only sales of the operators' shares⁵ of the products raised on their farms, the survey data indicate that:

- 90 percent of the farmers sold hogs and/or cattle for slaughter or feeder purposes in 1948.
- 60 percent sold both hogs and cattle.
- 24 percent sold hogs but not cattle.
- 6 percent sold cattle but not hogs.

Similarly, 38 percent of the farmers sold corn and/or soybeans in 1948.

- 8 percent sold both corn and soybeans.
- 17 percent sold corn but not soybeans.
- 13 percent sold soybeans but not corn.

Also, 84 percent of the farmers sold cream or whole milk and/or eggs in 1948.

- 59 percent sold both eggs and cream or whole milk.
- 12 percent sold cream or whole milk but not eggs.
- 13 percent sold eggs but not cream or whole milk.

²The definition of a farm used in the 1945 Census of Agriculture was followed in this survey. Thus, a farm was any establishment of 3 acres or more on which some agricultural operations were performed or a smaller establishment if its agricultural products in 1948 were valued at \$250 or more (see Appendix A).

³InFARmation Please, No. 1. Report of survey by the Statistical Laboratory, Iowa State College, for Wallaces' Farmer and Iowa Homestead, Wallaces' Farmer and Iowa Homestead, Des Moines, Iowa. Undated, p. 10, Sec. A: "Of the 1945 census farms, 93.9 percent were assumed to be situated in Iowa's open country zone . . ."

⁴By true values we mean the values which would be obtained if the operators of all farms in the open-country portion of Iowa had been interviewed—rather than just the operators of the sample of 600 farms.

⁵i.e.: disregarding sales of the landlords' shares from tenant-operated farms in the sample. (See table A-2, Appendix A, and footnotes. Also table A-7, Appendix A, gives information on the combined farm sales of operators' and landlords' shares of each commodity.)

Specific information applying to market news programming and to the content of broadcasts was obtained from each of the radio stations located in Iowa and 14 other radio stations that farmers mentioned in the survey. This information represented radio programs as of the spring of 1949.

The information was obtained from some radio stations by correspondence. Other stations that did not answer the mailed questions were reached by phone or personal interview. All information for each station was transferred to uniform program forms and returned to the station for verification. The farm director or program director of each station verified, signed and returned the forms. These were then analyzed.

Newspaper market news presentation was analyzed in all newspapers farmers mentioned as sources of market news. Market cities reported and the grades and commodities covered were summarized.

ACKNOWLEDGEMENTS

The leader-in-charge of project 1031, under which the research was done, was K. R. Marvin, professor and head of technical journalism at Iowa State College. J. P. Dodds⁶ of the Iowa Agricultural Experiment Station was project leader. Kenneth J. McCallister, Marketing Facilities Research Branch of the Production and Marketing Administration, United States Department of Agriculture, served as advisor on the project.

Sample design and preparation of sampling materials were done for the field survey by members of the Statistical Laboratory, Iowa State College, under the direction of R. J. Jessen, assisted by N. V. Strand and John Monroe. The questionnaire was drawn up and tested by J. P. Dodds and N. V. Strand. The Interviewer's Manual was written by John Monroe and Mrs. Jauvanta Walker of the Statistical Laboratory. John Monroe arranged and conducted the interviewer training school. Questionnaire editing, coding, transfer of data to IBM cards and tabulation were done primarily by members of the computing section of the laboratory, under the direction of John Monroe. The procedure for making estimates from the sample was prepared by Om Prakash Aggarwal, then graduate assistant in the Statistical Laboratory. Subject-matter analysis was by J. P. Dodds, assisted by Chia Ying Wu and members of the laboratory staff.

The advice and assistance of R. C. Bentley, WOI-AM-FM-TV market news editor; Geoffrey S. Shepherd, professor of economics; and R. J. Jessen, survey statistician and professor of statistics, are gratefully acknowledged. Credit is also due to Jauvanta Walker for her aid in preparation of the manuscript.

USE OF MARKET NEWS IN MARKETING IOWA FARM PRODUCTS

HOGS

MEDIA FARMERS USED

Hogs are Iowa's leading cash income crop. According to USDA Bureau of Agricultural Economics figures, in 1948, sales of hogs, pork and lard accounted for 40 percent of Iowa's cash farm income total of \$2,121,172,000.⁷ Sales of cattle, calves, beef and veal accounted for 23 percent of that total; corn, 8 percent; eggs, 6 percent; cream and milk, 9 percent; soybeans, 4 percent; and all other commodities, 10 percent.

⁶Now with South Dakota State College.

⁷Farm Income Situation. USDA, Washington 25, D.C. June 1950.

TABLE 2. AVAILABILITY AND USE OF MARKET NEWS MEDIA BY SELECTED GROUPS OF FARMERS

Class of open-country farm operators	Had radios in working order Jan. 1, 1949	At time of survey		Before last sale		Phoned buyers on day of last sale
		Received daily newspapers regularly	Had telephones	Listened to radio daily for commodity market news*	Read daily market news in newspapers*	
Total open-country farmers	(percent) 97	(percent) 89	(percent) 84	(percent) 94	(percent) 45	(percent) 43
Farmers who sold (in 1948):						
Hogs for slaughter or feeder purposes	98	90	87	94	45	43
Cattle for slaughter or feeder purposes	98	88	90	67	34	16
Corn	98	89	85	57	38	55
Soybeans	97	90	87	63	37	50
Cream or whole milk	98	90	85	8	8	†
Eggs	98	89	86	19	10	‡
Farmers who sold any of the six commodities in 1948§	98	90	86	92	51	‡

*For farmers selling cream or whole milk and farmers selling eggs, percentages represent those listening to or reading day-to-day market reports during the past month.

†No strictly comparable information was obtained. Only 1 percent of the cream or whole milk sellers had called any buyer during the previous month other than the buyer to whom they were selling.

‡No comparable information was obtained.

§On an average, 19 out of every 20 open-country farmers in Iowa had sold at least one of the six commodities in 1948.

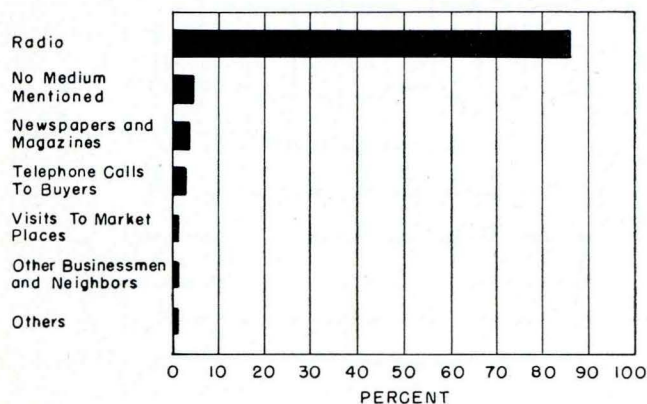


Fig. 1. Market information media farmers selling hogs depended on most (percent of farmers who had sold hogs for slaughter or feeder purposes in 1948).

According to the market news survey, 83 percent of Iowa's open-country farmers sold hogs for slaughter or feeder purposes in 1948.⁸ Table 2 indicates how farmers who had sold hogs used the three most important ways of getting market news as they planned their last sale of butcher hogs prior to the survey.

Farmers selling butcher hogs depended on radio above all other media for getting market news. Eighty-six percent called radio the "way of getting market information depended on most as the time to sell drew near."⁹ (See fig. 1.)

The following four sections show how farmers used radio, newspapers, telephone and other hog market news media.

⁸81.7 percent of all Iowa farmers raised hogs and pigs in 1944 according to the 1945 Census of Agriculture.

⁹Question E-13, "As the time to sell drew near, what way of getting market information did you depend on most?" Each respondent named one medium only.

RADIO

Radio served 94 percent of the hog sellers.¹⁰ On the average, these farmers recalled listening to 1.9 market news programs each day on 1.7 different stations as they prepared to make their last butcher hog sale.

BROADCASTING STATIONS NAMED

Table 3 shows what stations farmers named as "listened to regularly" for hog market reports and the percent of farmers who listened to each station. Two stations located near the center of Iowa, WHO (50,000 watts, 1040 kilocycles), Des Moines, and WOI (5,000 watts, 640 kilocycles),

¹⁰The term "hog sellers" is used to refer to these operators of open-country farms who had sold hogs or pigs for slaughter or feeder purposes in 1948. These farmers were then asked for information concerning their last sale of butcher hogs prior to interviewers' visits.

TABLE 3. RADIO STATIONS HOG SELLERS LISTENED TO FOR HOG MARKET NEWS

Stations	Location	Percent of hog sellers	Type of markets reported*
WHO	Des Moines	43	Terminal Interior
WOI	Ames	37	Terminal Interior
WMT	Cedar Rapids	16	Terminal Interior
WNAX	Yankton, S. D.		
	and Sioux City	10	Terminal Interior
KMA	Shenandoah	10	Terminal Interior
WOW	Omaha, Neb.	7	Terminal Interior
KGLO	Mason City	5	Terminal Interior
KXEL	Waterloo	5	Terminal Interior
KFAB	Omaha, Neb.	5	Terminal Interior
WLS	Chicago, Ill.	4	Terminal Interior
KFEQ	St. Joseph, Mo.	3	Terminal Interior
KBIZ	Ottumwa	3	Terminal Interior
KATE	Albert Lea, Minn.	2	Terminal Interior
KFJB	Marshalltown	1	Terminal Interior
KTRI	Sioux City	1	Terminal Interior
KWWL	Waterloo	1	Terminal Interior
†			

*Radio market broadcasting information obtained for April-May 1949 by mail and personal interviews with all Iowa AM stations and those out-of-state stations mentioned by farmers interviewed.

†21 other stations, including 15 Iowa stations and 6 out-of-state ones, were each reported by a few but less than 1 percent of the farmers.

Ames, were named most. WMT (5,000 watts, 600 kilocycles), Cedar Rapids, serving east-central Iowa, was used by the third highest proportion of farmers. Three stations located near the borders of Iowa were next in numbers of listeners.

Terminal markets were defined as public stockyards where commission firms sell for the shippers. Usually several local packers as well as firms shipping hogs to other packing plants are buyers on terminal markets. Examples: Chicago, Omaha, Sioux City and South St. Paul.

Interior markets are packing plants and concentration points reported by the Federal-State Market News Service at Des Moines, Iowa.¹¹ These are located in Iowa and two points in southern Minnesota. Examples: Waterloo, Ottumwa, Perry and Estherville, Iowa, and Austin, Minnesota.

Local markets are those in the same town as the radio station. These may be either terminal or interior market points or may be smaller buying stations not reported by the federal or federal-state market news services.

STATION COVERAGE

The preceding section has shown farmers' preferences for radio stations. The area coverage of stations may show about how far away listeners of individual stations may be located. The Iowa coverage areas of the leading stations, WHO, WOI, WMT and WNAX, as indicated by the interview survey, are shown in figs. 2, 3, 4 and 5. Each dot locates the farm of a respondent who mentioned the station as a source of hog market news.

WHO, Des Moines, was named by farmers in 69 counties, mainly concentrated in the central part of the state. The farmers who listened to hog market news over WOI, Ames, were found in 78 counties. WMT, Cedar Rapids, was reported by hog sellers in 28 counties of eastern Iowa.

¹¹However, if any of these markets is located in the same town as a radio station, it will be considered a local market for that station.

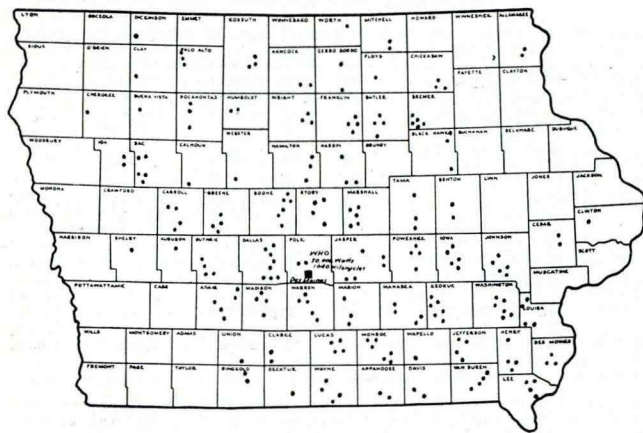


Fig. 2. Location of respondents who mentioned Radio Station WHO as source of hog market news.

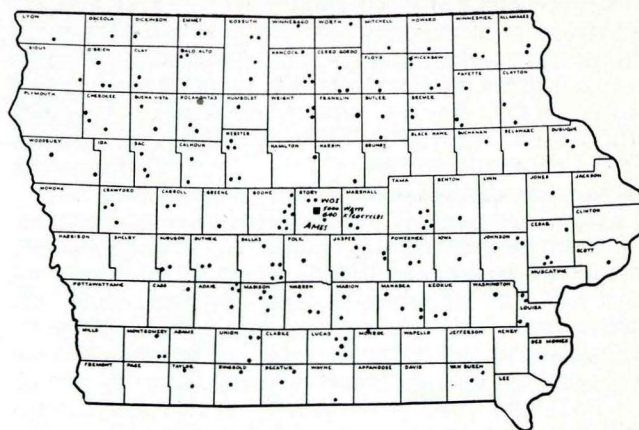


Fig. 3. Location of respondents who mentioned Radio Station WOI as source of hog market news.

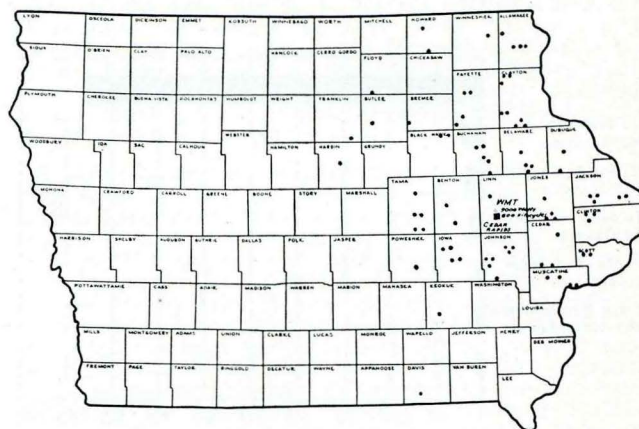


Fig. 4. Location of respondents who mentioned Radio Station WMT as source of hog market news.

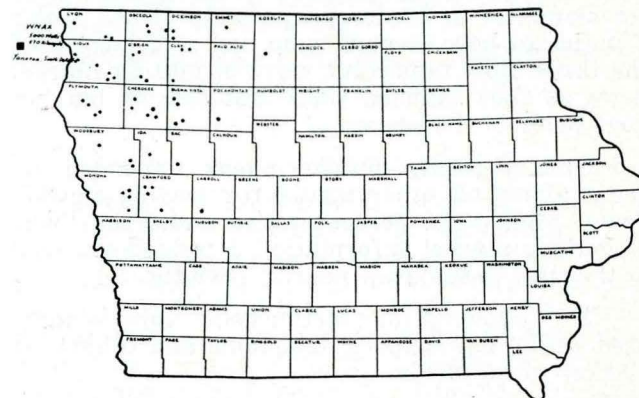


Fig. 5. Location of respondents who mentioned Radio Station WNAX as source of hog market news.

WNAX, Yankton, S.D., furnished market news to hog farmers living in 18 northwestern Iowa counties.

The area where people can listen to a station is partly determined by station transmitter power and frequency. Therefore, chances are that a station with a transmitter power of 5,000 watts at a frequency of 600 kilocycles will have more listeners than a similarly located station with but 1,000 watts and nearly the same frequency, say, 1,600 kilocycles.

PROGRAMS LISTENED TO

Table 4 lists the 17 programs farmers named most often for hog market news. The types of markets reported on these programs also are shown.

Thirty of the 37 stations named had one or more noon-hour programs with market news. During the morning, after the hog market prices for the day became available, from 8:34 a.m. to 11 a.m. inclusive, 20 stations broadcast 28 separate market news programs. Two of these mid-morning programs had the second and third most listeners. These were WOI's 10:30 a.m. complete morning report of both terminal and interior hog markets and WOI's 9:45 a.m. report of the opening prices paid at interior and terminal hog markets. Thirty-three percent of the farmers selling hogs listened to either one or both of these WOI midmorning programs.¹²

At 10:15 a.m. KBIZ, Ottumwa (250 watts, 1240 kilocycles), broadcast local packer's hog prices daily. Nine of the 24 survey farmers selling hogs and living within 34 miles of Ottumwa named this program.

TIMES FARMERS LISTENED

Eighty-four percent of the hog sellers listened to hog market news between 12 noon and 1 p.m. inclusive before their last butcher hog sale. Twenty-one percent mentioned more than one market news program they heard during the noon hour.

Forty-three percent of the farmers selling hogs listened to hog market news between 8:34 and 11 a.m. inclusive. Broadcasts of market news during these hours generally contain prices established in trading during the same morning. Practically all of these farmers mentioned only one program in this period.

Figure 6 shows the percentages of all hog sellers sampled who were listening to hog market news broadcasts by quarter-hour periods. The ratio of those listening during the middle of the morning to those listening at noon shows the importance of the midmorning reports.

The numbers of broadcasting stations reporting market news during each 15-minute period were totaled to show what hours market news was

TABLE 4. MARKET NEWS PROGRAMS TO WHICH HOG SELLERS LISTENED

Station	Location	Time of day	Percent of hog sellers	Type of markets reported
WHO	Des Moines	12:00 noon	41	Terminal Interior
WOI	Ames	10:30 a.m.	19	Terminal Interior
WOI	Ames	9:45 a.m.	18	Terminal Interior
WMT	Cedar Rapids	12:30 p.m.	16	Terminal Interior
WNAX	Yankton, S. D.			
	and Sioux City	12:15 p.m.	10	Terminal Interior
WOW	Omaha, Neb.	12:12 p.m.	7	Terminal Interior
KMA	Shenandoah	12:45 p.m.	6	Terminal Interior
KFAB	Omaha, Neb.	12:45 p.m.	4	Terminal Interior
KXEL	Waterloo	12:00 noon	4	Terminal Interior
WOI	Ames	8:55 a.m.	4	Terminal Interior
WHO	Des Moines	6:30 a.m.	3	Terminal Interior
WLS	Chicago, Ill.	11:30 a.m.	3	Terminal Interior
KGLO	Mason City	12:00 noon	3	Terminal Interior
KGLO	Mason City	12:45 p.m.	2	Terminal Interior
KBIZ	Ottumwa	10:15 a.m.	2	Terminal Interior
KMA	Shenandoah	12:15 p.m.	2	Terminal Interior
WOI	Ames	12:13 p.m.	2	Terminal Interior
.....				

*Nine other programs each were mentioned by more than 1 percent but less than 2 percent of the hog sellers; 53 programs were mentioned by less than 1 percent.

available on stations farmers mentioned in the survey (see fig. 7).¹³ The higher bars show that farmers' opportunities to hear hog market news were best between 6 and 7 a.m. and at noon. All during the morning and at 6 p.m. farmers had good chances to hear hog market news.

Early morning broadcasts (before 8:34 a.m.) usually reported the numbers of hogs expected on terminal and interior markets that day and sometimes reviewed the previous day's prices.¹⁴ Mid-morning broadcasts (8:34 to 10 a.m.) first reported prices and supplies on markets at opening time and later (10 a.m. to noon) reported established prices for some market points. Noon broadcasts usually included the same reports as those from 10 a.m. to noon plus any changes that took place.

The few market news broadcasts later in the day (after 1 p.m.) reported closing markets including prices paid and sometimes supplies carried over to the next market day.

Sixty-seven percent of the farm operators selling hogs said they have someone else listen when they can't listen to hog market reports. This emphasizes the need for accurate reports at regular times so that people unfamiliar with the reports may copy them.

It is assumed that most "substitute listening" occurred during midmorning market news broadcasts. This can neither be confirmed nor denied from this survey information, however.

INFORMATION USED IN THREE IMPORTANT MARKETING DECISIONS

The farmer has three important decisions in hog selling that may be influenced by market information: the most profitable selling weight, the most profitable selling day and the most advantageous outlet. Hog sellers were asked for their last butcher hog sale, "Where did you get the information that helped you decide on the buyer of the hogs, the weight at which to sell and the time to sell?" The factors influencing these

¹² 14 percent listened to WOI hog market news at 9:45 a.m. only.

¹³ 15 percent listened to WOI hog market news at 10:30 a.m. only.

¹⁴ 4 percent listened to WOI hog market news at both 9:45 and 10:30 a.m.

33 percent total.

¹³ See footnote *, table 3.

¹⁴ See footnote *, table 3.

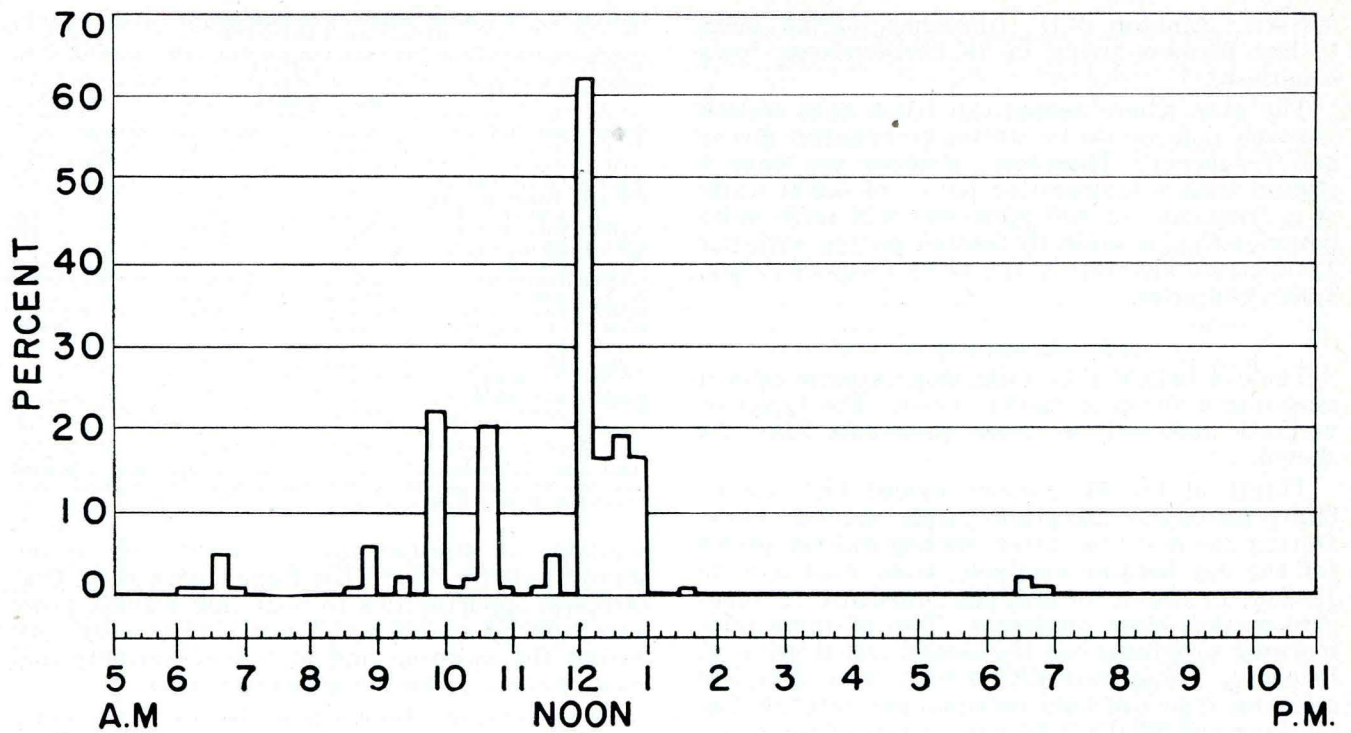


Fig. 6. Time periods farmers listened to hog market news (percent of 475 hog sellers who listened to any hog market news).

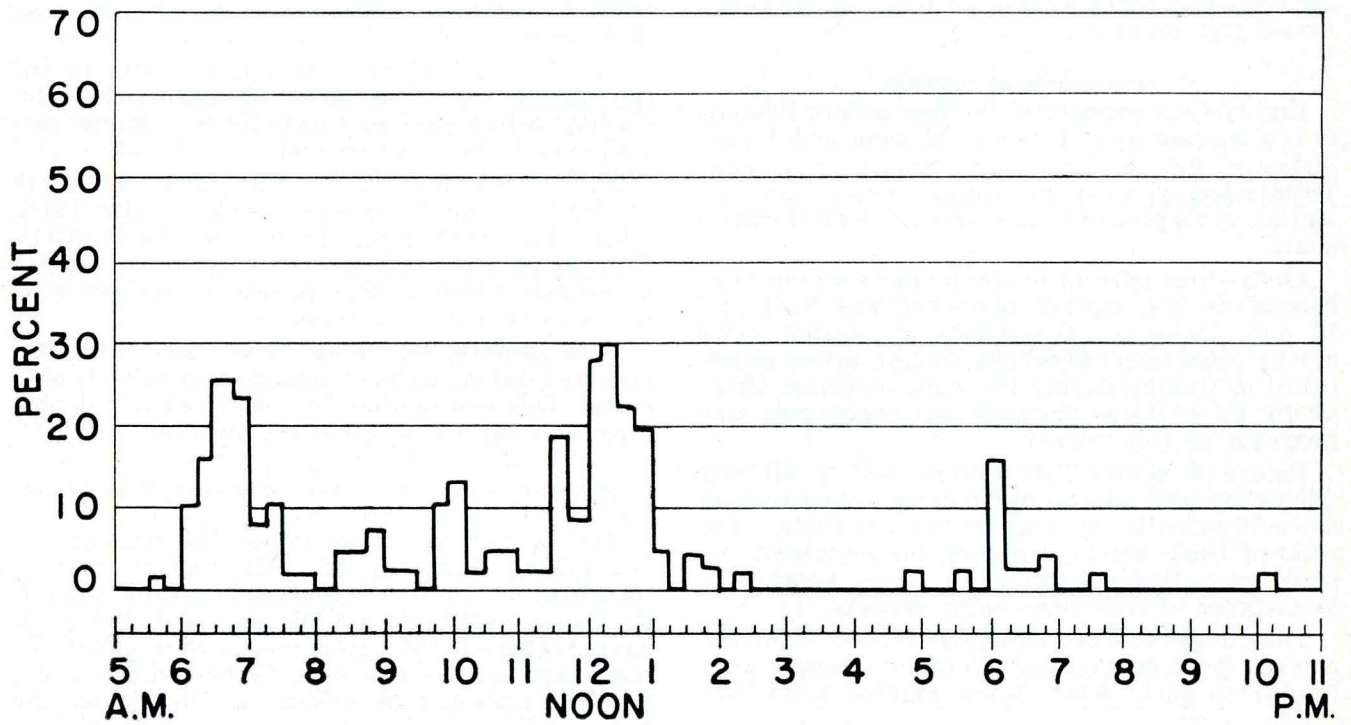


Fig. 7. Time periods radio stations broadcast hog market news (percent of 37 stations farmers named as sources of hog market news).

decisions are complex and difficult to measure. Marketing decisions may be affected by feed supply, roads and weather, labor and transportation, custom, etc.

Large numbers of farmers named none of the usual market news media sources (see table 5). Rather, they ascribed their decisions to such things as, "Always sell this weight and to this buyer." "Hogs ready to go, and this buyer is closest." "This is most profitable weight, I know this." "Have sold there for years."

The information in this table shows how important market information was to farmers at the time they sold a particular lot of butcher hogs.

WERE MARKET TERMS UNDERSTOOD?

Eighty-three percent of the farmers who sold hogs said they could judge the grade of their hogs "sufficiently close so as to compare them with the animals being reported" in market news. In other words, 83 percent believed they could read or listen to market news reports and determine the price that their salable hogs would bring on various markets.

Fifteen percent of the hog-sellers said that they rely on the opinion of others to determine what the grade of their hogs might be. The remaining 2 percent said they paid no attention to grade.

DAILY NEWSPAPERS

Ninety percent of the farmers who sold hogs in 1948 were receiving daily newspapers of general circulation regularly at interview time. The hog market news columns were read by 45 percent.¹⁵

The Des Moines newspapers, centrally located, circulate over a larger portion of Iowa than do any others.¹⁶ Sectional daily newspapers, such as the *Sioux City Journal*, the *Cedar Rapids Gazette* and the *Waterloo Daily Courier*, were important news sources for nearby farmers. A few farmers read more than one newspaper.

The coverage of hog market reports in daily newspapers varied, although many newspapers covered all three types of markets. Usually newspapers gave prices paid by local buyers. At terminal hog market cities, the local reports published were complete as to receipts and prices by grades and weights. This was true, too, for cities having large packing houses. Complete reports of Chicago's hog market were carried in every newspaper. The Kansas City, South St. Paul and Omaha markets were reported in a few of these newspapers. The *Des Moines Register* carried complete reports of terminal and interior Iowa and southern Minnesota hog markets. These were in the form of tabulations by weight and grade for eight interior and four terminal markets as well as news stories on the interior and Chicago markets. The Waterloo, Cedar Rapids and Mason City dailies gave complete daily prices

¹⁵Question E-5, "Did you read any day-to-day hog market reports at the time of selling your last lot of butcher hogs?"

¹⁶Farmers named 29 daily newspapers as sources of hog market news. The *Des Moines Register* was mentioned by 16 percent of the hog sellers; the *Des Moines Tribune* by 5 percent. The other 27 papers were each mentioned by less than 5 percent.

TABLE 5. SOURCE OF INFORMATION USED BY HOG SELLERS IN REACHING MARKETING DECISIONS (PERCENT OF HOG SELLERS)

Source of information	Marketing decisions concerning		
	Selling weight	Selling time	Sales outlet
	(percent)	(percent)	(percent)
Radio hog market news	18	22	3
Newspaper market news (including terminal market papers)	5	3	2
Calls to buyers (including co-op buyers)	3	2	18
Visits to market places (terminal stockyards, auctions, etc.)	3	3	2
Talks with other businessmen and neighbors	2	1	11
Others (including weather)	1	2	1
No source mentioned	68	67	63

for packing plants located in nearby cities as well as in their own. Interior market reports in other newspapers were brief, general reports which did not point out prices paid at specific points.

An advantage of newspaper market news over radio market news is that the former may be used for reference whenever the farmer has time. Most newspaper market news columns are far more complete than the information a listener can copy from radio broadcasts. However, only 3 percent of the farmers selling hogs said that, as the time for selling drew near, they depended on newspapers most for hog marketing information. The number of farmers who reported they used newspaper hog market news and did not use radio market news was only 3 percent of all farmers who sold hogs. Also, fewer farmers read newspaper market reports than listened to radio market news.

FARMERS GETTING MARKET NEWS BY BOTH RADIO AND NEWSPAPER AND THOSE LISTENING TO RADIO ONLY

Forty-eight percent of the farmers who sold hogs obtained hog market news both by reading newspapers and other publications and by listening to radio. The use of these two methods together should better prepare a farmer for hog marketing decisions (see table 6).

TELEPHONE

The most direct way a farmer can price his hogs without leaving the farm is by calling hog

TABLE 6. COMPARISON OF HOG SELLERS USING RADIO BUT NOT NEWSPAPERS WITH THOSE USING BOTH FOR HOG MARKET INFORMATION (PERCENT OF HOG SELLERS IN EACH CLASS)

Market news medium used	Before last butcher hog sale	
	Used radio not daily newspaper	Used both radio and daily newspaper
	(percent)	(percent)
Listened to day-to-day hog market news	100	100
Have someone else listen to hog market news when cannot listen	65	79
Received a daily newspaper regularly	85	100
Read day-to-day newspaper hog market news	0	100
Read market news in market papers* other than daily newspapers	0	26
Had a telephone	84	90
Called buyers for information on day of sale	42	47

*Includes such daily market papers as *Chicago Drivers' Journal* and *Omaha Journal-Stockman* as well as other farm publications less frequently published.

buyers. Forty-three percent of the farmers who had sold hogs, called buyers the day of their last butcher hog sale. One-third of these farmers telephoned two or more buyers. Two-thirds called just one buyer the day of sale.

Farmers use the telephone for calling buyers to confirm price and for closing sales. When asked, "Where did you get the information that helped you decide on the buyer of the hogs?" 27 percent of the farmers who called buyers the day they made their last butcher hog sale named "telephone calls to buyers." Only 11 percent of those who didn't call any buyers the day of their last sale said "telephone calls to buyers" were a help to them in picking the buyer. Eleven percent of each group said they received advice about buyers from other businessmen and neighbors.

Telephoning was not considered important for deciding on marketing weight or time.

Farmers who phoned buyers for information differed little from other farmers in other ways of getting market news (see table 7).

OTHER MEDIA

About one-fifth of the hog sellers read market news in periodicals other than general-circulation daily newspapers. The most frequently mentioned of these were commission firm newsletters¹⁷ (by 5 percent of the hog sellers), daily *Chicago Drovers Journal* (also by 5 percent), and (by about 2 or 3 percent of the hog sellers), daily *Omaha Journal-Stockman*, daily mailed government reports, weekly mailed government

¹⁷Excluding the *Producer's Guide* (mentioned by about 1 percent of the hog sellers).

TABLE 7. AVAILABILITY AND USE OF SELECTED MARKET NEWS MEDIA BY HOG SELLERS WHO DID AND THOSE WHO DID NOT CALL BUYERS (PERCENT OF HOG SELLERS IN EACH CLASS WHO HAVE CHARACTERISTIC)

Characteristic	On day of last sale	
	Called no buyers	Called one or more buyers
	(percent)	(percent)
Had radio in house	98	99
Listened to day-to-day hog market reports	93	96
Also have someone else listen to hog market reports when can't listen	62	75
Received daily newspaper regularly	91	89
Read day-to-day hog market reports (in newspapers or other daily publications)	49	54
Had telephone in house	86	88

TABLE 8. WEIGHT CLASSES OF BUTCHER HOGS SOLD

Weight class (pounds)	Average number of hogs sold in weight class*	Average number of hogs of all weight classes sold*	Average number of different weight classes in last sale*
160 to 169	4.3	36.7	3.0
180 to 199	8.0	9.0	1.2
200 to 219	17.3	18.3	1.2
220 to 239	23.2	25.2	1.1
240 to 269	23.9	24.9	1.1
270 to 299	17.2	22.4	1.3
300 to 329	23.1	26.2	1.3
330 to 359	22.2	27.6	1.5
360 to 399	11.4	15.2	1.4
400 to 499	4.2	9.1	1.8
500 and over	1.0	8.5	3.0

*By farmers making any sales in a given weight class.

reports and *Wallaces' Farmer*. Fewer hog sellers mentioned less frequently-mailed government reports, weekly newspapers, Sunday newspapers, agricultural processor and manufacturing newsletters, other farm papers or other farm magazines.

The commission firm newsletters that hog sellers mentioned included those of the following firms:

Wood Bros., Omaha, Sioux City, Chicago, South St. Paul
Steele and Siman and Co., Sioux City
Sioux City Livestock Co., Sioux City
Rice Bros., Sioux City, Chicago
John Clay and Co., Omaha, Chicago, South St. Joseph
Progressive Farmers Co-op Co., Sioux City
Producers Livestock Commission, Sioux City, Chicago, Omaha, South St. Paul, South St. Joseph
Scott Commission Co., Sioux City
Long and Hansen Co., Sioux City
Gehan Commission Co., Sioux City
Farmers Union Livestock Commission Co., Chicago

These newsletters were read by a greater percentage of those who had sold butcher hogs through commission firms on terminal markets at last sale (17 percent) than of those who sold to other types of outlets (2 percent).

MARKETING PRACTICES OF HOG SELLERS

Farmers were asked what classes of butcher hogs they sold and how these were marketed. These questions were asked for two reasons: (1) to make sure the farmer answered questions about his use of market news in making one particular sale, the last sale prior to interview; (2) to find out what weight classes farmers did sell and what marketing methods they used.

WEIGHT CLASSES OF HOGS SOLD

The butcher hogs farmers sold at last sale represented a broad range of weight classes (see fig. 8). The actual number of hogs sold in the two combined weight classes, 220 to 269 pounds, by any farmer, ranged from 22 to 28 head. The average size of sales may be influenced by the common practice of loading the so-called 1½-ton truck with around 25 hogs of these weights.¹⁸

Whether the use of each market news medium was independent of number of hogs in the sale was tested (see table 9). This involved use of chi-square tests of independence. Among the values tested were the number of farmers who read market reports in newspapers and sold less than the joint-median number of butcher hogs reported sold in last sales (16 head of hogs) compared with those who used newspaper market reports and sold more joint-median number of hogs. The resulting chi-square was higher than the 99-percent probability level. With that chi-square, it was reasonable to conclude that those who sold fewer numbers of hogs were less likely to read newspaper market reports than those who sold larger numbers of hogs.

Similar tests were applied to farmers' use of radio for market news and their use of telephone to call buyers. Those making smaller sales were

¹⁸Ken Randels, Manager, Walter Reynoldson & Co., Hog Buyers, Ames, Iowa. Information obtained by conversation, October 1950.

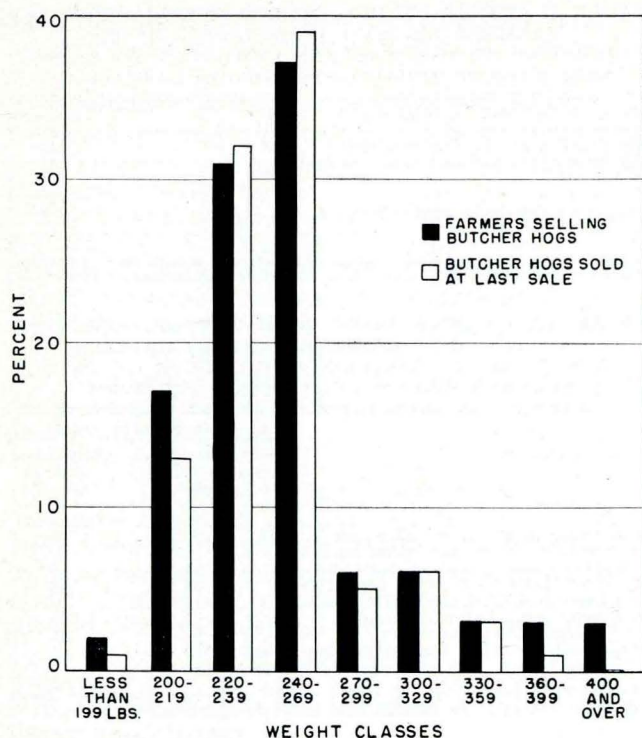


Fig. 8. Butcher hogs sold, by weight classes.

TABLE 9. AVERAGE NUMBER OF BUTCHER HOGS SOLD BY FARMERS GETTING MARKET NEWS IN DIFFERENT WAYS

	Hog market news medium used at selling time			
	Radio	Newspaper	Telephone	All three
Hog sellers who:				
Did use	22.7 head	27.2 head	24.1 head	27.4 head
Did not use	24.0 head	20.2 head	21.8 head	21.4 head

just as likely to use radio market news or call buyers as those making larger sales.

Similar tests showed that farmers selling smaller lots of hogs were less likely to use three media combined (radio, newspaper and phone) for market information than those who sold larger lots of hogs in their last sale prior to the interview.¹⁹

TRADING CHANNELS THROUGH WHICH FARMERS SOLD HOGS

The ways hogs moved from farm to packer were fairly diverse. Each kind of outlet is known to perform somewhat different combinations of marketing functions. How much each of these outlets was used is shown in table 10.

Reload stations are fairly large yards usually

¹⁹In the two tests ("newspapers" and "all three"), comparison of the calculated chi-squares for 1 degree of freedom, with the chi-square table, showed that, if there were independence of attributes, the probability of obtaining values of chi-square as large or larger due to chance alone was less than 1 percent. Thus the hypothesis that these characteristics were independent from size of sale was questioned. It seemed reasonable to reject the hypothesis and conclude that those hog sellers making larger sales were more apt to read newspaper market news and more likely to use all three media together than those who made sales of smaller numbers of hogs. By similar tests it seemed reasonable to accept the hypothesis that those making larger sales were not more likely to use the radio or the telephone for market information than those making smaller sales.

TABLE 10. TYPE OF OUTLET FOR LAST SALE OF BUTCHER HOGS

Type of outlet	Percent of hog sellers
Reload station	34
Independent buyer	21
Interior packing house	15
Commission house on terminal market	13
Order buyer	9
Livestock shipping association	3
Auction (sales barn or farm dispersal)	2
Trucker buyer	2
Others*	1

*Direct to another farmer, farmer's elevator, etc.

located in county seat towns. They are defined as those which buy for one particular packer at another city. Reload stations get hogs directly from the farmer, who either hauls his hogs to the reload station or sells directly to a reload station buyer who deals for the hogs on the farm.

Independent buyers have a small yard at which they assemble their purchases. These hogs are resold each day to the packer or other buyer who offers the best price.

Interior packers (packers not located at terminal market cities) usually buy hogs at the plant. Sometimes their buyers travel from farm to farm buying hogs.

Commission firms sell hogs for farmers to packers at the public stock yards or to buyers for packing plants in other cities.

Since farmers reported the outlet for their last sale rather than for all sales in 1948, no inference was made about actual proportions of hogs sold through various outlets in 1948.

Seventy-nine percent of the hog sellers made their last sale at their usual outlet. The remaining 21 percent sold at some outlet other than the usual one. Eighty-five percent of the latter sold at a new outlet because of higher price or better services. The other 15 percent changed buyers for such reasons as, they "had moved to a new farm" or the buyer was "no longer in business."

Nearly the same proportions of both groups (those selling at usual outlet and those who changed outlets) used radio and newspaper hog market news (see fig. 9). Radio was the medium "depended upon most for market information as the time to sell drew near" by farmers in both groups. No other single medium was considered important among the farmers in either class.

MARKET POINTS FARMERS PAID ATTENTION TO

About half of the hog sellers paid attention to reports from one market point.²⁰ Forty-seven percent named two market points; 3 percent named three. Among all farmers who paid attention to market points, 65 percent named terminal markets and 57 percent named interior markets. Only 4 percent named market points within their own county.

The sample was sufficiently dispersed that individual market cities were named infrequently.

²⁰Farmers who had sold hogs were asked, as general questions near the end of the interview, "On hogs, what market place do you pay closest attention to on the radio and in newspapers?" and "What other points do you check in this manner?" One percent of the hog sellers mentioned no market points.

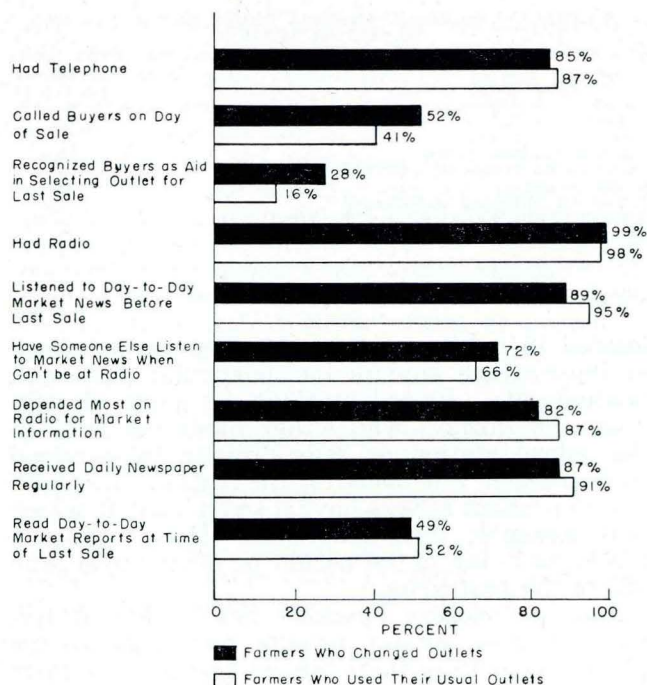


Fig. 9. Market news media used by hog sellers.

Therefore, each city named was classified appropriately as terminal, interior or local. Terminal markets were those having public stockyards. Interior markets were those located outside the county of the interview and which did not qualify as terminal markets. Local markets were those within the county of interview, whether stockyard city, interior packing plant city or small country buyer. Many farmers could easily get both terminal and interior reports because both were published in leading newspapers and broadcast on the three radio stations having the most listeners.

Types of hog market news programs farmers who sold hogs heard over radio are shown in table 11.

CATTLE

MEDIA FARMERS USED

Cattle sales were the second largest cash item from farming for Iowa farmers in 1948; Bureau of Agricultural Economics figures indicate that sales of cattle, calves, beef and veal accounted for \$492,004,000, or 23 percent of Iowa's cash farm income. According to the market news survey, 66 percent of the open-country farmers sold cattle or calves for slaughter or feeder purposes in 1948. Table 12 shows how these farmers used the three most important ways of getting cattle market news as they planned their last sale prior to the survey.

Sixty-three percent of all cattle sellers²¹ called

²¹By cattle sellers is meant those operators of open-country farms who sold cattle or calves for slaughter or feeder purposes in 1948; these farmers were then asked for information concerning their last sale of cattle.

TABLE 11. TYPES OF HOG MARKET NEWS PROGRAMS FARMERS SELLING HOGS LISTENED TO (PERCENT OF HOG SELLERS LISTENING TO RADIO HOG MARKET BROADCASTS BEFORE LAST SALE)

Markets covered in programs*	Percent
Terminal and interior markets	48
Terminal, interior and local markets	16
Local only	14
Terminal markets only	14
Terminal and local markets	8

*From an analysis of radio programs farmers mentioned. Obtained by correspondence with individual broadcasting stations, 1949.

TABLE 12. AVAILABILITY AND USE OF SELECTED MARKET NEWS MEDIA BY CATTLE SELLERS (PERCENTAGES IN EACH OF TWO GROUPS OF CATTLE SELLERS WHO HAVE CHARACTERISTIC)

Characteristic	Farmers who sold:	
	Some slaughter steers at last sale*	Only other cattle at last sale
	(percent)	(percent)
Had radio in working order Jan. 1, 1949	99	98
Listened to day-to-day radio cattle market reports before last sale	84	60
Received daily newspaper regularly	89	88
Read day-to-day cattle market reports of some kind before last sale	60	30
Had telephone in house	92	86
Made calls to cattle buyers the day of sale	23	11

*Twenty-four percent of the cattle sellers sold some slaughter steers at their last sale; 76 percent sold only other cattle and calves.

radio the "way of getting market information depended on most as the time to sell drew near."²² Eighteen percent indicated that they depended upon past experience for their decisions in cattle marketing. This characteristic was more prevalent among those selling other cattle than among those selling slaughter steers (see fig. 10).

The following four sections show in more detail how farmers selling cattle used radio, newspapers, telephone and other cattle market news media.

RADIO

Radio served 67 percent of the cattle sellers as they prepared to make their last sale. On the average, these farmers recalled listening to 1.6 stations. Forty-seven percent of these listened to

²²Question F-13. Each respondent named one medium only.

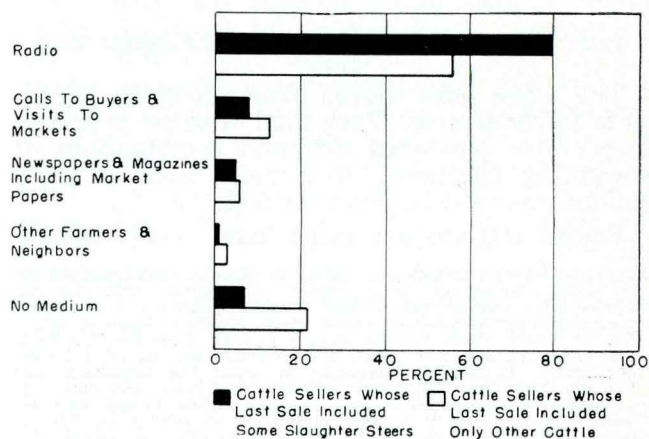


Fig. 10. Market information media farmers selling cattle depended on most as time of last sale drew near.

one program daily, 39 percent twice daily and 14 percent three or more times daily.

BROADCASTING STATIONS AND PROGRAMS NAMED

Tables 13 and 14 indicate radio stations and programs farmers said they listened to regularly for cattle market news.

The three stations most often mentioned, though not located in terminal stockyards cities, each broadcast cattle market reports for several terminal markets. The next three stations listed in table 13 reported their local cattle markets as well as other terminal markets.

Federal-state reports of the interior markets for Iowa and southern Minnesota cover hogs and sheep but not cattle.

TIMES FARMERS LISTENED

Figure 11 shows the times of day cattle sellers were listening to cattle market news broadcasts, by quarter-hour periods. Noon programs generally contained, in addition to market news, several features such as local, state and national farm news. The general nature of noon farm programs plus the fact that farmers are near a radio at lunch time may account for part of the heavy noon listening.

Twenty-five of the 28 stations named offered one or more noon hour programs with market news. During the morning (between 8:45 a.m. and 11:29 a.m.), after the cattle prices for the day became available, 10 of the stations farmers named broadcast 16 separate cattle market news programs.

The numbers of broadcasting stations reporting cattle market news during each 15-minute period were totaled to show what hours market news was available on stations farmers mentioned in the survey (see fig 12).

Broadcasts during early morning hours (before 8:45 a.m.) usually reported the numbers of cattle expected on terminal markets that day and sometimes reviewed prices paid the previous cattle marketing day. It is believed that few farmers considered that type of information as market news when telling when they listened to market news. Earliest midmorning broadcasts (8:45 to 10 a.m.) reported the opening prices paid on terminal markets or at nearby packing plants. Later reports (10 a.m. to noon) gave the established prices for terminal markets and nearby packing plants which might affect prices paid farmers in the station coverage area. Noon broadcasts usually covered the cattle market information available since 10 a.m.

The few cattle market news broadcasts later in the day were reports of closing markets including prices paid and, occasionally, reports of supplies carried over to the next market day.

DID OTHERS GET CATTLE MARKET NEWS FOR FARMERS WHO SOLD CATTLE?

Forty-five percent of the cattle sellers interviewed said they have someone else listen when they can't listen to cattle market reports.

TABLE 13. RADIO STATIONS CATTLE SELLERS LISTENED TO FOR CATTLE MARKET NEWS

Station	Location	Percent of cattle sellers	Type of markets reported†
WHO	Des Moines	27	Terminal
WOI	Ames	21	Terminal
KMA	Shenandoah	10	Terminal
WMT	Cedar Rapids	8	Terminal
WNAX	Yankton, S. D. and Sioux City	8	Terminal
WOW	Omaha, Neb.	6	Terminal
KGLO	Mason City	4	Terminal
KFAB	Omaha, Neb.	4	Terminal
KFEQ	St. Joseph, Mo.	3	Terminal
WLS	Chicago, Ill.	3	Terminal
KXEL	Waterloo	2	Terminal
KBIZ	Ottumwa	2	Terminal
KTRI	Sioux City	2	Terminal
KATE	Albert Lea, Minn.	1	Terminal

*Fourteen other stations, including four out-of-state ones, were each mentioned by less than 1 percent of the cattle sellers.

†Local markets here include those packing plants or concentration yards and public stockyards located in the same towns as the radio station—e.g., the Rath Packing plant in Waterloo would be a local market for KXEL; the public stockyards at Omaha would be local markets for KFAB—as well as the more usual small local buyer or sales barn.

TABLE 14. MARKET NEWS PROGRAMS TO WHICH CATTLE SELLERS LISTENED

Station	Location	Time of day	Percent of cattle sellers	Type of markets reported*
WHO	Des Moines	12:00 noon	27	Terminal
WOI	Ames	10:30 a.m.	11	Terminal
WMT	Cedar Rapids	12:30 p.m.	8	Terminal
WOI	Ames	9:45 a.m.	8	Terminal
WNAX	Yankton, S. D. and Sioux City	12:15 p.m.	8	Terminal
KMA	Shenandoah	12:45 p.m.	7	Terminal
WOW	Omaha, Neb.	12:12 p.m.	6	Terminal
KFAB	Omaha, Neb.	12:45 p.m.	4	Terminal
KGLO	Mason City	12:45 p.m.	2	Terminal
WLS	Chicago, Ill.	11:30 a.m.	2	Terminal
WOI	Ames	12:13 p.m.	2	Terminal
KGLO	Mason City	12:00 p.m.	2	Terminal

*Radio market broadcasting information obtained for April-May 1949 by mail and personal interviews with all Iowa AM stations and those out-of-state stations mentioned by farmers interviewed.

†Twelve other programs were each mentioned by at least 1 percent but less than 2 percent of the cattle sellers; 29 programs were each mentioned by less than 1 percent.

Among those who sold slaughter steers at their most recent sales, 68 percent said they have someone else listen when the farm operators themselves could not listen to cattle market reports. Thirty-seven percent of the cattle sellers whose last sale included no slaughter steers would have others listen for them.

It is supposed that most of the substitute listening occurs during the midmorning market news broadcasts.

INFORMATION USED IN THREE IMPORTANT MARKETING DECISIONS

Cattle sellers were asked, "Where did you get the information that helped you decide on: (a) the buyer of the cattle, (b) the weight to sell them and (c) the time to sell them." From a little more than half to four-fifths of the cattle sellers named none of the common information media. Rather, they ascribed their decision to: "My experience." "We've always sold at that weight." "We've always sold to that buyer." "Cattle ready to go." or "Needed the space."

WERE MARKET TERMS UNDERSTOOD?

Seventy percent of the farmers who sold cattle

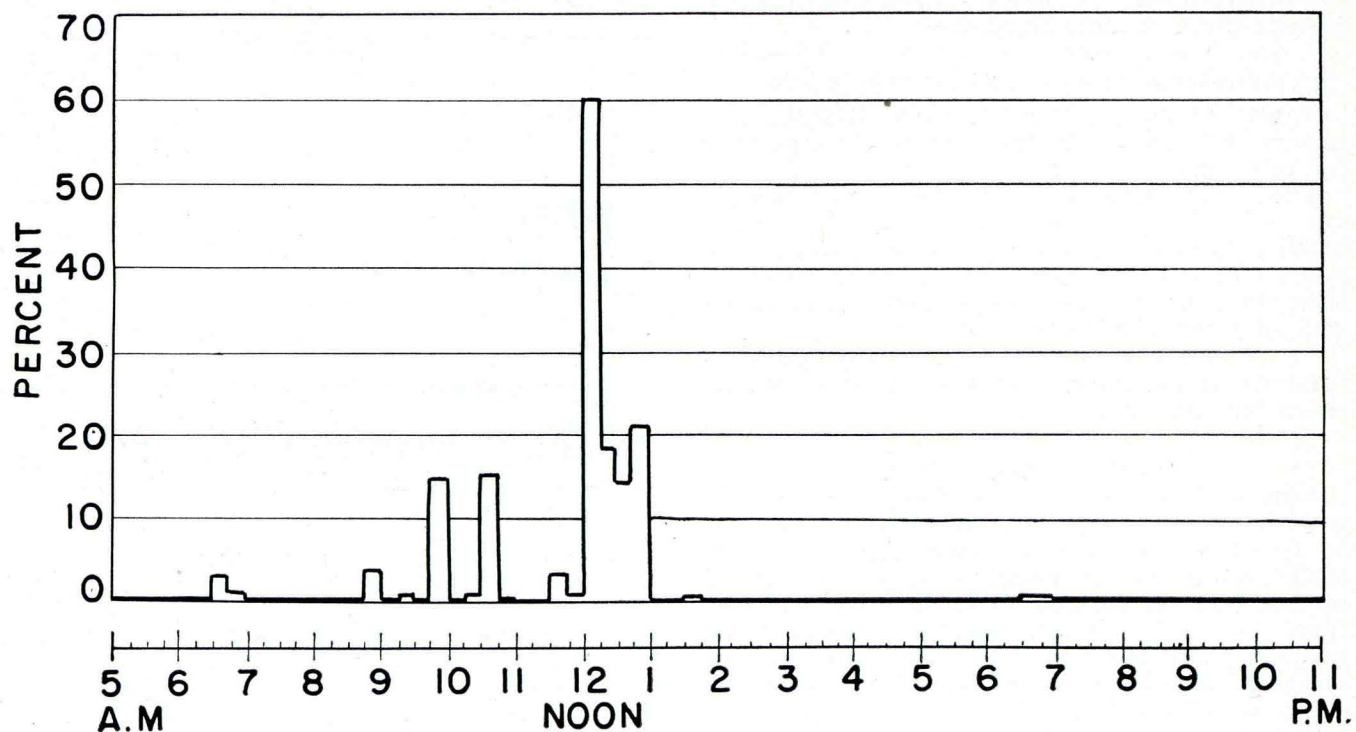


Fig. 11. Time periods farmers listened to cattle market news (percentages based on 263 cattle sellers who listened to any cattle market news before last sale).

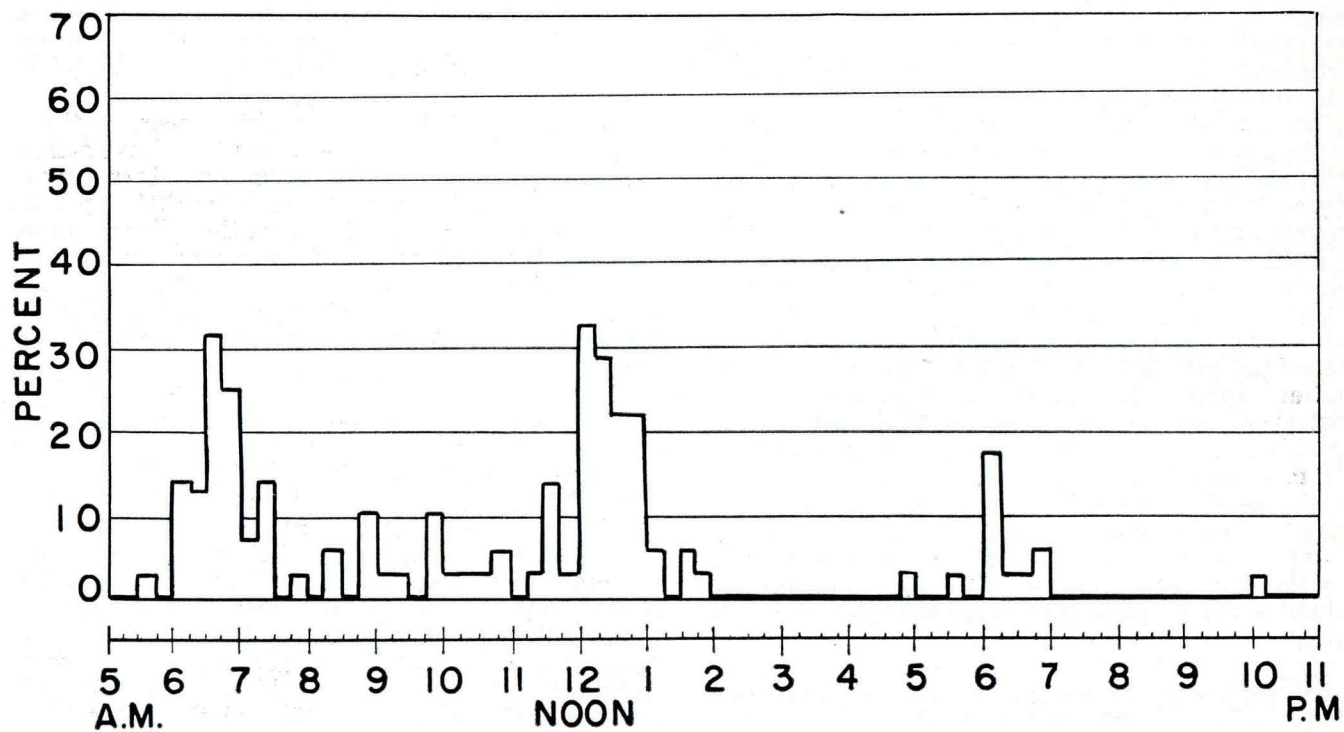


Fig. 12. Time periods radio stations broadcast cattle market news (percent of 28 stations cattle sellers named as sources of cattle market news).

were confident of their ability to judge the grade of their cattle "sufficiently close so as to compare them with the animals being reported" in market news. They believed they could read or listen to market reports and put a price on their cattle. Twenty-seven percent of the cattle sellers said that they rely on the opinion of others to determine what the grade of their cattle might be. The other 3 percent said they paid no attention to grade.

NEWSPAPERS

Eighty-eight percent of the farmers who sold cattle for slaughter or feeder purposes in 1948 received daily newspapers regularly, but only 40 percent read day-to-day cattle market news of any kind before their last sale. More slaughter steer sellers read newspaper market news than did those who sold only other cattle; yet, in both groups, about the same proportion received daily newspapers.

The *Des Moines Register*, used most for information on marketing cattle,²³ covered cattle sales at four terminal markets.

The *Sioux City Journal*, the *Mason City Globe-Gazette* and the *Omaha World-Herald* published detailed reports of the receipts and prices of cattle by all grades and kinds sold in their local cattle market, as well as in nearby terminal markets. Some other daily newspapers had brief local reports. Several had none.

The Chicago cattle market was reported in every newspaper that cattle sellers used. Other terminal markets reported by a few newspapers were those of Omaha, South St. Paul, Kansas City, St. Joseph and Denver.

Newspaper market news is not as fresh as market news broadcast while the markets are active. Nevertheless, 5 percent of the cattle sellers obtained market news from daily publications of some kind and not from radio before their last sale. Thirty-five percent of all farmers who sold cattle obtained their market news both by reading day-to-day market reports and by listening to the radio (see table 15).

TELEPHONE

Telephones, the most direct medium, connect farmers with cattle buyers everywhere. Most of Iowa's cattle buyers have the telephones at their homes or place of business. Also, 90 percent of the farmers who sold cattle had telephones in their houses.

The small percentage (23 percent) of slaughter steer sellers²⁴ calling buyers the day of sale may be explained by the larger proportion of sales of slaughter steers made on terminal markets for which the selling decision generally must be made

²³i.e., by 12 percent of the cattle sellers. The *Sioux City Journal* was mentioned by 5 percent; the *Cedar Rapids Gazette*, *Waterloo Daily Courier*, *Mason City Globe-Gazette*, *Omaha World-Herald*, *Des Moines Tribune* and *Dubuque Telegraph-Herald* were each mentioned by between 1 and 3 percent. Fourteen other daily newspapers were each mentioned by less than 1 percent of the cattle sellers.

²⁴Cattle sellers whose last cattle sales had included some slaughter steers.

TABLE 15. USE OF SELECTED MARKET NEWS MEDIA BY CATTLE SELLERS USING RADIO
(PERCENTAGES OF TWO GROUPS OF CATTLE SELLERS USING RADIO WHO HAD CHARACTERISTIC)

Characteristic	Before last sale	
	Used radio, not daily publication	Used both radio and daily publication
	(percent)	(percent)
Listened to day-to-day cattle radio market news	100	100
Also have someone else listen to cattle market news when can't listen	60	76
As time to sell drew near, depended most on radio as way of getting cattle market information	82	82
Received a daily newspaper regularly	82	100
Read day-to-day cattle market news of some kind	0	100
Had a telephone	86	88
Called buyers on day of sale for information	20	24

the day before the sale. This may also be due to the fact that one-fourth to one-third of the cattle sales were made after the prospective buyer had inspected the cattle on the farm.

Those farmers who called buyers on the day they sold slaughter steers obtained their market news from radio and newspapers in much the same ratios as those who didn't call buyers.

However, there were some differences between those selling only other kinds of cattle who did call buyers on the day of last sale and those who did not (see table 16).

OTHER MEDIA

Thirty-four percent of all cattle sellers read market news in daily newspapers. About 14 percent also read cattle market news in other periodicals. Seven percent of the cattle sellers

TABLE 16. USE OF SELECTED MARKET NEWS MEDIA BY CATTLE SELLERS WHO SOLD NO SLAUGHTER STEERS AT LAST SALE
(PERCENT OF CATTLE SELLERS IN EACH OF TWO GROUPS WHO HAD CHARACTERISTIC)

Characteristic	Cattle sellers selling no slaughter steers at last sale:	
	Who called no buyers	Who called one or more buyers
	(percent)	(percent)
Had radio in working order Jan. 1, 1949	97	97
Listened to day-to-day radio cattle market reports before last sale	58	75
Also have others listen to cattle market reports when can't listen	36	39
Received daily newspaper regularly	88	86
Read day-to-day cattle market reports of some kind before last sale	29	42
Had telephone in house	86	86
Got information that helped farmer decide on buyer of last-sale cattle from:		
Call to buyers	19	36
Visits to market places	11	3
Talking with other farmers and businessmen	12	0
As time to sell drew near, for cattle market information depended most on:		
Radio	55	67
Phone calls to buyers	7	11

mentioned commission firms' newsletters²⁵ (excluding *Producer's Guide*); about 4 percent each, the daily *Chicago Drover's Journal* and *Omaha Stockman-Journal*. Two percent or less mentioned *Wallaces' Farmer*, *Producer's Guide*, weekly mailed government reports, Sunday newspapers, daily mailed government reports, other mailed government reports or other farm periodicals.

The commission firm newsletters were read by a greater proportion (13 percent) of those who sold cattle through commission firms on terminal markets at their last sale than those who sold to other types of outlet (1 percent).

Twelve percent of the cattle sellers recalled getting advice on markets from neighbors or other farmers and businessmen before selling their cattle.

MARKETING PRACTICES OF CATTLE SELLERS

Figure 13 shows the great variety of cattle sold by open-country farmers at last sale. Weight classes for each of these kinds of cattle appear in table 17. Table 18 shows the cattle transactions classified according to numbers sold. In 1948 the total number of cattle sold by Iowa farmers was 2.3 times the number shipped into Iowa for feeding or stocking herds.²⁶

²⁵i.e., Steele & Siman & Co., Sioux City; Producers Livestock Commission, Sioux City, Chicago, Omaha, South St. Paul, South St. Joseph; John Clay & Co., Omaha, Chicago, South St. Joseph; Rice Bros., Sioux City, Chicago; Wood Bros., Omaha, Sioux City, Chicago, South St. Paul; Long & Hansen Co., Sioux City; Wagner, Garrison & Abbot Co., Sioux City; Sioux City Livestock Co., Sioux City; Progressive Farmers Co-op Co., Sioux City; and Scott Commission Co., Sioux City.

²⁶Agricultural Statistics. USDA, Washington 25, D.C. 1950.

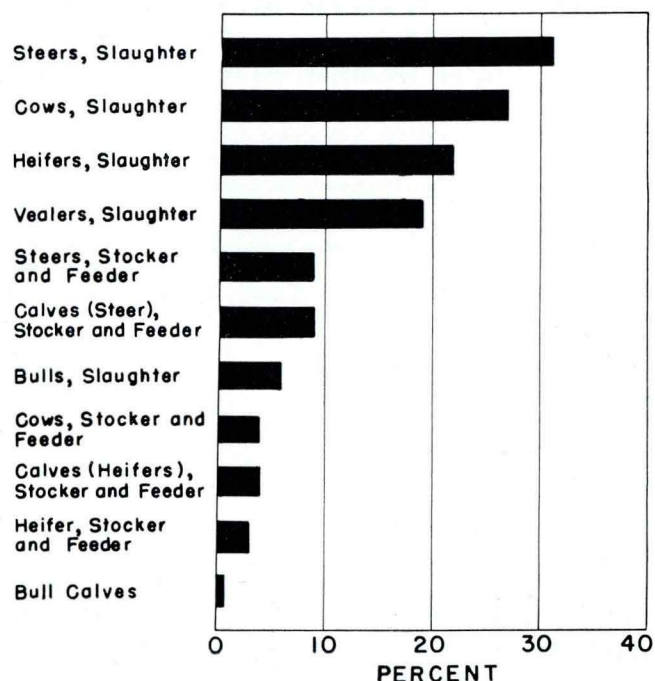


Fig. 13. Kinds of cattle sold in last sale. (Percent of cattle sellers selling each kind in last sale.)

TABLE 17. WEIGHT CLASSES OF CATTLE SOLD, BY KINDS SOLD

Kind of cattle	Weight class for kind of cattle (lbs.)	Last-sale transactions containing cattle of specified kind (percent)
Steers, slaughter	under 700	9
	700 to 899	26
	900 to 1,099	43
	1,100 to 1,299	16
	1,300 to 1,499	6
Heifers, slaughter	under 600	8
	600 to 799	33
	800 to 999	41
	1,000 over	18
Cows, slaughter	500 to 799	6
	800 to 999	16
	1,000 to 1,199	55
	1,200 over	23
Bulls, slaughter	under 900	14
	900 to 999	4
	1,000 to 1,199	32
	1,200 over	50
Vealers	100 to 149	22
	150 to 199	25
	200 to 249	33
	250 to 500	20
Steers, stocker and feeder	under 700	50
	700 to 899	38
	900 to 1,099	12
Heifers, stocker and feeder	under 600	55
	600 to 799	27
	800 over	18
Cows, stocker and feeder	under 800	6
	800 to 1,099	47
	1,100 over	47
Feeder and stocker calves, heifers	200 to 299	11
	300 to 499	32
	500 to 599	23
	600 over	34
Feeder and stocker calves, steers	200 to 399	20
	400 to 599	47
	600 over	33
Bull calves	100 lbs.	100

TABLE 18. NUMBERS OF CATTLE IN LAST SALE, BY TWO GROUPS OF CATTLE SELLERS

Number of cattle* sold in transaction	Farmers selling some slaughter steers in last sale (percent)	Farmers selling other cattle only in last sale (percent)
1 to 5	21	64
6 to 10	29	22
11 to 15	14	6
16 to 20	10	3
21 to 25	10	1
26 to 30	2	1
31 to 35	2	1
36 to 40	5
41 to 45	1	1
46 to 50	3
More than 50	3	1

*Cattle of all kinds.

MARKETING CHANNELS USED BY FARMERS IN SELLING CATTLE

Since farmers reported the outlet for their last sale rather than for all sales in 1948, no inference can be made about actual proportions of cattle sold through various outlets in 1948. Table 19 is based on the last sale.

Thirty-two percent of the slaughter steer sellers sold at some outlet other than the usual one. Three-fourths of those who changed outlets changed because they expected or obtained a higher price. Both groups are compared in fig. 14 with regard to use of various cattle market news media.

MARKET POINTS FARMERS PAID ATTENTION TO

Cattle sellers watched market reports of the

terminal markets most (see table 20).²⁷ Although there is no federal or federal-state reporting of interior cattle markets, farmers could listen to radio reports or read newspaper reports of prices paid at out-of-county packing plants (interior), in-county buyers (local) and those of public stockyards markets (terminal). Approximately 53 percent of the cattle sellers watched one market point, 37 percent watched two, and 2 percent watched three or more different market places.

GRAIN: CORN AND SOYBEANS

MEDIA FARMERS USED

Corn is the principal grain crop grown in Iowa. Since a large portion of the corn is fed to livestock by growers, only 0.2 percent of Iowa's open-country farmers sold corn in 1948. Iowa's cash farm income from corn amounted to 8 percent of Iowa's total 1948 cash farm income.²⁸ Soybeans accounted for 4 percent of the Iowa cash farm income in 1948. One-fourth of Iowa's open-country farmers sold soybeans in 1948.

Table 21 shows the use farmers made of the three most important media for getting market news as they planned their last sales of corn and

²⁷Farmers who had sold cattle for slaughter or feeder purposes in 1948 were asked questions K-3 toward the end of the interviews: "On cattle, what market place do you pay closest attention to on the radio and in newspapers?" and "What other points do you check in this manner?"

²⁸Farm Income Situation. USDA, Washington 25, D.C. June, 1950.

TABLE 19. CATTLE SELLERS' LAST-SALE TRANSACTIONS, BY TYPE OF OUTLET

Type of outlet	Farmers selling some slaughter steers in last sale	Farmers selling other cattle only in last sale
	(percent)	(percent)
Commission firm on terminal market	54	18
Auction (sales barn or farm dispersal)	12	46
Reload station	14	9
Independent, order or trucker buyer	12	14
Interior packing plant	6	3
Direct to other farmers	1	9
Other*	1	1
All outlets combined	100	100

*Cold storage plant, cooperative livestock shipping association.

TABLE 20. MARKET PLACES FARMERS SELLING CATTLE PAY ATTENTION TO IN NEWSPAPERS AND ON RADIO

Type of cattle market place	Cattle sellers
	(percent)
Terminal	72
Interior	35
Local	4
None	8

TABLE 21. MARKET INFORMATION MEDIA FARMERS SELLING CORN OR SOYBEANS DEPENDED ON MOST FOR LAST SALE (PERCENTAGES OF FARMERS WHO HAD SOLD CORN OR SOYBEANS IN 1948)

Medium depended on most as time of sale drew near	Farmers who sold:	
	Corn	Soybeans
	(percent)	(percent)
Radio	39	43
Calls to buyers and co-op managers	38	30
Daily newspapers	8	9
Talks with other farmers and businessmen	2	3
Other (commercial newsletter)	0	1
None	13	14

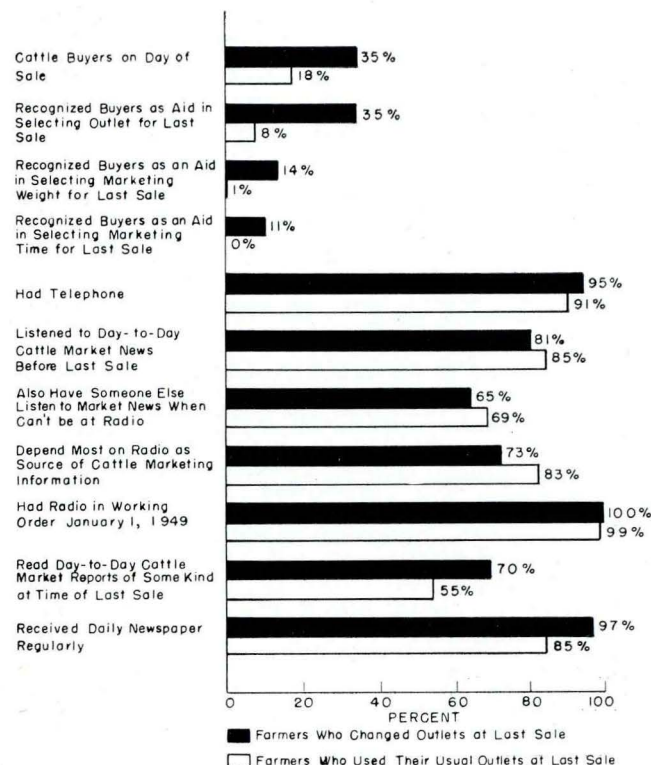


Fig. 14. Market news media used by slaughter steer sellers.

soybeans. In contrast to those selling livestock, fewer farmers named radio as the medium "depended upon most" as they thought of selling their last lot of corn or soybeans.

The following four sections show how farmers who sold corn and soybeans used radio, newspapers, telephone and other grain market news media.

RADIO

Radio served 57 percent of the corn sellers²⁹ as they planned their last sale. These farmers listened to an average of 1.7 programs on 1.5 different stations each day.

Terminal markets were defined as those cities in which grain exchanges were located. These would include Omaha, Chicago, and St. Joseph, Missouri. Local markets were defined as those markets located in the same town or city as the broadcasting station. The only corn or soybean markets radio stations reported were those of terminal markets and local grain exchanges. No station heard by more than 1 percent of the corn or soybean sellers was broadcasting prices paid by local elevators and buyers as distinct from sales on exchanges.

²⁹By corn sellers and soybean sellers is meant those operators of open-country farms who sold corn and soybeans, respectively, in 1948. In general, "grain sellers" will denote farmers who had sold either corn or soybeans.

Sixty-three percent of the soybean sellers listened to day-to-day radio soybean market news before their last sale. They listened to an average of 1.4 programs on 1.3 different stations.

Tables 22 and 23 show which stations farmers listened to for corn and soybean market news at marketing time.

PROGRAMS GRAIN SELLERS LISTENED TO

The actual corn market news programs farmers selling corn listened to were found by asking farmers to name the stations to which they listened regularly and the times they listened to corn market news on those stations (see table 24). Farmers mentioned nine daily WOI corn market reporting programs besides the WOI noon broadcast.

Table 25 lists programs to which more than 1 percent of the soybean sellers said they listened regularly for soybean market news. In addition to the 10:30 a.m. program, six other WOI soybean market broadcasts were mentioned.

TIMES GRAIN MARKET NEWS PROGRAMS WERE BROADCAST

The percentages of broadcasting stations reporting corn and soybean markets during each 15-minute period are shown in fig. 15.

Early morning broadcasts (before 9:29 a.m.) usually reported the future and cash grain trading on principal grain exchanges of the last business day. Broadcasts during the morning (9:29 to 11:29 a.m.) covered the morning's trading. Noon reports usually consisted of the latest quotations from the grain exchanges. The quotation for the close of the Chicago Board of Trade, for instance, was available after the close of the market at 1:15 p.m. C.S.T.

TABLE 22. RADIO STATIONS SELLERS LISTENED TO FOR CORN MARKET NEWS

Station	Location	Percent of corn sellers	Type of markets reported
WHO	Des Moines	28	Terminal
WOI	Ames	25	Terminal
KGLO	Mason City	8	Terminal Local
KMA	Shenandoah	6	Terminal
WOW	Omaha, Neb.	4	Terminal Local
WMT	Cedar Rapids	3	Terminal
KFJB	Marshalltown	2	Terminal
WLS	Chicago, Ill.	2	Terminal Local
WNAX	Yankton, S.D.	2	Terminal
KFEQ	and Sioux City, St. Joseph, Mo.	2	Terminal Local

*Five other stations, including two out-of-state, were each reported by less than 1 percent of the corn sellers.

TABLE 23. RADIO STATIONS SELLERS LISTENED TO FOR SOYBEAN MARKET NEWS

Station	Location	Percent of soybean sellers	Type of markets reported
WHO	Des Moines	40	Terminal
WOI	Ames	20	Terminal
WMT	Cedar Rapids	6	Terminal
KGLO	Mason City	6	Terminal Local
KXEL	Waterloo	3	Terminal Local
KICD	Spencer	1	Terminal
KFEQ	St. Joseph, Mo.	1	Terminal Local

*Eight other stations, including two out-of-state, were each mentioned by less than 1 percent of the soybean sellers.

DID OTHERS GET MARKET NEWS FOR FARMERS WHO SOLD GRAIN?

Thirty-five percent of the corn sellers and 32 percent of the soybean sellers had someone else listen to grain market news when they couldn't listen. This shows the necessity for deliberate and accurate market news broadcasts. This is needed so that listeners who may be unfamiliar with the market news format may have time to copy the information they want.

INFORMATION USED IN TWO IMPORTANT GRAIN MARKETING DECISIONS

Farmers who had sold corn or soybeans were asked, for their last sales, "Where did you get the

TABLE 24. MARKET NEWS PROGRAMS CORN SELLERS LISTENED TO

Station	Location	Time of day	Percent of corn sellers	Type of markets reported
WHO	Des Moines	12:00 noon	28	Terminal
WOI	Ames	10:30 a.m.	14	Terminal
KGLO	Mason City	12:00 noon	8	Terminal Local
WOW	Omaha, Neb.	12:16 p.m.	4	Terminal Local
WOI	Ames	9:55 a.m.	4	Terminal
WOI	Ames	9:29 a.m.	4	Terminal
KMA	Shenandoah	12:15 p.m.	3	Terminal
WMT	Cedar Rapids	12:40 p.m.	3	Terminal
WOI	Ames	11:59 a.m.	3	Terminal
WOI	Ames	12:13 p.m.	3	Terminal
WOI	Ames	1:30 p.m.	3	Terminal
KMA	Shenandoah	12:45 p.m.	2	Terminal

*Five other programs each were mentioned by at least 1 percent but less than 2 percent of the corn sellers; 10 programs were each mentioned by less than 1 percent (i.e., by only one corn seller in the survey).

TABLE 25. MARKET NEWS PROGRAMS SOYBEAN SELLERS LISTENED TO

Station	Location	Time of day	Percent of soybean sellers	Type of markets reported
WHO	Des Moines	12:00 noon	37	Terminal
WOI	Ames	10:30 a.m.	11	Terminal
WMT	Cedar Rapids	12:40 p.m.	6	Terminal
KGLO	Mason City	12:00 noon	6	Terminal Local
WOI	Ames	1:30 p.m.	5	Terminal
WOI	Ames	11:59 a.m.	3	Terminal
WOI	Ames	9:29 a.m.	3	Terminal
KXEL	Waterloo	12:00 noon	2	Terminal Local
WOI	Ames	9:55 a.m.	2	Terminal
WHO	Des Moines	6:30 p.m.	2	Terminal
WHO	Des Moines	8:55 a.m.	1	Terminal

*Seventeen other programs were each mentioned by less than 1 percent of the soybean sellers.

TABLE 26. SOURCE OF INFORMATION USED BY CORN AND SOYBEAN SELLERS IN REACHING MARKETING DECISIONS (PERCENTAGES OF CORN OR SOYBEAN SELLERS)

Market news medium used in reaching decision	Decision concerning selling time		Decision concerning sales outlet	
	Corn (percent)	Soybeans (percent)	Corn (percent)	Soybeans (percent)
Calls to non co-op buyers	9	3	33	27
Calls to co-op managers	1	2	15	18
Radio market news	5	7	0	0
Newspaper market news	1	2	0	1
Talking with other businessmen, neighbors and other farmers	6	4	10	10
Others (commercial newsletter, watching sales at central market in person)	2	1	1	0
No medium named	76*	81*	41	44

*Including 3 percent of the corn sellers and 1 percent of the soybean sellers who named weather as the medium used in reaching a decision on selling time.

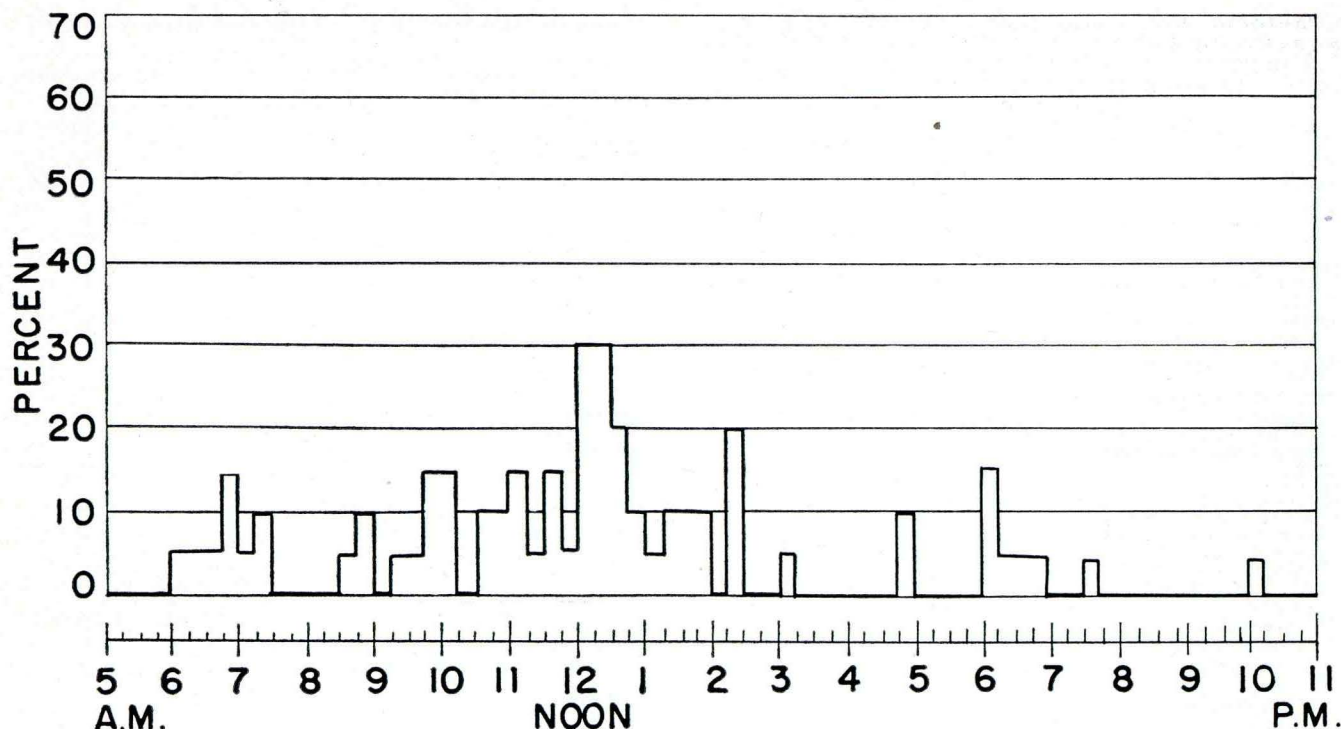


Fig. 15. Time periods radio stations broadcast grain market news (percent of 20 stations corn or soybean sellers named as sources of corn or soybean market news).

information that helped you decide on (a) the buyer of this (corn or soybeans), (b) the time to sell this (corn or soybeans)?"

As table 26 shows, the great majority gave credit to no outside information medium for helping them decide when to sell. The two statements, "We had no storage space," or "Bins had to be cleared for new crop" are typical of the responses.

Insufficient price information about the local market made radio of little value to farmers selling grain.

NEWSPAPERS

Ninety percent of the farmers who sold corn and/or soybeans in 1948 received daily newspapers. Less than half of these—41 percent of the corn sellers and 37 percent of those selling soybeans—read daily newspapers for grain market news before their last sale.³⁰ A few of these farmers read more than one.

All daily newspapers published news of corn and soybean trading on the Chicago Board of Trade. These reports were not presented uniformly by all papers, however. The *Des Moines Register* and *Des Moines Tribune* tabulated Chicago's corn and soybean futures with the day's high, low, opening and closing quotations and the cash prices along with a news story covering the

trading. A few other newspapers published only a brief tabulation of the closing futures quotations, for instance. The *Des Moines Register*, *Des Moines Tribune* and *Omaha World-Herald* also reported cash corn quotations by grades at Kansas City, Minneapolis and St. Louis.

Most of the newspapers mentioned by grain-selling farmers had some local corn or soybean market reports—these were nearly always brief tabulations of prices offered at local elevators for different grades. The only instance of a more complete local grain report was in the *Omaha World-Herald* which published an account of receipts and shipments in addition to prices quoted on different grades.

TELEPHONE

Over 85 percent of the grain sellers had telephones at survey time. Half or more of the farmers selling corn and those selling soybeans called some buyers the day of sale. One-third of all corn sellers and one-third of the soybean sellers called but one buyer on that day.

Telephone calls were the most important means named by farmers in determining *where to sell* corn or soybeans (see table 26). The *over-all* importance of telephones for grain market information is shown in table 21.

Farmers who sought market information by telephoning grain buyers, including co-op managers, on the day of sale differed from the rest of the grain sellers as to other ways of getting market news (see table 27).

³⁰About 17 percent of the corn sellers read the *Des Moines Register* for corn market reports at the time of selling their last lot of corn. Eleven other daily newspapers were each mentioned by 5 percent or less of the corn sellers. Similarly, at the time of their last soybean sale, about 17 percent of the soybean sellers read the *Des Moines Register* for soybean reports; 5 to 6 percent each read the *Des Moines Tribune* and *Mason City Globe-Gazette*. Eleven other dailies were each named by 3 percent or less of the soybean sellers.

TABLE 27. AVAILABILITY AND USE OF SELECTED MARKET NEWS MEDIA BY CORN AND SOYBEAN SELLERS (PERCENTAGES OF CORN SELLERS AND SOYBEAN SELLERS IN EACH OF TWO GROUPS WHO HAD CHARACTERISTIC)

Characteristic	Corn sellers		Soybean sellers	
	who called no buyer	who called one or more buyers	who called no buyer	who called one or more buyers
	(percent)	(percent)	(percent)	(percent)
Had radio in working condition Jan. 1, 1949	97	100	97	97
Listened to day-to-day radio reports on commodity before last sale	41	70	57	69
Also have others listen when can't listen	21	47	27	35
Received daily newspaper regularly	91	87	90	90
Read day-to-day market reports about commodity	34	46	30	45
Had telephone in house	81	89	84	92
When thinking of selling,* depended most for grain market information on:				
Calling buyers and co-op managers	29	46	24	36
Radio	38	40	46	41
Newspapers	9	7	7	11
Other farmers and neighbors	3	0	3	4
Commission firm newsletter	0	0	0	1
None	21	7	20	7
	100	100	100	100

*Not necessarily on day of sale.

OTHER MEDIA

A few grain-selling farmers who read corn or soybean market news in daily newspapers also used other publications, but not to any great extent. The daily *Omaha Stockman-Journal* and *Wallaces' Farmer* each were mentioned as read for corn market reports by about 2 percent of the corn sellers; the daily *Chicago Drovers' Journal* was mentioned as read for soybean reports by 1 percent of the soybean sellers. Less than 1 percent of the grain sellers mentioned weekly or Sunday newspapers, commission firm newsletters, daily mailed government reports, *Doane's Agricultural Digest* or USDA publications. Less than 15 percent of the grain sellers recalled getting market advice from neighbors or other businessmen before last selling grain.

MARKETING PRACTICES OF FARMERS SELLING CORN AND SOYBEANS

Thirty-eight percent of Iowa's open-country farmers sold soybeans and/or corn in 1948. These farmers were asked how much corn and soybeans they sold in their last lots and what marketing methods they used. These questions were asked for two reasons: (1) to make sure a farmer answered questions about his use of market news in making one particular sale, the last sale prior to interview; (2) to find out what quantities farmers did sell and what marketing methods were used.

Soybean sales were smaller per lot than corn sales (see table 28). Most of the corn and soy-

TABLE 28. QUANTITIES OF CORN AND SOYBEANS SOLD IN LAST SALES

Quantity in bushels	Corn sellers	Soybean sellers
	(percent)	(percent)
1 to 100	5	18
101 to 200	9	18
201 to 300	16	19
301 to 400	6	13
401 to 500	16	7
501 to 600	5	6
601 to 700	1	5
701 to 800	2	3
801 to 900	7	2
901 to 1,000	8	4
1,001 to 1,100	6	1
1,101 to 1,200	2	2
1,201 to 1,300	2	1
1,301 to 1,400	2	..
1,401 to 1,500	2	..
1,501 to 2,000	6	1
2,001 to 2,500	4	..
2,501 and over	3	..

TABLE 29. LAST-SALE CORN AND SOYBEAN TRANSACTIONS, BY TYPE OF OUTLET

Type of outlet	Corn transactions	Soybean transactions
	(percent)	(percent)
Elevator	73	92
Farmer for farm use (inter-farm sale)	23	1
Processing plant (including seed firms)	1	3
Trucker buyer	2	2
Feed store	1	1
Government	0	1

bean "last sales" were made to nearby elevators — either independently owned, cooperatively owned, or part of a chain of elevators. As table 29 indicates, 23 percent of the grain sellers made their last sales to other farmers. Inter-farm sales accounted for 15 percent of the total quantity of corn in the most recent sales.

MARKET POINTS FARMERS PAID ATTENTION TO

Each farmer who had sold corn or soybeans in 1948 was asked, as a general question near the close of the interview, what grain market places he paid attention to on the radio and in newspapers (see table 30). The sample was sufficiently widespread that individual market cities other than Chicago were named only infrequently. Therefore, each city named has been classified as either terminal, interior or local.³¹

Most grain sellers watched just one market point. Twenty-four percent of the corn sellers and 20 percent of the soybean sellers named two specific markets; 1 percent of the soybean sellers named three.

³¹Terminal markets were those with grain exchanges in which traders might deal in futures as well as make cash transactions. Interior markets were those grain buyers located outside the county of interview and not qualifying as terminal markets.

TABLE 30. GRAIN MARKET PLACES FARMERS SELLING CORN AND SOYBEANS PAY ATTENTION TO IN NEWSPAPERS AND ON RADIO

Type of market point	Corn sellers*	Soybean sellers*
	(percent)	(percent)
Terminal markets	50	45
Interior markets	22	26
Local markets	31	30
None	15	13

*One or more answers were permitted. Thus totals are greater than 100 percent.

CREAM, WHOLE MILK AND EGGS

MEDIA FARMERS USED

Cream and milk sales made up about 9 percent, and egg sales about 6 percent, of Iowa's cash farm income in 1948.³² According to the survey, 71 percent of the open-country farmers sold cream or whole milk and 72 percent sold eggs in 1948.

Table 31 shows what little use these sellers made of radio and daily newspapers for getting dairy produce and egg market news during the month prior to the survey interview. The highest percentages of farmers selling cream (or whole milk) and eggs who mentioned using any information named "calls to buyers" or "advice from other farmers and businessmen" as the medium depended on most for price, market information.³³

The majority of those who said they depended on no medium most for selling information indicated that their cream or milk and egg marketing methods were routine. A typical statement was, "I followed the same practice for many years."

The following four sections deal with how farmers used radio, newspapers, telephone and other cream and egg market news media.

RADIO

On the average, 8 percent of the dairy products sellers³⁴ and 19 percent of the egg sellers listened regularly to market news about those products. These farmers were listening to about 1.2 different stations and programs from day to day during the month before interview.

Only three stations—WHO, Des Moines, WMT, Cedar Rapids, and WOI, Ames—were listened to regularly for cream market news by more than one farmer in the survey during the month.³⁵ All three broadcast reports of Chicago's cash butter market. WOI at Ames reported Chicago and New York butter futures as well. None of these stations provided farmers with prices paid for cream or butter at nearby Iowa points. WHO's produce markets were heard at 8:55 a.m. by 3 percent of the cream and whole milk sellers; WMT's were listened to at 12:40 p.m. also by 3 percent. WOI's were heard most often at 10:30

a.m. (by about 1 percent of the dairy products sellers). Two other midmorning WOI programs and WOI's noon butter reports also were mentioned.

Egg sellers named 17 stations as listened to for day-to-day radio reports on egg prices in the month preceding interview. WHO and WOI were each listened to by about 7 percent of the egg sellers; WMT was listened to by 4 percent; four stations—KGLO, Mason City, WOW, Omaha, KICD, Spencer and WLS, Chicago—by 1 percent. Ten other stations were mentioned by only one or two in the survey.

Chicago's cash egg prices usually were the only terminal market reports broadcast. New York cash egg prices were reported in a few instances. WHO broadcast local prices for Des Moines gathered by the federal-state market news service there. Radio stations themselves gathered other local egg reports.

WHO's egg reports were listened to at noon. The largest number of WOI listeners heard WOI's egg reports at 10:30 a.m.; the 9:44 a.m. broadcast was next most popular, and only isolated farmers recalled other WOI egg reports (morning, noon and early afternoon). Nearly all egg sellers who listened to WMT heard the 12:40 p.m. broadcast. Most of the other egg programs mentioned in the survey were those presented from 11:30 a.m. through the noon hour.

Figures 16 and 17 show times of day farmers could hear cream and egg market news broadcasts. Most frequently, Iowa stations broadcast only reports of terminal cream and egg markets, which were usually read from each station's syndicated news wire service.

MARKET POINTS FARMERS SELLING CREAM OR WHOLE MILK AND EGGS PAID ATTENTION TO

Over 50 percent of the dairy products and egg sellers said in general they didn't pay attention to any markets over radio and in newspapers for these commodities.³⁶ Twenty-nine percent of the dairy products sellers and about as many of the egg sellers said they paid attention to various local market places. Ten percent of the cream and whole milk sellers and 13 percent of the egg sellers paid attention to terminal market places—about double the numbers watching interior points.

DID OTHERS GET CREAM AND EGG MARKET NEWS FOR FARMERS WHO SOLD CREAM, WHOLE MILK OR EGGS?

Only 1 percent of those selling dairy products and 6 percent of the egg sellers had someone else listen to market news for those products. This small second-hand usage of radio market news may be attributed to the regularity and frequency of selling cream or whole milk and eggs and the small value of radio reports covering markets at a great distance from the farmer. Because of this farmers tend to find suitable outlets and continue to sell at the same place.

³⁶Question K-1, for eggs and cream or whole milk: "What market place do you pay closest attention to on the radio and in newspapers; what other market points do you check in this manner?"

TABLE 31. MARKET INFORMATION MEDIA FARMERS SELLING CREAM OR WHOLE MILK AND EGGS DEPENDED ON MOST (PERCENT OF FARMERS WHO HAD SOLD EACH COMMODITY IN 1948)

Medium depended on most for price and market information	Cream or whole milk (percent)	Eggs (percent)
Other farmers, neighbors and businessmen	16	28
Calls to buyers	18	20
Radio	10	13
Daily newspapers	6	9
Other (commercial and college newsletters, etc.)	2	0
None	48	30

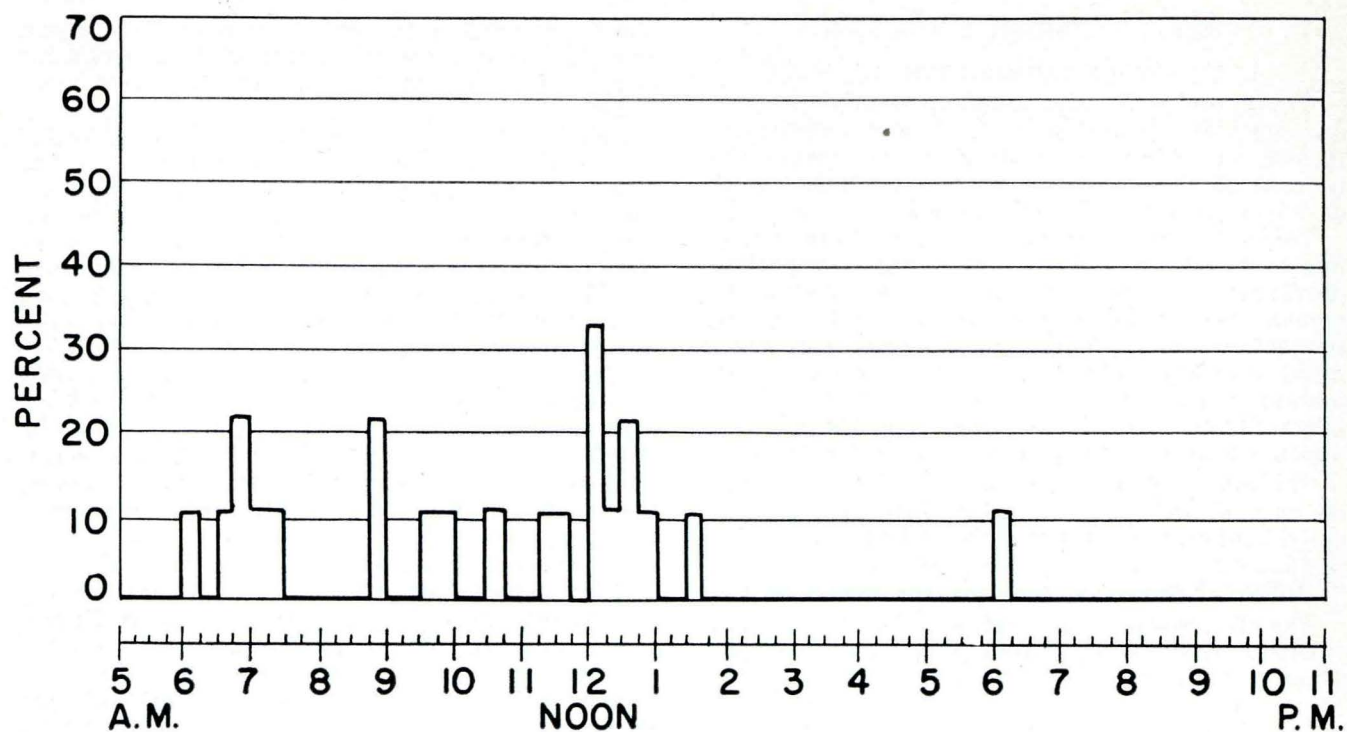


Fig. 16. Time periods radio stations broadcast cream or butter market news (percent of 9 stations farmers named as sources of milk or cream market news).

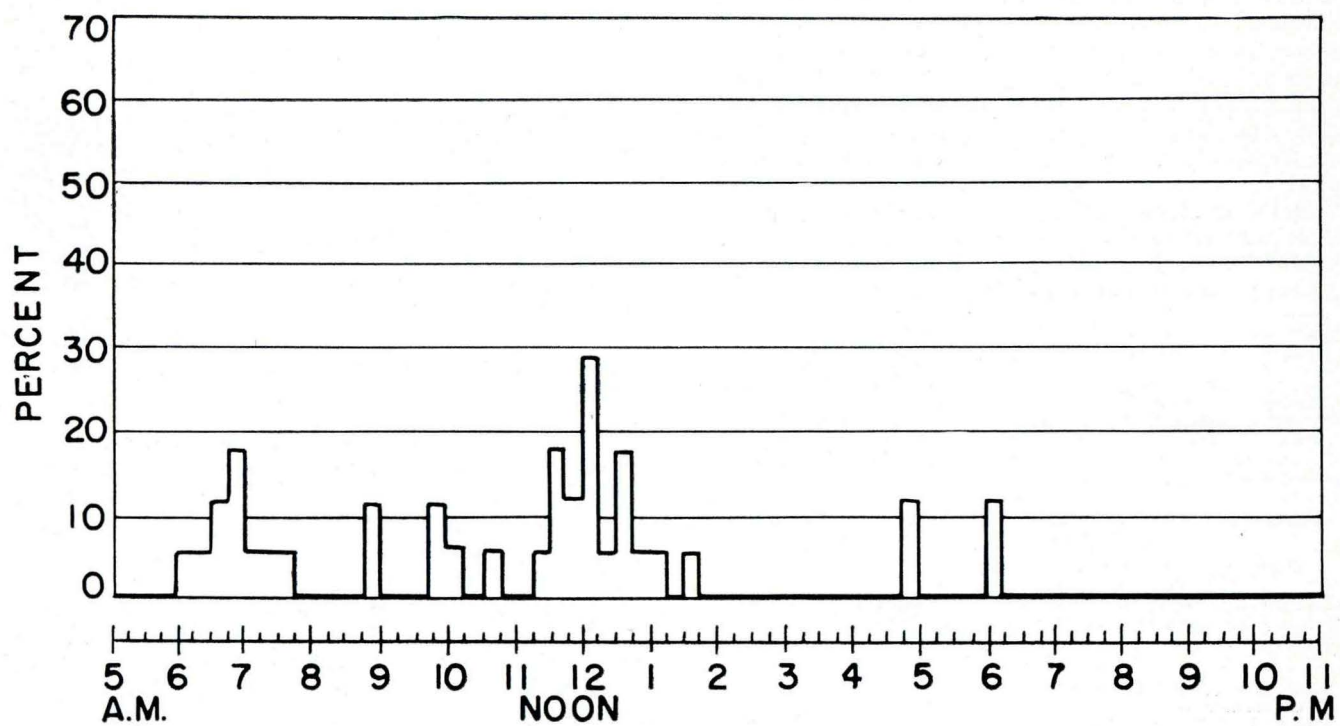


Fig. 17. Time periods radio stations broadcast egg market news (percent of 17 stations farmers named as sources of egg market news).

NEWSPAPERS

No single newspaper³⁷ was used extensively for cream or milk and egg market news.

Such market reports as were published in daily newspapers were quite simple. Most cream reports were made up simply of New York and Chicago cash butter prices. Nearly all gave the receipts and price quotations for different grades of butter in text form. Local butter reports were very brief showing prices paid by grades.

Egg reports varied from paper to paper. Terminal reports covered New York and Chicago produce markets giving total receipts and prices for different grades either in text or tabular form. Local egg reports were less detailed than the terminal reports received over syndicated news wire services. Some local reports consisted simply of a brief report on retail prices. The *Des Moines Register* and *Sioux City Journal*, however, published complete prices on different grades of eggs sold and a short statement on local wholesale egg market conditions.

TELEPHONE

Most dairy-products and egg buyers have telephones. Eighty-five percent of the cream or whole milk sellers and 86 percent of the egg sellers had telephone service at their homes at the time of the survey.

Twenty-eight percent of the egg sellers said that telephone calls to buyers had helped them select their egg buyers. Another 14 percent used the advice of neighbors or other farmers. About one-half of all egg sellers mentioned no medium as helping them decide on a buyer.³⁸

When cream and whole milk sellers were asked where they got information on prices paid for dairy products in other markets³⁹, three-fourths of them said they used no media. About 10 percent phoned buyers and the same number talked

³⁷Egg sellers named 18 daily newspapers as read for egg market news in the month before interview; dairy products sellers named 12 dailies as read for milk or cream reports. However, in both instances each paper was mentioned by less than 1 percent of the sellers.

³⁸The remaining 6 percent most frequently mentioned newspapers.

³⁹Question I-10b.

with other farmers and neighbors. Newspapers and radio were less frequently mentioned in this connection.

Farmers rarely checked prices with buyers to whom they were not selling whole milk or cream. Only 1 percent of those selling these products called any such buyers to check prices during the month before interview.

OTHER MEDIA

Farmers who read day-to-day cream or milk and egg market news in the month before interview told what publications they read. Eight percent of the dairy-products sellers and 10 percent of the egg sellers used daily newspapers for market information. Few used other types of publications. Two percent of the egg sellers mentioned weekly newspapers, but less than 1 percent of the egg or dairy-products sellers mentioned other types of periodicals.

MARKETING PRACTICES OF FARMERS SELLING CREAM OR WHOLE MILK

Table 32 shows that, at the time of the survey, about 90 percent of the dairy-products sellers were selling their cream or whole milk to creameries or cream stations. Two-thirds of the farmers selling cream or whole milk had their products picked up at their farms by the buyers at last sale. Cooperative creameries made pick-ups at 88 percent of the farms selling to them; private creameries, at 72 percent of the farms; produce or cream stations, at 27 percent.

For all types of outlets, except fluid milk markets and milk manufacturing plants, twice-a-week deliveries were most common.

Thirty-eight percent of the farmers selling cream or whole milk to creameries or produce and cream stations made cash sales (sales on day of delivery for last sale). The remainder sold on a pool basis in which the farmers received payment at regular intervals: 40 percent received payment every two weeks, 14 percent weekly and 8 percent monthly.

TABLE 32. CREAM AND WHOLE MILK SALES, BY TYPE OF OUTLET AND FREQUENCY OF DELIVERY

Type of outlet	Farmers selling cream or whole milk			Frequency of pickup or delivery to outlet					
	selling whole milk at last sale	selling cream at last sale	total selling cream or whole milk	Number of times per week					Every 2 weeks
				1	2	3	4	6	
Cooperative creamery	10	31	41	6*	57	29	1	7	0
Produce or cream station	8	22	30	40	52	5	0	2	1
Private creamery	4	15	19	22	67	9	0	2	0
Fluid milk market	5	0	5	0	0	0	0	100	0
Milk manufacturing plants for ice cream, cheese, condensed or powdered milks	3	1	4	11	17	0	5	67	0
Shipped by express to large centralizer creamery	0	1	1	17	50	0	17	16	0
All outlets	30	70	100	19	53	15	1	12	0

*These figures are percentages based on the number of cream and whole milk sellers selling to each type of outlet at last sale.

MARKETING PRACTICES OF EGG SELLERS

Table 33 shows the types of outlets where farmers sold their eggs at their last sale before the survey.

Sixty-two percent of the egg sellers sold ungraded eggs at their last sale. These farmers were paid according to the number of eggs accepted by buyers—that is, on a case run or current receipts basis. Thirty-two percent of the egg sellers sold eggs which buyers paid for on the basis of interior quality, egg size and count. Six percent of the sales were based on egg weight and count only. Thus, large eggs were paid for at a higher rate per dozen than small eggs, but high interior quality did not get a premium.

TABLE 33. EGG SELLERS' LAST-SALE TRANSACTIONS, BY TYPE OF OUTLET

Type of outlet	Egg sellers (percent)	Total eggs sold at last sale† (percent)
Farm pick-up route	35	46
Produce buying station (for car lot shippers)	37	30
Grocery store	18	13
Hatchery	5	6
Produce plant	3	2
Other*	2	3

*Creamery, cooperative marketing agency, consumer delivery route.

†Similar results were obtained by R. L. Baker. In his Ph.D. dissertation, "Some factors affecting the quantity and quality of eggs marketed by certain producers," he pointed out that in 1948 the major first outlets were car lot shippers and buying stations. The grocer was of minor importance. Iowa State College Library, Ames, Iowa. 1950.

Most farmers sold eggs once each week (see table 34). About 64 percent of the egg sellers were selling a case of eggs (30 dozen) or less per week at survey time (between 21 and 30 dozen being most common). Twenty-four percent sold between one and two cases (31 to 60 dozen) per week.

CHANGES FARMERS WANTED IN MARKET NEWS

KIND OF MARKET NEWS REPORTS FARMERS PREFERRED

Of the farmers who had sold any of the six survey commodities in 1948, 68 percent showed preference for a radio or newspaper report giving a complete summary of the market (see fig. 18).⁴⁰ This would be a report of prices on all grades sold, all commodities sold and for all markets affecting the listening or readership area. This report would include information on the receipts of new supplies and the clearance of old supplies on each market.

The complete summary had a clear-cut advantage from the farmer's viewpoint, because it was most likely to give information on the particular product and grade which the farmer had for sale.

⁴⁰In response to the general question K-2, toward the end of the interview: "When you are selling, which of these kinds of reports do you prefer?"

A radio or newspaper report which tells:

Top price for the day on a single market or the top market
..... or:

Price range for the grade making up the bulk of sales or:
A complete summary of the market, including tops, range and
lows

TABLE 34. FREQUENCY OF PICK-UP OR DELIVERY OF EGGS, BY SELECTED TYPES OF OUTLET

Frequency of pick-up or delivery	Egg sellers selling to selected type of outlet			
	All out- lets com- bined*	Gro- cery	Farm pick-up route	Produce- buying station
	(percent)	(percent)	(percent)	(percent)
Once a week	60	56	63	59
Twice a week	34	33	35	33
Three times a week	3	5	1	4
Every 10 days	1	3	0	2
Every two weeks	2	3	1	2

*Including hatchery, produce plant, creamery, cooperative marketing agency and housewife in town (consumer delivery route).

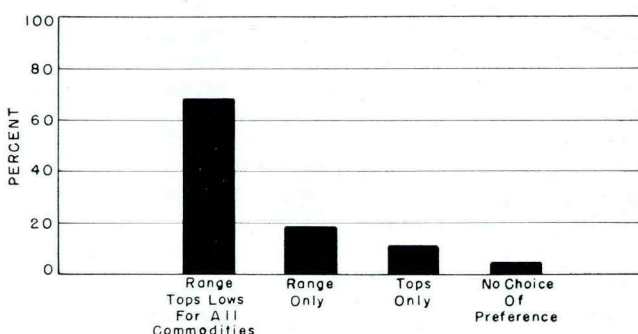


Fig. 18. Kind of market news reports farmers preferred (percentage of all farmers who sold any of the six commodities in 1948).

This point indicates the need for avoiding the terse "top of the market" report frequently broadcast. Large numbers of farmers can't use the report of the "tops" because they do not sell the highest priced grade or weight class.

SUGGESTED CHANGES FOR MARKET NEWS

Each farmer in the survey who had sold any of the six commodities in 1948 was asked, "In what way would you like to change market news reports as they are on the radio or in print?"

Seventy-six percent said they were satisfied with market reports or could think of no changes they would like to make. Twenty-four percent did make suggestions or comments. Twelve percent made suggestions which applied to the amount or kind of information farmers wanted included in market news reports, both in print and on radio, as follows:

FOR MORE COMPLETE REPORTS:*

Give prices on average and low quality sales (more of us sell at those prices), not the emphasis on high prices each day.

More detail on cattle market:

- by grade and class
- reports from all of the cattle buyers
- weights, grades on stocker and feeder reports
- better definition of grades
- information on stag prices

More summary on market news broadcasts

Want local market reports, including cream and egg prices

Report the hog discounts from top by weight groupings

Give cash grain prices instead of futures

Add a soybean market report

*Suggestions listed in order of frequency of response.

Add stock of meat on hand and prices
Report the country run prices rather than packer buyer grades
Advance estimates in more detail
Grain reports for more midwest cities
More information on sealing grain
Complete tabulated reports of all commodities on all midwest terminal markets

Other suggestions regarding trend information and market news scheduling appear below.

FOR MORE TREND INFORMATION:

Give today's prices and note changes from previous market day
Account for rising or falling trends
Account for the wide difference in price within one 24-hour period
Earlier market trend information
More general trend information

ON MARKET NEWS SCHEDULING:

Earlier reports
Markets at a better time for listening
Complete markets summary at 11:30 a.m. to 1:29 p.m.
Complete markets summary at 6 p.m. to 10 p.m.
Stations should schedule market news programs so that farmers may get market reports every 15 minutes during the marketing day
More market reports
More complete program on Saturday
Weekly summaries
Weekly government reports on hogs and turkeys
Add turkey reports in the fall

ON CURRENT MARKET NEWS PRESENTATION:

Want greater accuracy. Radio reports disagree with newspaper reports. Why?
Want information more up-to-date, more understandable
Announcers: talk plainer, too sing-song, know your markets
Paper is day late
Local grain reports not accurate
Radio and newspapers duplicate each other too much
Paper not as complete as radio
Complete summary tables too long
Weekly papers ought to have markets

DEMAND FOR OUTLOOK INFORMATION⁴¹

Forty-three percent of all farmers selling any of the six products said they were currently getting outlook information. Twenty-nine percent named one source of outlook information and 14 percent named two or more sources (see fig. 19).

Outlook information was defined for the farmers as dealing with "how supplies and prices are likely to change in the next few weeks or months." In Iowa, information of this nature is most usually supplied by the Iowa State College Agricultural Extension Service and certain agricultural business firms.⁴² Its general purpose is to help farmers in their marketing and production plans.⁴³

⁴¹More complete information based on outlook data obtained in this market news survey appears in the unpublished M.S. Thesis, Communications media through which Iowa farm operators obtain agricultural outlook information, by Noah D. Holmes. Iowa State College Library, Ames, Iowa. 1951.

⁴²An analysis of the accuracy of Iowa State College farm outlook information is reported in the unpublished M.S. Thesis, Directional accuracy of farm price predictions published in the Iowa Farm Outlook Letter (July 1, 1948 to July 1, 1951), by John F. Heer. Iowa State College Library, Ames, Iowa. 1953.

⁴³An evaluation of the accuracy of federal economic forecasting is presented in the unpublished Ph.D. Thesis, An evaluation of the accuracy of federal economic forecasts by John D. Baker, Jr. Purdue University Library, Lafayette, Indiana. 1952.

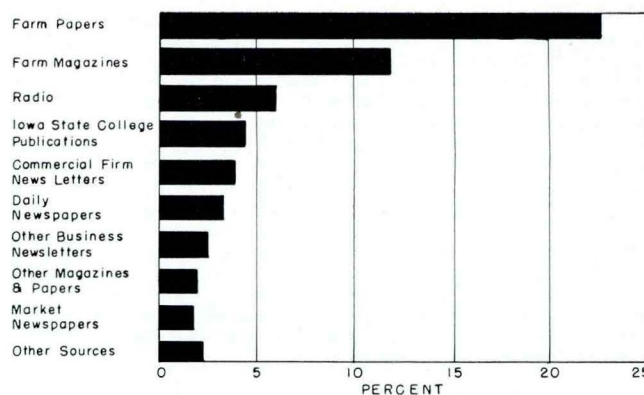


Fig. 19. How farmers obtained outlook information (percentages of all farmers who sold any of the six commodities in 1948). *Other sources include: government crop reports, Farm Bureau personnel, adult education courses, Agricultural Extension Service personnel, commission firm personnel and buying and processing firms.

The three farm periodicals most often mentioned as read for outlook information were *Wallaces' Farmer* (by over one-fifth of the farmers selling any of the six commodities), *Successful Farming* and *Farm Journal* (by 3 to 5 percent each).

Seventy-six percent of the farmers showed a current interest in outlook by saying either they wanted to get some outlook information or they wanted more of it. Seventy-three percent of those who said they weren't then getting outlook information said they wanted to get it.

Forty-five percent of the farmers who have sold one or more of the six commodities in 1948 wanted to read outlook information weekly. Fifteen percent asked for it daily.⁴⁴ When asked what time of day they'd most prefer radio outlook programs, practically all of the farmers who want outlook information wanted to hear it on their radios at noon.

APPENDIX A (SURVEY PROCEDURES)

FOREWORD

An Iowa State College committee concerned with the media of communications farmers use for getting market information drew up the project, "Effectiveness of Assembling and Disseminating Agricultural Marketing Information." This committee was composed of representatives from (a) the director's office, statistics and agricultural economics of the Iowa Agricultural Experiment Station, (b) the Iowa State College Extension Service in Agriculture and Home Economics and (c) the Department of Technical Journalism. This committee, working through the Experiment Station and with an agent of the Marketing Facilities Research Branch of the Production and Marketing Administration (United States Department of Agriculture) who was concerned with research into the effectiveness of reports of the USDA Market News Services, arranged for the joint financing of the project. The committee and the USDA agent, working with representatives of the Federal-State Market News Service at Des Moines set forth the objectives of the project, delineated the areas for research, and determined that the survey would be the first major phase of study. A Market News

⁴⁴Another 6 percent wanted to read outlook information twice monthly; also, 6 percent wanted it monthly.

Research Project Committee was organized from personnel already mentioned and, in the first series of meetings, agreed on general techniques for such a survey.

It was stipulated that the population of interest should consist of operators of farms in the open-country portion of Iowa, the subject-matter area of inquiry being the activity of the members of the population as marketers of their own farm products. It was agreed that information would be obtained by personal interviews with that portion of the population associated with a probability sample of farms¹ such that sample data can be expanded into estimates of population totals, the precision of which can be measured, without the use of outside information.

This appendix is primarily intended to describe procedures used in the design and execution of the survey which was usually referred to either as the "Market News Survey" or as the "Media Survey."

THE SAMPLING PLAN

THE UNIVERSE

All farm operators (including those with joint-operation arrangements) connected with 1948 open-country farms constituted the individuals whose producer-marketer activities were studied.²

Detailed area sampling materials developed in the Master Sample Project³ were available for the open-country zone. Use of area sampling techniques permits the association of every element in a population of unknown and changing size with one and only one small area of known size and location in a universe of areas covering the open-country zone. Therefore, sampling at the first stage was made from a special aggregate (called a universe) of small, contiguous land areas, each of which contained a cluster of farm headquarters. This had the obvious advantage that the size of the universe is known and constant by definition, and the population of farms is wholly contained and distributed geographically within the universe.

Two stages for sampling were used: The first stage specified a sample of small areas; the second stage, a sample of farms with headquarters within those areas. As will be seen later, this specified a sample of farm operators and a sample of producer-marketers also. Essential terms are defined in the following section.

DEFINITION OF TERMS:

Open-country zone consists of all that area which is not within the boundaries of incorporated places, unincorporated name places or other unincorporated places with a 1940 population density of 100 persons or more per square mile.

Farm definition for this survey followed the

¹In addition, information on marketing was obtained for landlords and landlord-marketers associated with the sample of farms. The present report is not concerned with that information and deals only with the marketing activities of the operators. Landlord-marketers were those individuals who sold for the landlords in 1948 any of the hogs or cattle (for slaughter or feeder purposes), corn, soybeans, eggs or cream and whole milk produced on share-type lease farms and paid to the landlords as rent. Thus the landlord-marketer for a particular share-type lease farm might be the landlord himself, an agent for the landlord, or the tenant acting as the landlord's agent.

²In 1940 about 200,000 farms, or 94 percent of all farms in Iowa, were situated in the open country. Estimates derived by the Statistical Laboratory from 1945 Census of Agriculture data indicate that there were 196,000 farms in open country in 1945.

³King, A. J. and Jessen, R. J. The master sample of agriculture (two articles), Jour. Amer. Stat. Assn. 40:38-56. March 1945.

one used in the 1945 Census of Agriculture with one modification—the additional restriction imposed in condition (b) below. In order to qualify as a census farm, a place must be at least 3 acres in size, or if under 3 acres have produced at least \$250 worth of products. The \$250 refers to total value of products—both those used at home and those sold or given to others. Several tracts of land were considered to be one farm rather than several only if they met two conditions: (a) if they were operated by the same operator or partnership, and (b) if they were operated by one set of machinery, equipment and workstock.

Headquarters was the term applied to a unique, simply located point on each farm. If this point lay within the boundaries of the primary segment, the farm's operator was eligible for selection as a respondent. If the operator was living on his farm, his dwelling was defined as the farm headquarters. (When the farm was operated by a partnership, the senior partner according to age was the operator considered in the determination of headquarters.) If the operator did not live on the farm there were a number of specific rules for location of the farm headquarters.

Sampling unit (s.u.) was a small area of land averaging about 1 square mile in size and containing a cluster of about four farm headquarters. Its boundaries were fixed and easily located in the field by a trained interviewer.

Universe was the aggregate of 53,788 sampling units into which the geographic area of the open-country zone in Iowa was divided.

Primary segment was the term applied to a sampling unit which was chosen for the sample in the first stage of sampling.

Subsample was the term applied to the cluster of three farms with headquarters in the primary segment, which were selected in a prearranged, randomized manner, for interviewing.

Secondary segment was the term applied to a sampling unit adjoining the primary segment and from which (a) the "fixed-take" of three farms was to be completed if there were less than three farm headquarters in the primary segment, and (b) farms were to be selected for interviewing purposes as substitutes for those farms in the subsample for which *none* of the operators could be interviewed.

Producer-marketer was a farm operator who in 1948 sold any hogs or cattle (for slaughter or feeder purposes), corn, soybeans, eggs or cream and whole milk produced on the farm he operated. Producer-marketers were classified as (a) farm-operator marketers — those producer-marketers who operated farms either by themselves or as the senior partners by age of partnership operations—and (b) junior partner marketers.

Observation units were those elements, associated with the farm, on which information was to be taken by the interviewers—i.e., the farm itself, the operator, the producer-marketer.

SELECTION OF A SAMPLE OF AREA SAMPLING UNITS

The Revised Master Sample Project materials for Iowa include delineations of 26,060 small areas called count units⁴ which cover the open-country zone. Each count unit contains sufficient farms, as indicated by the 1940 map counts of farms and dwellings, to provide from 1 to 5 master-sample-sized units (m.s.s.u.'s). The sampling unit for this survey was 1 m.s.s.u.

The first stage in the sampling dispersed the sample throughout Iowa by a random systematic selection of 200 primary segments. This represents a sampling rate of 1 primary segment for every 269 s.u.'s, or a 0.37-percent sample. As a preparatory step, the 99 counties were ordered in a serpentine manner from a starting point at the northeast corner of the state and progressing west across the top tier of counties, east on the next tier toward the south, etc., until all counties were ordered. Within counties, count units were ordered by township in a similar contiguous, serpentine manner, listed and cumulated by numbers of m.s.s.u.'s. County lists were then cumulated for the state. The sampling rate of 1 out of 269 s.u.'s was applied against this cumulative listing in the following manner.

A random number was drawn between 1 and 269 to identify the first primary segment, and every 269th m.s.s.u. thereafter in the listing was specified for the sample. This automatically identified the count units in which the primary segments would be located. Within each of these count units, approximately equal-sized s.u.'s (in terms of numbers of indicated farms) were delineated with identifiable boundaries. The s.u.'s were numbered in a serpentine, contiguous manner from the northeast corner of the count unit and one selected at random as the primary segment. The s.u. following it⁵ in numbered order

⁴The count unit is defined as the first division of areas smaller than the minor civil division (township in Iowa). The count unit must be located by well-defined boundaries such as highways, railroad right of ways, creeks, etc.

⁵There was one exception to this procedure—if the primary segment was the highest numbered s.u. in a count unit containing more than 1 s.u., the sampling unit with the next lower number in the count unit was taken as the secondary segment.

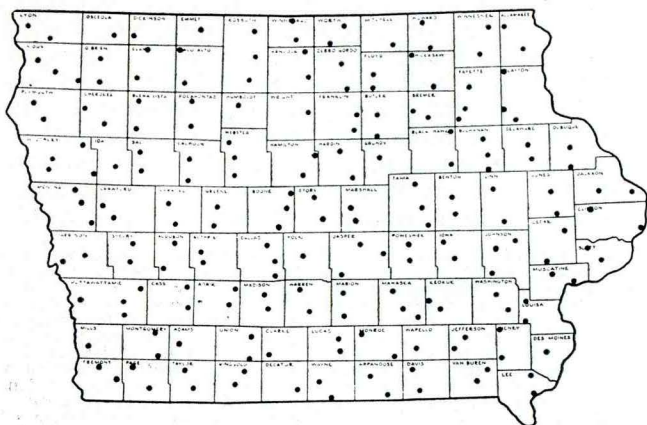


Fig. 1-A. Location of 200 primary sample segments.

was then taken as the secondary segment. Primary and secondary segments were designated in red and green respectively on two sets of Iowa Highway Commission county maps—one set for use in the field by the interviewers, the other set for office use (fig. 1-A shows segment location).

SAMPLING WITHIN THE SEGMENT

The second stage of sampling was a field operation carried out by the interviewers after intensive training to define the sample of farms on which observations would be obtained within the sample of areas. Six hundred farms were to be identified. The Interviewer Manual contained a set of instructions outlining the action to be taken under the various sampling conditions.

On reaching the primary segment, the interviewer prepared a sketch of the segment showing the location of houses, schools and other culture observed. All separate tracts of land, whether whole farms, parts of farms or nonfarm land, were outlined on the sketch and assigned numbers in a clockwise order completely around the segment, beginning at the point at which the interviewer entered the segment. After determining which tracts were parts of farms, who operated the farms and which farm headquarters lay within the primary segment, the interviewer selected three farm headquarters randomly from the primary segment by means of a table of random number sets printed in the Interviewer Manual. This identified the three sample farms on which complete interviews were to be taken. Very brief interviews sufficient to fill out one-page check sheets were obtained for all remaining farms with headquarters inside the segment. To illustrate: Segment 129 in Iowa County, Iowa, with an expected number of seven farms, was found to contain four actual farm headquarters. The random number set in the interviewer's table for a segment with four farms specified Nos. 1, 2 and 4 for complete interview in this case. The interviewer then called at those farms and in addition obtained certain basic information from farm No. 3 to fill out a check sheet (see p. 168).

In cases where the interviewer found exactly three actual farms with headquarters in the primary segment, all would be sample farms. If only one or two farms had headquarters inside the primary segment boundaries, they were designated as sample farms and the interviewer immediately entered the adjoining (secondary) segment to complete the fixed-take of three sample farms. Identification of tracts of land and farm headquarters was begun at the north or east end of the common boundary line between the pair of segments and continued in a clockwise direction within the secondary segment until the requisite number of sample farms had been located and indicated on a segment sketch.

In terms of the sampling design, the chance of any farm's being selected for interviewing was equivalent to the product of (1) the chance which the sampling unit in which the farm's head-

quarters was located had of being chosen, 1/269, and (2) the within-segment sampling rate which is approximately the fraction three divided by the actual number of farms with headquarters within the sampling unit.

UNITS OF OBSERVATION

The element or unit on which information is obtained is called the *unit of observation*. The information which each respondent reported concerned the characteristics of one or another of three units of observation: (a) the farm (as of 1948 and Jan. 1, 1949); (b) the operator of the farm (whether he operated the farm alone or in partnership); or (c) the producer-marketer of the farm if he had sold any of six specified products in 1948 from that farm.

One problem in constructing the sampling plan and the questionnaire was to decide how to deal with these different units of observation. The chance of any farm's being drawn into the sample was known. What, then, were the chances of any other unit's being drawn into the sample? If these latter units of observation did not come into the sample with known probabilities, no estimates with measurable errors can be made for any characteristics based on these units of observation.

The chance which an individual had of coming into the sample as a farm operator would depend on how many farms the operator had. A question was inserted near the beginning of the questionnaire to find out whether he operated or shared in the operation of more than one farm and, if so, how many farms and where they were located.

The chance which the farm operator's household⁶ (or any partner's household) had of coming into the sample would depend on how many operators were in the household as well as on the number of farms each one had. However, for this survey we are considering household or dwelling unit characteristics only as characteristics of the operator and not as characteristics of the household or dwelling unit *per se*.

ELIGIBLE RESPONDENTS

Information about the farm was obtained primarily from the farm operator of a single-operator farm and from any *one* partner of a partner-operated farm. Information about the farm's operators, their household or households, and the producer-marketers of six commodities was obtained from all farm operators (including both senior and junior partners).

In all instances where a sample farm had changed operators since 1948, the operators of the farm land for the 1948 year were interviewed.

The intent of this selection of respondents was primarily to obtain interviews from the persons who had made marketing decisions for the operators' shares of products from open-country farms in 1948, the most recent complete calendar year.

⁶A household was defined in the Interviewer Instructions as consisting of the family or any group of persons living together with common housekeeping arrangements.

CALL-BACKS

When an interview could not be obtained at a sample farm while the interviewer was working in the primary segment, the interviewer was required to make at least one separate call-back to the farm. In case no operator for the sample farm was available after the first call-back, this situation was treated as a farm noninterview. Similarly, a situation in which the operators of the sample farm refused to be interviewed was treated as a farm noninterview.

TREATMENT OF NONINTERVIEWS IN THE FIELD

In any method of sampling, when interviewing techniques are used, some recognition must be given to the existence of noninterviews. In this survey, it was decided that controlled substitution would be made in the field from an adjoining s.u. for noninterview sample farms from the primary segment. Complete interviews would then be taken on the substitute farms.⁷

More specifically, if at least one operator interview was not obtained for a sample farm after one call-back, the farm was regarded as a non-interview and the following procedure was used:

1. A check sheet (1-page mimeographed form) was assigned to the noninterview sample farm. On this the interviewer recorded the reason for noninterview, in detail, and as much information about the operatorship, farm size and tenure, products marketed in 1948, and household composition as he could obtain by observation and by talking with neighbors or with other members of the household.

2. Another farm was substituted for this farm. The rule for substitution specified: (a) that the secondary segment be outlined on the segment sketch, (b) that the secondary segment be entered from the north or east end of the common boundary line between the primary and secondary segments, and (c) that the tracts be numbered in a clockwise manner from that point of entrance. Beginning with the first farm with headquarters inside the secondary segment, the interviewer attempted to complete the necessary number of farm interviews. If at least one operator interview could not be obtained at farm No. 1 with reasonable effort, a check sheet was filled out for the farm and reason for noninterview recorded. The interviewer then proceeded to the next farm in numerical order and continued in this manner until an operator interview was obtained or the secondary segment was exhausted. In every case a check sheet was completed for

⁷For research purposes (to study the scheme's economic and statistical implications for sampling purposes) and because it would be relatively economical, it seemed desirable to make substitutions. It is realized that, with this scheme, there still is the possibility of biasing the data in case the noninterviewed group of eligible respondents should be significantly different from the interviewed group with regard to the subject matter of the questionnaire. However, it was believed that greater danger of a bias, as well as a major loss in value of the sampling design, would result from ignoring the noninterview problem. A measure such as the one considered was needed to keep some degree of identity in sample composition for the sample as it was originally drawn and to preserve the sampling rates.

every farm at which a minimum of one operator interview was not obtained—whether the farm was a sample farm in a primary segment or a substitution farm in a secondary segment.

If an interview was obtained from one of the operators of a partnership sample farm but not from one of the other operators, no field substitution was made. The interviewer recorded the reason for noninterview of these persons on the sections of the farm questionnaire assigned to them.

In case the number of farms for which interviews were finally obtained was less than three and less than the number of farms in the combined primary and secondary segments, office duplication of questionnaires from interview farms would be made for noninterview farms, to bring the total number of farm questionnaires for analysis up to the segment quota. However, it was expected that duplication would be necessary in but a small number of cases, if any.

OBTAINING THE DATA THE QUESTIONNAIRE

The purpose of the questionnaire in general was to obtain, as accurately and completely as possible, information related to the employment of market news by Iowa farmers.

OBJECTIVES OF THE QUESTIONNAIRE DESIGN

The following is an outline of the questionnaire objectives from the standpoint of design:

(a) To assure the interviewer that the operator's farm qualifies for the sample as a "census" farm.

(b) To ascertain the size and location of all parts of the sample farm.

(c) To make sure that questions on inventories, sales, production, planting intentions and household characteristics are asked in the same manner as such questions had been handled in surveys and censuses against which this survey could be checked.

(d) To obtain the information needed to determine whether the operator qualifies as a respondent for the completion of any of the six commodity marketing sections.

(e) To cast marketing questions for the various commodities as nearly as possible into the same setting so that intercommodity comparisons may be made with some assurance.

(f) To obtain supplementary information on marketing and the household for any partners other than the partner or partners located at the farm headquarters.

(g) To obtain any information necessary for estimating the number of producer-marketers, numbers of farms owned or operated by these marketers, and sales of farm products by the marketers.

CONSTRUCTION AND TESTING

Following a series of conferences with specialists in areas concerning survey methods and

interviewing, communications and market news service and marketing problems in the six commodity fields, a tentative questionnaire was drawn up for testing in December 1948. As is often the case, the tentative questionnaire was found to be too long and not sufficiently logical in progression for a successful interview. The final version of the questionnaire (see Appendix B), was completed and tested in March 1949. This version required approximately an hour interview.

The questionnaire was divided into six functional parts and presented to the respondent in what was considered logical sequence, to simplify interviewing in the field. These sections were: A, Orientation; B, The Farm; C, The Operator; D, The Household; E-J, Six Commodity Market News Sections; and K, General Marketing Information.

Thus, the interviewer began by asking who operated the farm; then inquired about farm ownership and leasing arrangements; the farm production in 1948; the Jan. 1, 1949, inventory; sales in 1948; and planting intentions for 1949. Next, referring to the household, the interviewer obtained information on age and education on all members of the household and pertinent data on electric power, running water, telephone, radios, newspapers and magazines received regularly in the home. At the close of section D, the respondent was asked about the number and location of other farms he owned in Iowa—to assure the interviewer that both he and the respondent would be talking about the same farm when discussing marketing.

The questions on sales in 1948 served to identify the commodity questions that should be introduced into the interview. All six commodity sections of the questionnaire had the same continuity. They began with questions identifying the last sale preceding the time of the interview, for one of the commodities sold in 1948. Following this, the respondent was asked about the use of various media for getting marketing information on this product before the last sale, his marketing procedure for that sale as compared with his "usual" procedure and, finally, the respondent's evaluation of the media which had been available to him.

If the farm operator had sold one or more of the six products in 1948, he was also interviewed for the final general marketing information section which was concerned mainly with matters that applied to the overall job of using marketing information and the media used for getting it.

The form of the questionnaire was examined by the Statistical Laboratory for coding and editing ease before being printed by the offset process. Most questions were designed to permit answer completions near the right-hand side of each page. In addition, wide margins were made at the right to facilitate processing the data.

The final draft of the questionnaire was checked by one or more of the committee members working in areas concerning market news service, survey methods, the individual commodity fields and communications.

INTERVIEWER TRAINING

Eight men and seven women, all with farm backgrounds, were hired as interviewers. The project manager and two staff members of the Statistical Laboratory supervised training and field work.

The 15 interviewers attended a 2½-day training school at Ames, April 11 to 13, 1949. Questionnaires and the Interviewer Manual, which included detailed written instructions on sampling operations in the field and the questionnaire, were distributed for study at the opening of the school. The training session covered the purpose of the survey, instructions on interviewing techniques, the sampling method and responsibilities of the interviewers for accurate reporting. The questionnaire was discussed, question by question, with special emphasis on obtaining uniform understanding of the meaning of each question. Following the classroom work there was an afternoon of practice interviewing under actual on-the-farm survey conditions, to help interviewers become thoroughly familiar with the routine of locating sample farms and use of the questionnaire. The following day the interviewers edited the practice questionnaires and reviewed problems encountered in the field.

CONTROL OF FIELD WORK

Most of the interviewing was completed during the period April 14 to May 17, 1949. Throughout those weeks interviewers were required to keep daily time-and-mileage records covering all field work and to send in daily progress reports to the project manager at Ames. During the first week the supervisors had conferences with all interviewers in the field. The interviewers also were instructed to make telephone calls freely to the Ames office for advice on specific problems in identification of farm headquarters and sample farms or on other survey operations.

PRE-EDITING AND REVIEW

Control over the quality of the interviewers' work was maintained through a field reviewing procedure which was set up as follows:

(a) The reviewer at Ames received the questionnaires from the interviewers daily. These were checked, and complete questionnaires were filed for editing. (b) The reviewer returned any questionnaires that were incomplete or which required correction. (c) The interviewers made corrections in any questionnaires returned by the reviewer, making revisits to the corresponding farms if necessary.

All questionnaires were reviewed for consistency and completeness of answers. This review, a feature of the field work, is to be distinguished from later editing which prepared questionnaires for coding—another step in the processing of the data.

Soon after interviewing began, it became evident from the field work that two interviewers needed to be replaced. Their work was then allocated among the other interviewers.

As an additional check on the interviewers' accuracy in locating segments and sampling within segments, the staff workers who had drawn the sample compared the segment sketches made by the interviewers with the office set of maps. In all cases, the sketches seemed consistent with map information.

SAMPLE CHECK

NATURE OF THE RESULTANT SAMPLE

When all the questionnaires were in, a quality control check was made to get a more definite view of the distribution of missing interviews and the extent of substitution. This involved laying out all sample returns (both completed interviews and check sheets), by county and segment as in the original design, and going over each segment checking the number of questionnaires completed and whether proper substitution had been employed where required.

FARMS

The 200 primary segments were found to contain 695 eligible farms—i.e., farms with headquarters inside the segment boundaries. From these, 600 sample farms, three from each segment, were to be randomly selected. However, 10 primary segments turned out to have but one eligible farm each, and 30 had but two eligible farms. This reduced the number of sample farms taken in the primary segments to 550, since the fixed-take of three farms could not be obtained in any of those 40 segments. The deficit was made up, according to rule, from adjoining secondary segments.

No operator interviews were obtained for 51 of the primary segment sample farms (see table 1-A), so, including interviews for the 50 sample farms selected from the secondary segments, 101 complete questionnaires were to be filled out for farms with headquarters in the secondary segments. In four instances this was impossible, so that the total number of farm questionnaires completed in the field was 596 rather than the expected 600.

Only two eligible farms had been found in two sampling areas (primary segments No. 128 and 172 together with their secondary segments). Duplication—essentially a weighting process—was used for these farms. Duplication was also made for one of the two eligible farms in sampling

TABLE 1-A. INTERVIEWING RESULTS FOR PRIMARY AND SECONDARY SEGMENT SAMPLE FARMS

Number of sample farms	Primary segment	Secondary segment	Total
For which at least one operator interview was obtained:	499	39	538
For which no operator interviews were obtained:			
a. Farms successfully substituted for in the field and operator interviews obtained from substitute farms	51	7	58
b. Farms for which substitution was not completed and for which questionnaires were duplicated in the office	0	2	2
Total number of sample farms	550	48	598

area No. 128 because of an operator refusal. One more duplication was required for a sample farm operator refusal in secondary segment No. 162. This segment contained only two farm headquarters inside its boundaries while the adjoining primary segment had contained only one sample farm; field substitution could not be made.

In the two cases where the combined primary and secondary segments had yielded only two sample farms, completed questionnaires were selected at random from all those obtained for farms in the same counties. Data from each selected questionnaire were then punched on two sets of IBM cards, the second or *duplicate* set being assigned the farm number of the "missing" third farm. For the two refusal-noninterview sample farms, check sheet information was used as much as possible; the rest of the information for each farm, its operator and marketers was then duplicated from the completed questionnaire obtained for the nearest farm in the general farming area which approximated the acreage, type of farm, tenure, age of operator and products marketed of the noninterview farm.

About half of the 600 farms for which questionnaires were obtained included land not owned by their operators. Two-hundred-seventy-two farms in the sample had one landlordship,⁸ 20 had two landlordships, and three farms had three landlordships each. Of those 295 farms, 215 contained land rented by the operators under share lease arrangements. However, for 50 of these, none of the landlords' shares of the six survey commodities were sold in 1948.

OPERATORS

Thirty-nine farms were operated by two-man partnerships; five farms, by three-man partnerships. On nearly two-thirds of the partnership farms, all partners lived together in the same dwelling units.

For every partnership, the junior partners as well as the senior partner were interviewed on their marketing of any of the six commodities under consideration. In this way, there were frequently two interviews regarding the sale of, say, one particular lot of hogs. In some cases, it was only possible to make these interviews while the partners were together, although interviewers had been instructed to interview them separately for the marketing sections.

In order to simplify tabulation and calculation of estimates, the analysis of data was limited to 600 operator interviews—one for each farm. In each of the 44 partnership cases, the interview with the senior partner (by age) was selected as the operator interview for the farm. So information on the operator and his household analyzed for those 44 farms was obtained from the senior partners. (It will have been noted that for many

⁸A landlordship was defined as the person or persons, estate or other firm with which a lease for a particular parcel of land was in force. Thus, when a tenant operated two separately-owned parcels of land he had two leases and paid rent to two landlords regardless of the number of persons associated with either lease.

of these farms all partners lived in the same household.)

PRODUCER-MARKETERS

Marketing information reported in the main body of this bulletin refers to the operators' activities as marketers of their *own* shares of the farm products—not to any of their activities in marketing the farm landlords' shares.

There were a few instances⁹ of partnership farms where only the junior partners had made the marketing decisions for particular commodities. For analysis purposes, the junior partners' information on marketing for the last sales of those commodities which had been marketed by the junior partners alone was transferred to the senior partner questionnaire. Therefore, in 14 partnership cases, the operator was treated as a composite individual as a marketer for the farm.

Where both partners reported on their use of market news for the last sale of a particular commodity, only the report of the senior partner was used in the analysis. This action was taken for 26 partnerships.¹⁰

Thus, for partnership farms the data analyzed for the marketer was (1) the senior partner data for all commodities on which the senior partner had helped make marketing decisions, and (2) the junior partner data for commodities sold from the farm which the senior partner did not help market.

THE DATA

Analysis covered only the aspects of market news having to do with farm operators themselves, with the further restriction mentioned in the preceding section. The amount of information obtained for each operator was dependent on the number of commodities sold in 1948 (see table 2-A).

⁹In 11 partnerships the junior partners were the sole marketers for the farms; in three other cases marketing decisions for the farms were made by both junior and senior partners, but for *certain commodities* the junior partners made all marketing decisions.

¹⁰The senior partner was the sole marketer in three other partnerships. A fourth partnership had sold no commodities in 1948.

TABLE 2-A. NUMBER OF COMMODITIES SOLD FROM SAMPLE FARMS IN 1948*

Number of commodities sold	Number of farms	
	considering operators' share only	for total farm sales (combining sales of operators' and landlords' shares) [†]
0	27	27
1	32	30
2	80	70
3	143‡	126
4	204‡	211
5	89	102
6	25	34
Total	600	600

*Considering only the six leading cash income commodities—hogs (for slaughter or feeder purposes), cattle (for slaughter or feeder purposes), corn, soybeans, cream or whole milk, eggs.

†Discrepancies between entries in this column and those in the preceding column are mainly (about 83 percent) due to sales of crop and cash-crop landlords' shares of corn. (Another 9 percent are the result of corn sales for stock-share landlords.)

‡The two most frequently reported combinations of commodities sold by the producer-marketers were hogs, cattle, eggs, cream or whole milk (by one-fourth of the 600 operators) and hogs, eggs, cream or whole milk (by one-twelfth).

Nearly all of the commodity sections of the questionnaire contained the questions: "Where did you get the information that helped you decide on (a) the buyer of? (b) the weight at which to sell [or, for eggs, the grade basis on which to sell]? and (c) the time to sell?" The purpose of this set of questions was to determine the relative use of various media for answering questions about selling place, selling weight (for livestock only) and selling time (for livestock and grain only). It turned out that high proportions of the respondents did not name any market news medium in response—instead, they gave answers that reflected long-standing custom, intuition or habit as the basis for their decisions. Only 22 percent of the hog sellers had named "radio" for their last sale of butcher hogs, in answering the question "Where did you get the information that helped you decide on the time to sell hogs?" However, when asked "As time to sell drew near, what way of getting market information did you depend on most," 86 percent of the hog sellers said "radio" for their last sale.

It is believed that higher proportions of correct answers could have been obtained if the first set of questions had been reworded, as follows: "*What way of getting market information did you refer to that helped you decide on (a) the buyer of? (b) the weight to sell them? (c) the time to sell?*" Nevertheless, the result of the actual wording agreed with one minor hypothesis of the questionnaire writers—that many farmers do not clearly recall where they obtained information leading up to individual parts of a selling decision.

For various reasons some parts of the commodity sections of the questionnaire were not considered during analysis. A discussion of these follows.

One of the questions on radio market reports for each commodity read, "Which station did you listen to most at marketing time?"¹¹ The question following read, "What other stations did you use?" The purpose of these questions was simply to identify what stations were listened to for the commodity market news, not to distinguish between stations named as listened to most and other stations. This report shows all of the stations the farmers listened to for market news on each commodity—but does not include a separate list of stations farmers mentioned as listened to most.

A similar approach was used on newspaper reading. The opening question read, "Which newspaper did you prefer for market reports?" and was followed by, "Which other newspapers did you read these in?" No attempt was made to separate the "preferred" from the other newspapers. Since the farmers received only 1.2 daily newspapers on the average, a choice

was involved in so few cases that an analysis was not believed worthwhile.

Such small numbers of farmers mentioned reading mailed government market reports for the six commodities that nothing was done with the information other than obtaining a total.

Farmers were asked, "Did you listen to the broadcasts of the (hog, cattle, corn, soybean) market reports before you decided to sell or ship?" Those who replied in the affirmative were then asked, "What was the market doing that made you select that day?" Responses to these two questions for livestock and grain are not used in this report because: (a) several interviewers, when asked to comment on the questionnaire and their interviewing experience, pointed out that these questions seemed to confuse respondents, who had just previously been asked, "Before you sold your last lot of did you listen to day-to-day radio reports on the market?" (b) The question about market behavior should have been an independent item in the questionnaire in order to elicit responses from all farm operators who had sold the commodities under consideration.

Question I-5 dealt with whether or not farmers selling cream or whole milk had read any day-to-day milk or cream market reports during the past month. If the response was "no," the interviewer was instructed to skip to I-6, thus omitting questions I-5a,b,c,d,e,f. Unfortunately, questions I-5e and I-5f did not solely relate to the reading of market reports, so that the effect of the inclusive "skip" instruction was a complete loss of suggestions from one group of respondents (those answering "no" to I-5) about information they would like to have to help them compare prices they were receiving with prices paid by other dairy products markets.

Similarly for eggs, the interviewer was instructed to skip to J-5 if he received a "no" response to J-4, "Did you read any newspapers, magazines or government reports for day-to-day egg market reports during the past month?" This meant an omission of eight questions (4a, . . . , h), three of which were not solely related to reading egg market reports and should have been asked regardless. Thus, for one group of respondents (those answering "no" to J-4) information was lost on the grades they paid closest attention to when comparing prices and on their talking to neighbors and telephoning or visiting possible buyers.

Two questions¹² of the general information section of the questionnaire were answered in the affirmative by such small numbers of farmers that no attempt was made to analyze related information on the types of market information farmers record for various commodities or to estimate the numbers of farmers who hedged or speculated on the grain futures markets.

¹¹For eggs, cream and milk, a modified form of the question was used: "Which station did you listen to most for prices [last month]?"

¹²Question K-6, "Do you write down, or graph, or chart any market information?" Question K-7, "Did you buy or sell any grain on the futures market in 1948?"

NOTE ON THE EFFECTS OF FARM SUBSTITUTION
ON THE DATA

Some effects of substitution have been studied by utilizing information from the check sheets which were obtained for noninterview sample farms in the primary segments. Table 3-A presents estimates of means and percentages obtained from data for the 550 primary segment sample farms (including noninterview sample farms) and for the 499 interviewed primary segment sample farms and 51 substitute farms. It is readily seen that the two estimates are, for all practical purposes, identical for the items shown—a result which is not surprising since the differences between the noninterview and substitute farms for those items are not of a major order, and the weight exercised upon the total sample by the substitute farms is small.

EDITING AND PROCESSING THE DATA
EDITING

There were two main treatments applied to the data before coding—(1) editing for missing information within the questionnaires, and (2) editing to bring recorded responses in the questionnaires under a uniform set of terms according to specific written editing instructions. These instructions, prepared in advance of actual editing,

included detailed question-by-question instructions for the editors' use.

Interviewers had been instructed to make every effort to get all information called for in the questionnaire. Even so, there were some missing data. When major portions of the questionnaires were incomplete, revisits to the segments were occasionally made; otherwise, letters were sent to respondents or the persons who had interviewed them—and were followed by telephone calls in a last attempt to get specific responses. Only after these measures had failed was information considered missing.

When either the value of 1948 sales for a commodity or the number of head or bushels sold was missing, state averages were used to compute the missing data—i.e., to convert numbers sold into value of sales and *vice versa*. These average prices were obtained from the Iowa Crop and Livestock Reporting Service for hogs, cattle, corn

QUESTION B-9—CONVERSION FACTORS FOR 1948 SALES DATA

Item	Average value
Hogs and pigs (sold for slaughter or feeder purposes), per head	\$ 58.17
Cattle and calves (sold for slaughter or feeder purposes), per head	226.70
Corn, per bushel	1.85
Soybeans, per bushel	3.13
Eggs, per dozen	0.40
Cream or milk, per pound of butterfat	0.80
Whole milk, per gallon	0.247

TABLE 3-A. COMPARISON OF ESTIMATES FOR 550 PRIMARY SEGMENT SAMPLE FARMS USING INFORMATION FROM NONINTERVIEW PRIMARY SEGMENT SAMPLE FARMS AND INFORMATION FROM SUBSTITUTE FARMS.

Characteristic	The sample after farm substitution*			The sample as it would have been if all primary segment sample farms had been interviewed†		
	Number of farms responding	Estimate A		Number of farms responding‡	Estimate B	
		Average	Percent		Average	Percent
Farm						
Number of acres	550	176.3		541	177.7	
Tenure arrangement:						
Owner-operator			49.8			50.5
Tenant-operator			42.2			41.4
Part-owner-operator			8.0			8.1
	550		100.0	543		100.0
Operator arrangement:						
One-man operation			93.3			92.2
Two-man partnership			6.0			7.1
Three-man partnership			0.7			0.7
	550		100.0	547		100.0
Operator						
Age	550	45.7		539	45.9	
Number of people in operator's household	550	3.83		538	3.80	
Had electricity:						
None			11.7			12.3
REA			51.5			51.9
Other highline			34.6			34.1
Home plant			2.2			1.7
	549§		100.0	543		100.0
Producer-marketer						
Sold hogs in 1948:						
Yes			83.5			84.2
No			16.5			15.8
	550		100.0	539		100.0
Sold cattle in 1948:						
Yes			65.6			65.8
No			34.4			34.2
	550		100.0	538		100.0

*Consisting of 499 interviewed primary segment sample farms and 51 substitute farms from the secondary segments.

†Consisting of 499 interviewed and 51 noninterview primary segment sample farms.

‡These numbers differ from 550 for two reasons: (a) Noninterview primary segment sample farms for which "don't know" responses were obtained for a particular item on the check sheets are not included in figures for that item. (b) Usually no information except reason for noninterview was reported on check sheets for refusal operators.

§No response was recorded on the questionnaire for one sample farm regarding possession of electricity.

and soybeans. For eggs, cream and whole milk, information was obtained from the 1948 Farm Record Summary, Iowa State College.

However, if both the sales-value and the number-sold figures were missing for any commodity, no attempt was made to edit in values. Responses of "don't know" (edited as DK) were given, for both quantity sold in 1948 and value, most frequently for eggs and for cream or whole milk.

Estimates of corn and soybean production figures based on state averages were filled in by the editors when the number of acres harvested for grain was reported but not the production.

For a number of other items the editors were able to determine the missing responses by reviewing evidence within the questionnaire. If this was not possible, the responses were edited as NR (no response).

All publications which the farmer mentioned in response to the inventory question (C-6) on papers and magazines which were then coming into his home regularly were accepted during editing, except comic or religious magazines and publications that couldn't be identified from information in Ayer's "Directory of Newspapers and Periodicals, 1949." The following definitions were used in classifying publications:

Farm paper—a publication devoted largely to agricultural interests, which is published semi-monthly or oftener and has a format conforming to one of the two following classifications: (a) *full-size*: 7 to 8 columns wide, 24 to 26 nonpareil ems (2" to 2.17") wide, and 294 to 304 agate lines (21" to 21.17") in depth; (b) *tabloid size*: 4 to 5 columns wide, 24 to 28 nonpareil ems (2" to 2.33") in width, and 182 to 224 agate lines (13" to 16") in depth. (Farm papers are generally printed on newsprint.)

Farm periodical — any publication devoted largely to agricultural interests which does not conform to the size classifications of farm papers or, if it does, is not published semi-monthly or more frequently.

Other magazine—a magazine devoted to interests other than agriculture.

Daily paper — a newspaper published daily which is devoted to interests other than agricultural.

Sunday paper — a newspaper published on Sunday of each week as the Sunday issue of a daily paper.

Weekly paper — a newspaper published weekly devoted to interests other than agricultural.

For several reasons publications mentioned by the respondent in the marketing sections of the questionnaire, but not in the earlier inventory, were not counted among the papers and magazines being received regularly. (1) A farmer who had sold six commodities in 1948 had a greater chance of being reminded of other publications as the interview was being completed than the farmer who had sold fewer commodities. (2) It is not known whether, or in what manner, the

publications mentioned in the later sections of the questionnaire were coming regularly into the farmer's home. It is possible that those publications were read only occasionally in business establishments or homes other than that of the respondent.

In general during the editing, comments for open-end questions were listed separately by segment and farm No. for later coding.

CODING

By means of a numeric code, data were prepared for punched-card methods of processing.

With the exception of weight classes in livestock, quantitative data were not reduced to categories but preserved in raw form. For example, the reported numbers of bushels of corn sold at last sale were coded exactly as given in the interview rather than being rounded to the nearest hundred and coded only for the hundred digit. However, categories or general classifications were nearly always set up for word-response to open-end questions, and code numbers were assigned to the classes rather than the individual comments. Codes were not prepared for questions which yielded ambiguous responses or items which were considered relatively unimportant to the immediate analysis.

The final code for farm, operator and producer-marketer information consisted of codes for 25 sets or decks of IBM cards, the decks being designated as CARD 101, 102, etc. Data coded for a particular deck or CARD usually concerned a single unit of observation. CARD 101, then, which concerned characteristics of the farm, contained 600 single IBM cards, one for each sample farm in the survey.

Data were transferred in coded form from the original questionnaires to mimeographed coding forms. All coding was checked.

PUNCHING AND VERIFYING CARDS

IBM cards were punched and verified from the coding forms. A number of consistency runs were made to check on final punched-card entries. These were particularly useful for picking up errors whenever the same item, such as "radio station listened to most for hog market news," was punched on more than one card for the same farm or operator.

TABULATION PROCEDURE

As was indicated in the sections on operators and producer-marketers, data for 600 operators (one from each sample farm), rather than 649, were studied for analysis purposes. Therefore, the tables in the main part of this bulletin are based on 600 farms, 600 operators or some subgroup of those operators.

At the time the questionnaire was constructed, a series of 48 preliminary tabulations was proposed, for each commodity field, to indicate the ways in which farmers are exposed to and use market news. These tabulations (frequency counts

and totals for the sample unweighted at the segment level) were completed in December 1949 for farmers who had sold hogs (for slaughter or feeder purposes) in 1948 from the sample farms. On the basis of a review of these tabulations, factors which appeared to be important for cross tabulation were selected.

The major schemes developed for classifying the data for each commodity for analytical purposes were: (1) grouping by size of last sale [number of head, bushels, pounds of butterfat (converted from gallons or pounds of milk or cream if necessary), dozen]; (2) a separation of those producer-marketers who made last sale at their usual outlet from those who made last sale at a new or other-than-usual outlet; (3) a separation of those who used both daily newspaper and radio for market reports on the particular commodity from those who used only radio.

A tentative manuscript for a publication on radio market news was circulated for study and comment among personnel of the USDA, the Iowa State Department of Agriculture, the Iowa Agricultural Experiment Station and the Extension Service in Agriculture and Home Economics, who were interested in the media survey project. This resulted in suggestions for additional tabulations, and the decision was made to check unbiased estimates against biased estimates (prepared from the preliminary tabulations where data were not weighted at the segment level by the inverse of the within-segment sampling rate) before proceeding with further analysis of commodity market news data (see tables 4-A to 8-A).

After a major portion of the machine work had been completed, a number of hand-tabulations were made for data not punched on cards and for complex tables showing relationships among new combinations of variables.

METHODS OF ESTIMATION AND MEASURES OF RELIABILITY¹³

The sampling design used for the media survey employed a two-stage sampling scheme, the first stage being systematic area sampling and the second the fixed-take random sampling within segments.

Methods of estimation of means and totals which are appropriate for systematic samples *per se* are available. However, no exact method of estimation for the sampling errors of such estimates specifically based on a systematic sample is possible. Approximate estimates of the sampling errors can be made in various ways. The simplest, which is sufficient for most census and survey work, according to Yates¹⁴, is to divide the material arbitrarily into strata and to calculate sampling errors as if the units were selected at random from these strata.

For purposes of estimation, the sample for

this survey is considered as a two-stage stratified random sample, and it is assumed that all strata are of equal size. From each stratum, two s.u.'s are drawn (at random) with equal probabilities at the first stage, and farm headquarters are selected from the segments with unequal but known probabilities at the second stage. The following notation will be used:

The subscript *s* refers to the stratum.

The subscript *i* refers to the segment.

The subscript *j* refers to the farm (identified by its headquarters).

N = the total number of farms with headquarters in the open-country zone of Iowa.

L = 100 = the number of strata in Iowa open country.

K = 53,788 = the total universe number of s.u.'s in Iowa open country.

K_s = the universe number of s.u.'s in the *s*th stratum.

K_s is assumed to be equal for all strata, so

$$K_s = \frac{K}{L} = 537.88$$

k_s = 2 = the number of s.u.'s selected for the sample from the *s*th stratum and is constant for all strata.

In the *s*th stratum:

N_i = the total number of farms with headquarters in the *i*th segment.

n_i = 3 = the sample number of farms selected for the *i*th segment and is constant for all segments.

x_{ij} = the value of some measured or enumerated characteristic of (or associated with) farm *j* in the *i*th segment.

t_i = the sample total for segment *i* for some measured or enumerated characteristic.

For the state,

n = 600 = the total number of farms selected for the sample.

μ, T = the true population mean and total respectively for some measured or enumerated characteristic of Iowa open-country farms, operators or producer-marketers.

The symbol $\hat{}$ (hat), will be used to denote an estimate.

UNBIASED ESTIMATES OF TOTALS AND SAMPLING ERRORS FOR THE IOWA OPEN-COUNTRY ZONE

ESTIMATION OF TOTALS

Unbiased estimates of population means cannot be obtained since such estimates require a knowledge of *N*. Population totals can, however, be estimated in an unbiased manner.

The best linear unbiased estimate of a total is:

$$\begin{aligned} \hat{T} &= \sum_{s=1}^L \frac{K_s}{K_s} \sum_{i=1}^{k_s} N_{is} \bar{x}_{is} \\ &= \frac{537.88}{2} \sum_{s=1}^{100} \sum_{i=1}^2 N_{is} \bar{x}_{is} \end{aligned} \quad (1)$$

For characteristics for which response was obtained for all sample farms, this formula can be simplified for computational purposes to:

$$\begin{aligned} \hat{T} &= \frac{537.88}{6} \sum_{s=1}^{100} \sum_{i=1}^2 N_{is} t_{is} \\ &= \frac{537.88}{6} \sum_{s=1}^{100} (N_{1s} t_{1s} + N_{2s} t_{2s}) \end{aligned} \quad (2)$$

where $\frac{t_{is}}{3} = \bar{x}_{is}$

The total number of farms in Iowa open country is estimated from (2) by putting *t_{is}* = *n_{is}* = 3, so

$$\begin{aligned} \hat{N} &= \frac{537.88}{2} \sum_{s=1}^{100} \sum_{i=1}^2 N_{is} \\ &= \frac{537.88}{2} (695) = 186,913 \text{ farms} \end{aligned} \quad (3)$$

¹³This section is based on a more complete report of the same title (typed ms., 54 pp.) by Om Prakash Aggarwal (former graduate assistant, Statistical Laboratory, Iowa State College; now assistant professor of mathematics, U. of Washington).

¹⁴Yates, Frank. Sampling methods for censuses and surveys, p. 229. Hafner Publishing Company, New York, 1949.

However efficiently the interviewing is conducted in any survey, there are usually some isolated nonresponses¹⁵ to specific questions in the questionnaires when they are received for analysis. The assumption was made, for this survey, that sample farms for which no response was obtained for a given question were scattered at random through the total 600-farm sample. Therefore, the sample values obtained for that question may be considered a random sample of values within any stratum, and segments having some nonresponse for the question are treated as segments from which an arbitrary number of farms (the actual number for which response to the question was obtained) was sampled.

In such cases, the characteristic \bar{x}_{is} in formula (1) can be replaced by $\frac{t_{is}}{2}$ for any segment having

one nonresponse for the characteristic and by t_{is} for a segment having two nonresponses. This was carried out in practice by multiplying the characteristic totals for segments with one nonresponse for the characteristic by 3/2 and totals for segments with two nonresponses¹⁶ by 3 before computing the weighted sums by formula (2). In this way an unbiased estimate of the total is obtained in accordance with formula (1), correction being made for nonresponse.

ESTIMATION OF SAMPLING ERRORS

An unbiased estimate of the variance of \hat{T} ¹⁷ is given by:

$$\hat{V}(\hat{T}) = \left(\frac{537.88}{2}\right)^2 \sum_{s=1}^{100} \sum_{i=1}^2 [N_{is} \bar{x}_{is} - \frac{1}{2} \sum_{i=1}^2 N_{is} \bar{x}_{is}]^2 \quad (4)$$

$$= \left(\frac{537.88}{2}\right)^2 \sum_{s=1}^{100} (N_{1s} \bar{x}_{1s} - N_{2s} \bar{x}_{2s})^2$$

For characteristics for which response was obtained for all sample farms, the formula simplifies computationally to:

$$\hat{V}(\hat{T}) = \left(\frac{537.88}{6}\right)^2 \sum_{s=1}^{100} (N_{1s} t_{1s} - N_{2s} t_{2s})^2 \quad (5)$$

Corrections for nonresponse for any characteristic are made, as for \hat{T} , at the segment level by multiplying the characteristic totals for segments with one nonresponse by 3/2 and the totals for segments with two nonresponses by 3, before substituting in formula (5).

The sampling error of \hat{T} when expressed as a percentage of \hat{T} is called the relative sampling error. It is estimated by:

¹⁵These may be in the form of either complete lack of any written responses for single questions, or, for questions of fact, "don't know" and "don't remember" responses. This discussion applies only to such nonresponses remaining after a modicum of editing for missing information (see pp. 157-158). Nonresponse to an entire questionnaire has already been covered through field substitution and duplication of questionnaires.

¹⁶In no instance was there nonresponse for a questionnaire item for all three sample farms in a segment.

¹⁷For \hat{N} ,

$$\hat{V}(\hat{N}) = \left(\frac{537.88}{2}\right)^2 \sum_{s=1}^{100} (N_{1s} - N_{2s})^2$$

a special form of formula (5).

$$\widehat{RSE} = \frac{100 \sqrt{\hat{V}(\hat{T})}}{\hat{T}}$$

which simplifies to

$$\widehat{RSE} = 100 \sqrt{\frac{\sum_{s=1}^{100} (N_{1s} t_{1s} - N_{2s} t_{2s})^2}{(N_{1s} t_{1s} + N_{2s} t_{2s})^2}} \quad (6)$$

Estimates of relative sampling errors¹⁸ given in tables 4-A to 8-A, together with estimated totals, \hat{T} , provide information for putting confidence limits on the estimated totals which indicate the extent of the reliability of the estimates obtained from the sample. The approximate 95-percent confidence interval is given by:

$$\hat{T} - 2[\widehat{RSE} \cdot (\hat{T})] < T < \hat{T} + 2[\widehat{RSE} \cdot (\hat{T})] \quad (7)$$

For example, for the estimated total number of farms in open country, \hat{N} , the interval becomes: $186,913 \pm 2(2.63\%) (186,913) = 186,913 \pm 9,832$ farms.

Then the probability or confidence is approximately 0.95 that intervals computed in this way, in repeated sampling, will contain the true population number of farms in the open-country zone of Iowa.

Put more simply, assuming that nonsampling errors are negligible, unless a 1-in-20 chance has come off in the sampling, the 95-percent confidence interval for a characteristic will contain N (or T), its true value, and even if that 1-in-20 chance has come off, the population value is usually close to the interval.

BIASED ESTIMATES OF TOTALS

Point-estimates of totals can be obtained with comparatively simple computations by multiplying together the unbiased estimate of the total number of farms and the simple mean of the means of all segments. Thus:

$$\hat{T}_b = \hat{N} \bar{x}_b = \frac{\hat{N}}{200} \sum_{s=1}^{100} \sum_{i=1}^2 \bar{x}_{is} \quad (8)$$

When there is complete response for a given characteristic,

$$\hat{T}_b = \frac{\hat{N}}{600} \sum_{s=1}^{100} (t_{1s} + t_{2s})$$

$$= \frac{186,913}{600} \left(\begin{array}{l} \text{unweighted sample total} \\ \text{for the characteristic} \end{array} \right)$$

Correction for nonresponse is made at the segment level as for \hat{T} —by replacing t_{is} by 3/2 t_{is} for one nonresponse for a characteristic and by 3 t_{is} for two nonresponses.

An unbiased estimate of the bias¹⁹ in \hat{T}_b as an

¹⁸These are not errors in the sense of mistakes—they represent the inevitable variation from the true unknown population values which arises from the fact that only a sample is investigated instead of the whole population.

¹⁹ $E(\hat{T}_b) - T = \text{bias}$

$$= \frac{1}{L} \sum_{s=1}^L \frac{K_s - k_s}{k_s(K_s - 1)} (T_s - T_{bs}) + T_b - T$$

$$= (T_b - T) - \frac{1}{L} \sum_{s=1}^L \frac{K_s - k_s}{k_s(K_s - 1)} (T_{bs} - T_s)$$

TABLE 4-A. ESTIMATES OF STATE TOTALS, BIAS AND SAMPLING ERRORS FOR IOWA OPEN-COUNTRY FARMS

Item	Unexpanded sample number	Estimate of total		Estimated relative sampling error of \hat{T}	Estimated bias of \hat{T}_b as a percentage of \hat{T}
		Unbiased \hat{T}	Biased \hat{T}_b		
		(number)	(number)	(percent)	(percent)
Iowa open-country farms	600	186,913		2.63	
Farms with highline electricity in operators' homes	521	163,247	162,303	3.30	-0.58
Farms with running water in operators' homes	288	89,647	89,718	5.89	0.08
In farms in 1948: Acres fully owned* by operators	54,681	16,571,444	17,034,225	6.03	2.79
Acres rented in by operators	53,087	15,933,136	16,537,662	5.78	3.79
Total acres in farms	107,768	32,504,580	33,571,887	3.66	3.28

*Acres in a partnership farm were considered as fully owned by the partnership if any of the partners owned the land.

TABLE 5-A. ESTIMATES OF STATE TOTALS, BIAS AND SAMPLING ERRORS FOR CORN AND SOYBEAN PRODUCTION ON IOWA OPEN-COUNTRY FARMS

Item	Unexpanded sample number	Estimate of total		Estimated relative sampling error of \hat{T}	Estimated bias of \hat{T}_b as a percentage of \hat{T}
		Unbiased \hat{T}	Biased \hat{T}_b		
		(number)	(number)	(percent)	(percent)
Acres planted to field corn in 1948	35,467	10,727,967	11,048,680	3.63	2.99
Acres of corn harvested for grain in 1948	33,775	10,214,093	10,521,588	3.70	3.01
Bushels of corn produced for grain in 1948	2,272,210	696,223,514	707,838,859	14.81	1.67
Acres of corn operators intended* to plant in 1949	35,471	10,648,179	11,049,926	3.78	3.77
Acres planted to soybeans in 1948	4,441	1,379,803	1,383,460	9.78	0.27
Acres of soybeans harvested for grain in 1948	4,333	1,342,957	1,349,816	10.02	0.51
Bushels of soybeans produced for grain in 1948	100,883	31,302,822	31,427,072	10.65	0.40
Acres of soybeans operators intended* to plant in 1949	3,709	1,164,643	1,155,428	10.01	-0.79

*At the time of interview (April-May 1949).

TABLE 6-A. ESTIMATES OF STATE TOTALS, BIAS AND SAMPLING ERRORS FOR FARM PRODUCTS AND EQUIPMENT ON HAND ON IOWA OPEN-COUNTRY FARMS, JAN. 1, 1949

Item	Unexpanded sample number	Estimate of total		Estimated relative sampling error of \hat{T}	Estimated bias of \hat{T}_b as a percentage of \hat{T}
		Unbiased \hat{T}	Biased \hat{T}_b		
		(number)	(number)	(percent)	(percent)
Iowa open-country farms	600	186,913		2.63	
On farms January 1:					
Bushels of corn*	1,377,342	411,113,832	429,069,580	4.27	4.37
Bushels of oats	459,349	141,665,737	143,096,400	6.38	1.01
Bushels of soybeans*	17,371	5,374,338	5,411,414	14.77	0.69
Hogs and pigs	27,302	7,924,791	8,505,119	5.28	7.32
Cattle and calves	15,508	4,631,588	4,831,052	5.97	4.31
Cows and heifers 2 years old and over kept for milk	3,861	1,200,413	1,202,779	4.64	0.19
Chickens	82,148	25,519,590	25,590,745	4.40	0.28
Tractors	767	235,331	238,936	3.16	1.53
Motor trucks	190	57,555	59,189	7.17	2.84
Grain combines	160	48,590	49,843	8.12	2.58

*Not including sealed or optioned corn or soybeans.

TABLE 7-A. ESTIMATES OF STATE TOTALS, BIAS AND SAMPLING ERRORS FOR IOWA OPEN-COUNTRY FARMS FROM WHICH SELECTED COMMODITIES WERE SOLD IN 1948

Item	Unexpanded sample number	Estimate of total ^a		Estimated relative sampling error of \hat{T}	Estimated bias of \hat{T}_b as a percentage of \hat{T}
		Unbiased \hat{T}	Biased \hat{T}_b		
		(number)	(number)	(percent)	(percent)
Iowa open-country farms	600	186,913		2.63	
Farms from which were sold:*					
Hogs (for slaughter or feeder purposes)	505	155,359	157,318	2.77	1.26
Cattle (for slaughter or feeder purposes)	396	123,893	123,363	3.74	-0.43
Corn	190	59,076	59,189	6.96	0.19
Soybeans	153	48,229	47,663	8.42	-1.17
Eggs	434	134,292	135,200	3.41	0.68
Cream or whole milk	429	133,486	133,643	3.28	0.12
Farms whose operators had sold hogs (for slaughter or feeder purposes) in 1948 and pay closest attention to interior markets (for hogs) on radio and in newspapers	212	68,403	66,042	5.77	-3.45

*Including both operators' and landlords' shares. Thus, for 62 sample farms the only corn sold was the landlords' shares. (See second footnote following table 2-A, p. 155.)

TABLE 8-A. ESTIMATES OF STATE TOTALS, BIAS AND SAMPLING ERRORS FOR COMMUNICATIONS MEDIA AVAILABLE TO OPERATORS* OF IOWA OPEN-COUNTRY FARMS, 1949

Item	Unexpanded sample number	Estimate of total		Estimated relative sampling error of \hat{T}	Estimated bias of \hat{T}_b as a percentage of \hat{T}
		Unbiased \hat{T}	Biased \hat{T}_b		
		(number)	(number)	(percent)	(percent)
Iowa open-country farms	600	186,913		2.63	
At time of interview (April-May 1949):					
Farms whose operators were receiving daily newspapers regularly in their homes	537	168,715	167,287	3.09	-0.85
Farms with telephones in operators' homes	502	158,047	156,384	3.57	-1.05
Producer-marketers† who were receiving any outlook information on farm products they were planning to sell	246	74,499	76,634	5.66	2.87
Farms whose operators or members of their households had at least one radio in working condition on Jan. 1, 1949	582	182,341	181,306	2.84	-0.57
Radios in working condition which farm operators' households had on Jan. 1, 1949	1,127	349,456	351,083	3.31	0.47

*Individual operators who farm by themselves and the senior partners for partnership-operated farm. This table does not include totals for those junior partners who did not live in the same dwelling units as their senior partners.

†See section on producer-marketers for restriction on these estimates.

estimator of T is given by:

$$\widehat{bias} = \hat{T}_b - \hat{T} \quad (10)$$

Unbiased and biased estimates of totals for a number of items are presented in tables 4-A to 8-A together with estimates of the bias in \hat{T}_b .

NOTE: Percentages given in the main body of

this report have been computed from the computationally simpler \hat{T}_b and are usually the ratios, expressed in percentage form, of some \hat{T}_b to \hat{N} or to the estimated total number²⁰ of farms whose operators sold a specific survey commodity in 1948 from the farms.

²⁰See table 7-A for these estimates.

APPENDIX B (ILLUSTRATIVE MATERIAL)

QUESTIONNAIRE

Iowa State College

IOWA AGRICULTURAL MARKET SURVEY

Location of place:

InterviewerCounty
 Date of 1st callTownship
 2nd callSegment No.
 3rd callFarm No.
 Length of Interview
 (hrs. & min.)

A. ORIENTATION:

1. Are you farming this place for yourself, or in a partnership?
 SELF
 PARTNERSHIP
 NOT FARMING

*If respondent farms for himself, go to Question 5.
 If respondent is a partner, go to next Question.
 If respondent says he does not farm, go to Question 3.*

2. If partnership: Who is the senior partner?.....
 Relationship to Respondent.....
 Address

*If respondent is senior partner, go to Question 5.
 If respondent is not the senior partner, determine headquarters of farm (partnership operation) by application of SENIOR PARTNERSHIP RULE. If headquarters is found to be in this segment, go to Question 5 and complete the schedule with this respondent before interviewing the other operator. If headquarters is outside the segment, go to Question 5, then terminate the interview.*

3. Do you own or rent in any cropland, pasture, range, orchards, or wasteland in this place?
 YES
 NO

a) If YES, how many acres?.....
If 3 acres or more, this is to be considered a farm. Skip to Question 5.

4. a) How much were field crops, garden vegetables, fruits, berries, etc., produced last year on this place worth at the local market price? (Includes that sold, on hand, and used at home). \$.....
 b) How much were animals or animal products produced on this place last year worth at the local market price? (Includes that sold, on hand, and used at home) \$.....
 c) How much were chickens, other poultry, and eggs produced on this place last year worth at local market prices? (Includes those sold, on hand and used at home). \$.....
 TOTAL a, b, and c.....TOTAL \$.....
*If \$250.00 or more total, this is to be considered a farm.
 If less than 3 acres and less than \$250.00 of produce, etc., terminate interview.*

5. (To be asked if this place qualifies as a farm):
 Do you operate or share in the operation of farms other than this one?
 YES
 NO

If YES, LIST FARM AND LOCATION.....

Then determine according to the instructions if the respondent farms it as part of this farm or as a separate farm with different operator arrangements. If the SENIOR PARTNERSHIP RULE brings the farm headquarters of other farms to this place, fill out separate schedules for each farm.

B. THE FARM:

Name of Operator or Partnership.....
 (Underline correct one)

ADDRESS.....

1. Did you farm this place last year?
 YES
 NO

If NO, name and location of previous operator.....
 (see instructions)

2. How many acres were in this farm last year?.....
 (include cropland, pasture, buildings, woods, orchards, ditches, range and wasteland)
 a) How many acres fully owned?acres
 b) How many acres of which you own a share?acres
 (1) What share?.....
 (fraction)
 c) How many acres do you rent in?acres

TOTAL.....

(should equal answer to Question 2).

If NONE to (b) and (c), SKIP TO QUESTION 4.

3. (If any land is partly owned or rented in): What person or persons own or hold an interest in the land in the farm?

NAME	ADDRESS OF OWNER	NO. OF ACRES	INTEREST HELD BY EACH	TYPE OF LEASE				
				Cash	Crop Share	Cash Crop Share	Stock Share	Profit Sharing
Other Owners:								
Landlords: (2c)								

4. What are the names of all the people who share in the profits and produce derived from operating this farm? (Exclude wife, children, etc., unless they are partners, paid laborers, landlords, etc.)

NAME

ADDRESS

LIVE IN SEGMENT? (Yes or No)	Family RELATIONSHIP to Operator	AGE	FUNCTION IN FARM			
			Operator	Partner (Share)	Landlord	Manager or Laborer (Specify which)

INVENTORY OF STOCK AND GRAIN:

5. a) How many acres were planted to corn last year?.....acres
 How many of these acres were harvested for grain?acres
 How many bushels were produced?bu.
 b) How many acres were planted to soybeans last year?acres
 How many acres were harvested for grain?acres
 How many bushels were produced?bu.

6. a) Was any of the corn produced on this farm last year sealed or optioned by January 1, 1949? YES
 NO
 b) Was any of the soybeans produced on this farm last year sealed or optioned by January 1, 1949? YES
 NO

	Corn	Soybeans	TENANT	LANDLORD	TOTAL

7. How many bushels of.....did you have on hand on this farm January 1, 1949? (Do not include sealed or optioned corn or soybeans).

	Tenant	Landlord	TOTAL
Corn, bushels?			
Oats, bushels?			
Soybeans, bushels?			
Wheat, bushels?			

8. How many of the following types of animals did you have on hand on this farm January 1, 1949?

	Tenant	Landlord	TOTAL
All cattle & calves, number			
Of these, how many cows and heifers 2 years old and over kept for milk?			
All hogs & pigs, number			
Sheep & lambs, number			
Chickens, number			

9. Were any of the following sold from this farm during 1948?

	Tenant	Landlord	TOTAL
Hogs & pigs (sold for slaughter or feeder purposes)?			
No. of head			
\$ Sales			
Cattle & calves (sold for slaughter or feeder purposes)?			
No. of head			
\$ Sales			
Corn?			
No. of bu.			
\$ Sales			
Soybeans?			
No. of bu.			
\$ Sales			
Eggs?			
No. of dozen			
\$ Sales			
Cream or Milk?			
Lbs. butterfat			
\$ Sales			
Whole milk?			
No. of gals.			
\$ Sales			

NOTE: Entries in blanks in the preceding question qualify that item for the appropriate marketing form (Parts E-K).

10. a) How many acres of corn do you intend to plant this year (1949)?acres
 b) How many acres of soybeans do you intend to plant this year (1949)?acres

11. How many farm tractors did you have on this place January 1, 1949?
12. How many motor trucks did you have on this place January 1, 1949?
13. How many grain combines did you have on this place January 1, 1949?

C. OPERATOR:

Now, in order that we will be able to present our findings according to size of family, age of operator, and the like, I would like to ask a few *specific* questions about the household.

1. a) How many people are now living in your household? No.....
- b) (Get relationship to operator, age, sex, education and occupation of members of the household):

RELATION TO OPERATOR	SEX	AGE	HIGHEST GRADE COMPLETED IN SCHOOL	OCCUPATION
1. Operator				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Is there anyone *else* living here? (in the household)

11.
12.
13.
14.

2. How many radios in working condition did you and other members of the household have on January 1, 1949? TOTAL.....

Number in house

No. of FM radios

Number in outbuildings (barn, etc.).....

Number in car(s)

3. Do you have electricity? YES

NO

Power Line:

REA

Other

Home Plant

4. Do you have a telephone in the house? YES

NO

5. Do you have running water in the house? YES

NO

6. INVENTORY OF PAPERS AND MAGAZINES:

- A. What (a) weekly newspapers
- (b) daily newspapers
- (c) Sunday newspapers
- (d) farm papers
- (e) farm magazines
- (f) other magazines

- B. Do you receive this (name of paper or magazine) by mail from publishers?
- C. If NO, how do you get it?

are now coming into your home regularly?

YES NO CARRIER STAND OTHER

- a) WEEKLY NEWSPAPERS

1.

2.

3.

- b) DAILY NEWSPAPERS

1.

2.

3.

4.

- c) SUNDAY PAPERS

1.

2.

- d) FARM PAPERS

1.

2.

3.

- e) FARM MAGAZINES

1.

2.

3.

4.

- f) OTHER MAGAZINES

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

7. Do you own any farms we haven't talked about? YES

NO

If YES, no. of complete farms

no. of parts of farms

LOCATION OF COMPLETE FARMS

LOCATION OF PARTS OF FARMS

Iowa State College

Iowa Agricultural Market Survey

PARTNER SUPPLEMENT

Location of farm:

Interviewer

Date of 1st call

2nd call

County

Township

Segment No.

3rd call..... Farm No.

Name of Partnership.....

STATUS of Respondent: SENIOR PARTNER.....

JUNIOR PARTNER.....

C-1 OPERATOR:

* * * * *

NOTE: the remainder of the partner supplement is exactly like the operator section of the questionnaire (section C).

E. HOGS

THIS IS ABOUT YOUR HOG MARKETING PROBLEMS. WE ARE INTERESTED IN HOW YOU DECIDED WHAT DAY AND WHERE YOU SOLD YOUR LAST LOT OF HOGS.

1. Who bought the last lot of butcher hogs that you sold?.....

a. What type of outlet would that be called?.....

b. Cooperative? YES

NO

2. What weight classes did you sell?

a. How many head in each weight class in this last sale of butcher hogs?

b. What was the date of that last sale?

c. Was the price for a given weight agreed on before the hogs left the farm? YES

NO

d. Who paid for hauling? Buyer.....

Self.....

e. How many buyers or commission men did you call the day you sold?

f. Did you talk to any other farmers or business men who gave you advice or information that helped you pick that day to sell? YES

NO

Radio Hog Market Reports

3. Before you sold your last lot of butcher hogs did you listen to day-to-day radio reports on the hog market? YES

IF "NO" SKIP TO 4.....

a. Which station did you listen to most at hog marketing time?

b. At what times did you listen for hog market news on this station?

c. What other stations did you use?

Call letters Hour Hour Hour

d. What times did you listen to these?

Call letters Hour Hour Hour

e. When you can't listen to hog reports do you have someone else listen for you? YES

NO

4. Did you listen to the broadcast of the hog market reports before you decided to sell or ship? YES

NO

a. What was the market doing that made you select that day? I don't know

Condition of market not a factor

or:

Newspaper, Magazine and Government Hog Market Reports

5. Did you read any day-to-day hog market reports at the time of selling your last lot of butcher hogs? YES

IF "NO" SKIP TO 6.....

a. Which newspaper did you prefer for hog market reports?

b. Which other newspapers did you read these in?

c. Which daily mailed government hog market reports do you read?

Chicago Livestock Market Report

Kansas City Livestock Market Report

Natl. Stock Yds. Livestock Market Report

Omaha Livestock Market Report

Sioux City Livestock Market Report

Detroit Livestock Market Report

So. St. Paul Livestock Market Report

Daily Report of Meat Trade Conditions & Wholesale Quotations from Chicago

d. Which weekly mailed government hog market reports do you read?

Weekly Interior Iowa and So. Minn. Hog Market Report: Des Moines

Weekly Livestock Market Review from:

Chicago

Detroit

Omaha

Wichita

Natl. Stk. Yds.

So. St. Joseph

So. St. Paul

Weekly Livestock Statistical Report: Chicago

e. Which other mailed government hog market reports do you read?

Monthly: Animals Slaughtered under Federal Inspection from:

Chicago

Detroit

Des Moines

Omaha

Wichita

Kansas City

Okla. City

Sioux City

So. St. Joseph

So. St. Paul

(Ask f. and g. only if govt. reports mentioned in c., d. and e. above)

- f. In what way would you like to see these government reports changed?
- g. If you had a choice between two government mailed market reports, which one would you take? Would you take a daily report of prices and receipts on the various markets? Or would you take a weekly report of the conditions of the markets with a summary giving some report of expected future market trends?
- Daily price report
- Weekly summary & situation
- Want both above
- Don't know
- h. Which other market papers do you usually read for hog markets? Give the first three in the order in which you prefer them at hog marketing time.
- 1..... 2..... 3.....
6. Do you usually sell butcher hogs at the same place as this last sale?
- YES
- NO
7. Do you usually sell them in this same weight class?
- YES
- NO
8. Do you usually sell some butcher hogs the same month as your last sale?
- YES
- NO
- (Ask 9 if 6 is NO.)
- (Ask 10 if 7 is NO.)
- (Ask 11 if 8 is NO.)
9. How did you happen to sell at this different place this last time?
10. How did you happen to sell at this different weight this last time?
11. How did you happen to sell at this different time this last time?
12. Where did you get the information that helped you decide on:
- a. The Buyer of the hogs?.....
- b. The Weight at which to sell?.....
- c. The Time to sell?.....
13. As the time to sell drew near, what way of getting market information did you depend on most?

F. CATTLE

THIS IS ABOUT YOUR CATTLE MARKETING PROBLEMS. WE ARE INTERESTED IN HOW YOU DECIDED WHAT DAY AND WHERE YOU SOLD YOUR LAST LOT OF CATTLE.

1. Who bought the last lot of cattle that you sold?.....
- a. What type of outlet would that be called?.....
- b. Cooperative?
- YES
- NO
2. What kinds of cattle did you sell this last time?
- Slaughter cattle, vealers and calves:
- Feeder and stocker cattle & calves:
- Steers
- Heifers
- Cows
- Bulls
- Vealers
- Calves (steers)
- Calves (heifers)
- a. What weight classes did you sell?
- b. How many head in each weight class in this last sale?
- c. What was the date of that last sale?.....
- d. Was the price for a given weight agreed on before the cattle left the farm?
- YES
- NO
- e. Who paid for hauling?
- Buyer.....
- Self.....
- f. How many buyers or commission men did you call the day you sold?
- g. Did you talk to any other farmers or business men who gave you advice or information that helped you pick that day to sell?
- YES
- NO

Radio Cattle Market Reports

3. Before you sold your last lot of cattle did you listen to day-to-day radio reports on the cattle market?
- YES
- NO
- a. Which station did you listen to most at that time?.....
- b. At what times did you listen for cattle market news on this station?
- c. What other stations did you use?
- d. What times did you listen to these?
- Station Time Time Time Time
- c. d. d. d.
- e. When you can't listen for cattle market reports, do you have someone else listen for you?
- YES
- NO
4. Did you listen to the broadcast of the cattle market reports before you decided to sell or ship?
- YES
- NO
- IF "NO" SKIP TO 5.....
- a. What was the market doing that made you select that day?
- I don't know
- Condition of market not a factor
- or:

Newspaper, Magazine and Government Cattle Market Reports

5. Did you read any day-to-day cattle market reports at the time of selling your last lot of cattle?
- YES
- IF "NO" SKIP TO 6.....
- a. Which newspaper did you prefer for cattle market reports?
- b. Which other newspapers did you read these cattle market reports in?
- c. Which daily mailed government cattle market reports do you read?
- Chicago Livestock Market Report
- Kansas City Livestock Market Report
- Natl. Stock Yds. Livestock Market Report
- Omaha Livestock Market Report
- Sioux City Livestock Market Report
- Detroit Livestock Market Report
- South St. Paul Livestock Market Report
- Daily Report of Meat Trade Conditions & Wholesale Quotations from Chicago
- d. Which weekly mailed government cattle market reports do you read?
- Weekly Stocker & Feeder Report from:
- Kansas City
- South St. Paul
- Omaha
- Weekly Livestock Statistical Report:
- Chicago
- Weekly Livestock Market Review from:
- Chicago
- Natl. Stk. Yds.
- Detroit
- Oklahoma City
- Omaha
- Sioux City
- Wichita
- So. St. Joseph
- Kansas City
- So. St. Paul
- e. Which other mailed government cattle market reports do you read?
- Monthly: Animals Slaughtered under Federal Inspection from:
- Chicago
- Kansas City
- Detroit
- Natl. Stock Yds.
- Des Moines
- Oklahoma City
- Omaha
- So. St. Joseph
- Wichita
- So. St. Paul
- Cold Storage Holding of Meat and Lard from:
- Chicago
- Kansas City
- Detroit
- Natl. Stock Yds.
- Des Moines
- Oklahoma City
- Omaha
- So. St. Joseph
- Wichita
- So. St. Paul
- Stocker and Feeder Cattle & Sheep Received in Several Corn Belt States.
- Chicago
- Kansas City
- Detroit
- Natl. Stock Yds.
- Des Moines
- Oklahoma City
- Omaha
- So. St. Joseph
- Wichita
- So. St. Paul
- (Ask f. and g. only if govt. reports mentioned in c., d. and e. above)
- f. In what way would you like to see these government reports changed?
- g. If you had a choice between two government mailed market reports which one would you take? Would you take a daily report of prices and receipts on the various markets? Or would you take a weekly report of the conditions of the markets with a summary giving some report on expected future market trends?
- Daily price report
- Weekly summary & situation
- Want both above
- Don't know
- h. Which other market papers do you usually read for cattle markets? Give the first three in the order in which you prefer them at hog marketing time.
- 1..... 2..... 3.....
- (Ask 6 only if Slaughter Steers were sold last (Question 2). Same applies to 7 and 8).
6. Do you usually sell slaughter steers at the same place as this last sale?
- YES
- NO
7. Do you usually sell slaughter steers in this same weight class?
- YES
- NO
8. Do you usually sell slaughter steers in the same month as your last sale?
- YES
- NO
- (Ask 9 if 6 is NO)
- (Ask 10 if 7 is NO)
- (Ask 11 if 8 is NO)
9. How did you happen to sell at this different place this last time?
10. How did you happen to sell at this different weight this last time?
11. How did you happen to sell at this different time this last time?
12. Where did you get the information that helped you decide on:
- a. The Buyer of these cattle?.....
- b. The Weight to sell them?.....
- c. The Time to sell?.....
13. As time to sell drew near what way of getting market information did you depend on most?.....

G. CORN

THIS IS ABOUT YOUR CORN MARKETING PROBLEMS. WE ARE INTERESTED IN HOW YOU DECIDED ON THE DAY AND PLACE TO SELL YOUR LAST LOT OF CORN.

1. Who or what agency bought the last lot of corn you sold?.....
 - a. What type of outlet would that be called?.....
 - b. Cooperative?.....
2. How many bushels did you sell at this time?.....
 - a. What was the date of that last sale?.....
 - b. Was the price for a given grade agreed on before the corn left the farm?.....
- c. Who paid for hauling?.....
 - Buyer.....
 - Self.....
- d. How many buyers, elevators, mills or brokers did you call the day you sold?.....
- e. Did you talk to any other farmers or business men who gave you advice or information that helped you pick that day to sell?.....

YES.....
NO.....

Radio Corn Market Reports

3. Before you sold your last lot of corn did you listen to *day-to-day* radio reports on the corn markets?.....
 - IF "NO" SKIP TO 4.....
 - a. Which station did you listen to most at corn marketing time?.....
 - b. At what times did you listen to corn markets on that station?.....
 - c. What other stations did you use?.....
(Use one line under c. for each)
 - d. What times did you listen to these?.....
(Put times to right of station)
- e. When you can't listen to corn market reports do you have someone else listen for you?.....
4. Did you listen to the broadcast of the corn markets before you decided to sell?.....
 - IF "NO" SKIP TO 5.....
 - a. What was the market doing that made you select that day?.....
I don't know.....
Condition of market not a factor.....
or:
 - b. Did you get: (a) price based on market on day contacted buyer?.....
or: (b) price based on market on day of delivery?.....
or: (c) other.....

c. d. d. d.
Call Letters Hour Hour Hour

Newspaper, Magazine and Government Corn Market Reports

5. Did you read any *day-to-day* corn market reports at the time of selling your last lot of corn?.....
 - IF "NO" SKIP TO 6.....
 - a. Which newspaper did you prefer for corn market reports?.....
 - b. Which other newspapers did you read these in?.....
 - c. Which mailed government grain market reports do you read?.....
Weekly Commercial Grain.....
Stocks Report from:.....
Chicago.....
Kansas City.....
Minneapolis.....
Quarterly Feed Market.....
Summary from:.....
Chicago.....
Kansas City.....
(Ask d. and e. only if govt. reports mentioned in c. above)
 - d. In what way would you like to see these government reports changed?.....
 - e. If you had your choice of times to receive a government report of the market situation on grain and livestock, which would you prefer?.....
Daily.....
Every other week.....
Monthly.....
Other.....
 - f. Which other market papers do you usually read for corn markets? Give the first three in the order in which you prefer them at corn marketing time.
1..... 2..... 3.....
6. Do you usually sell corn at the same place as this last sale?.....
 - YES.....
 - NO.....
7. Do you usually sell corn the same month as your last sale?.....
 - YES.....
 - NO.....
- (Ask 8 if 6 is NO)
(Ask 9 if 7 is NO)
8. How did you happen to sell at this different place this last time?.....
9. How did you happen to sell at this different time this last time?.....
10. Where did you get the information that helped you decide on:.....
 - a. The Buyer of this corn?.....
 - b. The Time to sell this corn?.....
11. When you were thinking of selling this corn, what way of getting market information did you depend on most?.....

H. SOYBEANS

THIS IS ABOUT YOUR SOYBEAN MARKETING PROBLEMS. WE ARE INTERESTED IN HOW YOU DECIDED ON THE DAY AND PLACE TO SELL YOUR LAST LOT OF SOYBEANS.

1. Who or what agency bought or handled the last lot you sold?.....
 - a. What type of outlet would that be called?.....
 - b. Cooperative?.....
2. How many bushels did you sell at this time?.....
 - a. What was the date of the last sale?.....
 - b. Was the price for a given grade agreed on before the soybeans left the farm?.....
- c. Who paid for hauling?.....
 - Buyer.....
 - Self.....
- d. How many buyers, elevators, mills or brokers did you call the day you sold?.....
- e. Did you talk to any other farmers or business men who gave you advice or information that helped you pick that day to sell?.....

YES.....
NO.....

YES.....
NO.....

Buyer.....
Self.....

YES.....
NO.....

Radio Soybean Market Reports

3. Before you sold your last lot of soybeans did you listen to *day-to-day* radio reports on the grain market?.....
 - IF "NO" SKIP TO 4.....
 - a. Which station did you listen to most at soybean marketing time?.....
 - b. At what times did you listen to soybean markets on that station?.....
 - c. What other stations did you use?.....
(Use one line under c. for each)
 - d. What times did you listen to these?.....
(Put times to right of station)
- e. When you can't listen to soybean market reports do you have someone else listen for you?.....
4. Did you listen to the broadcast of the soybean markets before you decided to sell?.....
 - IF "NO" SKIP TO 5.....
 - a. What was the market doing that made you select that day?.....
I don't know.....
Condition of market not a factor.....
or:

c. d. d. d.
Call Letters Hour Hour Hour

Newspaper, Magazine and Government Soybean Market Reports

5. At the time of selling your last lot of soybeans did you read any *day-to-day* grain market reports?.....
 - IF "NO" SKIP TO 6.....
 - a. Which newspaper did you prefer for soybean market reports?.....
 - b. Which other newspapers did you read these in?.....
 - c. Which mailed government grain market reports do you read?.....
Weekly Commercial Grain Stocks Report from: Chicago.....
Kansas City.....
Minneapolis.....
Quarterly Feed Market Summary from:.....
Chicago.....
Kansas City.....
Weekly Feed Market Review from:.....
Chicago.....
Kansas City.....
Weekly Grain Market Review from:.....
Chicago.....
Kansas City.....
Soybean Market Summary from: Chicago.....
(Ask d. and e. only if govt. reports mentioned in c. above)
 - d. In what way would you like to see these government reports changed?.....
 - e. If you had your choice of times to receive a government report of the market situation on grain and livestock, which would you prefer?.....
Daily.....
Weekly.....
Every Other Week.....
Monthly.....
Other.....
 - f. Which other market papers do you usually read for soybean markets? Give the first three in the order in which you prefer them at soybean marketing time.
1..... 2..... 3.....
6. Do you usually sell soybeans at the same place as this last sale?.....
 - YES.....
 - NO.....
7. Do you usually sell soybeans the same month as your last sale?.....
 - YES.....
 - NO.....
- (Ask 8 if 6 is NO)
(Ask 9 if 7 is NO)
8. How did you happen to sell at this different place this last time?.....
9. How did you happen to sell at this different time this last time?.....

10. Where did you get the information that helped you decide on:
 - a. The Buyer of these soybeans?
 - b. The Time to sell these soybeans?
11. When you were thinking of selling these soybeans what way of getting market information did you depend on most?

I. CREAM AND WHOLE MILK

WE ARE INTERESTED IN HOW YOU DECIDE WHETHER YOU ARE GETTING THE RIGHT PRICE FOR YOUR CREAM OR WHOLE MILK.

1. Where are you selling your dairy products now?
2. Is cream or whole milk picked up at your farm?
 - IF "NO" SKIP TO 3.
 - IF "YES" SKIP TO 3.
3. What is the settlement plan on which you are paid? (Select one of the following or write in the "other" space)

Butterfat:
 Day of delivery
 One week pool
 Two week pool
 Monthly pool
 Whole Milk:
 By volume
 By weight
 By butterfat content only
 B.F. plus value of skin
 B.F. plus % non-fat-solid
 Flat price, no B.F. dftl.
 Flat price plus B.F. dftl.
 Classified price plan
 Other

- a. How many units did you sell in the last week (7 days)?
 -lbs.
 -gals.
- b. How often is your cream or milk delivered or picked up?

Radio Milk and Cream Market Reports

4. Did you listen to day-to-day radio reports on the milk and cream markets last month?
 - IF "NO" SKIP TO 5.
 - IF "YES" SKIP TO 5.
- a. How often during last month? (How many times?)
- b. What station did you listen to most for milk and cream prices?
- c. At what times did you listen for milk and cream prices, etc., on this station?
- d. What other stations did you use?
- e. What times did you listen to these?

	d.	e.	e.	e.
	Call Letters	Hour	Hour	Hour
.....
.....

- f. When you can't listen to market reports do you have someone else listen for you?

YES
 NO

Newspaper, Magazine and Government Milk and Cream Market Reports

5. Did you read any day-to-day milk or cream market reports during the past month?

- a. Which newspapers, magazines, or pamphlets did you read these in?

- b. Which of these did you prefer?
- c. Which daily mailed govt. Dairy Market Reports did you read during the past month?

Daily Market Reports (Dairy and Poultry Products) from:
 Chicago Madison
 Detroit St. Louis

- d. Which other mailed govt. Dairy Market Reports did you read in past month?

Semi-Weekly Market Report from Des Moines
 Weekly Summary of Egg & Poultry Markets from Chicago
 Weekly Dairy Market Review from Chicago

Monthly Origin or Receipts by States from: Chicago
 Detroit

- e. What information that you can't get now would you like to have to help you compare the prices you get for dairy products with those paid on other markets?

- f. What one of the ways that we've mentioned would you prefer having this information given to you?

	Radio	Daily Govt. Rep.
Wkly. Gvt. Rep.
Newspaper

Buyer's Cream and Milk Market Reports

6. How many other buyers that you didn't sell to did you call during the last month?
7. Did you talk to any other farmers or business men who gave you advice or information about possible outlets for cream or whole milk?

YES
 NO

8. What information did you ask these buyers, farmers or business men for? (mention "buyers," "farmers" or "business men" whichever applies according to 6 or 7 above)
9. Have you changed outlets for your cream or whole milk in the past year?

IF "NO" SKIP TO 9b.

- a. How did you happen to change outlets this past year?
- b. What are the main reasons for continuing to sell at your present outlet?
 Look back to question 3, note commodity that price is based on and say, "THE PRICE YOU GET IS BASED ON THE PRICE OF"
10. Do you check the price you receive against the prices in other markets for that/those item(s)?

IF "NO" SKIP TO 11.

- a. Which one(s) did you check up on in the last month?
- b. Where do you get the information on what is paid for dairy products in other markets?

NOW WE HAVE TALKED ABOUT MANY OF THE WAYS YOU GET MARKET INFORMATION ON CREAM AND WHOLE MILK.

11. Which one of those do you depend on most for price and market information?

J. EGGS

WE ARE INTERESTED IN HOW YOU DECIDE WHO WILL BUY YOUR EGGS.

1. Where did you sell your eggs last?
 - a. What type of outlet would that be called?
 - b. Cooperative?

IF "NO" SKIP TO 2.

- c. On what grades did you sell your eggs this last time?
 Ungraded (CR) Graded by weight only
 Graded by size and candled for interior quality
- d. How many dozen did you sell at this time this way?
- e. How often are eggs picked up or delivered?
2. Was the price agreed upon before the eggs left the farm?

IF "NO" SKIP TO 3.

- a. Were the eggs picked up at your farm?
- b. Do you get the same price as if you delivered the eggs?
- c. What is the charge for hauling your eggs? per. \$.....

Radio Egg Market Reports

3. Did you listen to day-to-day radio reports on egg prices last month?

IF "NO" SKIP TO 4.

- a. Which station did you listen to most for egg prices?
- b. What times did you listen to this station for egg prices?
- c. What other stations did you use?
- d. What times did you listen to these?

	c.	d.	d.	d.
	Call Letters	Hour	Hour	Hour
.....
.....

- e. When you can't listen to egg market reports do you have someone else listen for you?

YES
 NO

Newspaper, Magazine and Government Egg Market Reports

4. Did you read any newspapers, magazines or government reports for day-to-day egg market reports during the past month?

IF "NO" SKIP TO 5.

- a. Which newspaper, magazine or pamphlets did you read these egg market reports in?

- b. Which of these gives you the most information on egg prices that you want?

- c. Which mailed daily government egg market reports did you read in the past month?

Daily Market Reports (Dairy and Poultry Products) from:
 Chicago Madison
 Detroit St. Louis

- d. Which other mailed government egg market reports did you read in the past month?

Semi-Weekly Market Report from Des Moines
 Weekly Summary of Egg & Poultry Markets from Chicago
 Weekly Dairy Market Review from Chicago

Monthly Origin of Receipts by States from: Chicago
 Detroit

- e. In what way would you like to see any of these publications change their egg market reports to suit you better?

- f. How many other people who might handle your eggs did you call or see that day?

- g. Did you talk to any other farmers or business men who gave you advice or information that helped you pick that day to sell?

YES
 NO

- h. What grade do you pay closest attention to when checking egg prices on radio or in print?.....
5. Do you usually sell eggs at the same place as this last sale?
YES
NO
6. Do you usually sell eggs on the same grade basis that you sold these on?
YES
NO
- (Ask 7 if 5 is YES)
(Ask 8 if 5 is NO)
(Ask 9 if 6 is NO)
7. What are the main reasons for continuing to sell at your present outlet?
8. How did you happen to sell at this different place this last time?
9. How did you happen to sell on this different grade basis this last time?
10. Where did you get the information that helped you decide on:
a. The Buyer of these eggs?.....
b. The Grade Basis to sell on?.....
11. When you are thinking about comparing prices you get for eggs with prices others get for them, what way of getting market information do you depend on most?

GENERAL INFORMATION QUESTIONNAIRE

- K. 1. On each of the following commodities: (sold last year) and in newspapers? What market place do you pay closest attention to on the radio this manner? What other market points do you check in this manner?
- a. Hogs
b. Cattle
c. Corn
d. Soybeans
e. Eggs
f. Cream or whole milk
2. When you are selling, which of these kinds of reports do you prefer?
A radio or newspaper report which tells:
Top price for the day on a single market or the top market....
or: Price range for the grade making up the bulk of sales....
or: A complete summary of the market, including tops, range and lows
3. In what way would you like to change market news reports as they are on the radio or in print?
- PERHAPS YOU ARE INTERESTED IN KNOWING HOW SUPPLIES AND PRICES ARE LIKELY TO CHANGE IN THE NEXT FEW WEEKS OR MONTHS. THIS IS SOMETIMES CALLED OUTLOOK INFORMATION.
4. Do you now get any outlook information on the farm products you are planning to sell?
YES
IF "NO" SKIP TO 5.....
- a. Where do you get this information?
(If more than one source is named)
- b. Which of those you have named is most important to you for each of these products? (ask on products sold only)
- Hogs Soybeans
Cattle Corn
Milk or Cream Eggs
5. Do you want more/some of this outlook information?
YES
IF "NO" SKIP TO 6.....
- a. What time of day would you like best if radio stations would give these programs at any time you wanted them? (Hour).....
- b. How often would you want to read this outlook material?
Daily In season
Twice monthly Monthly
Weekly
- c. What else would you like to know about the markets that you don't get now?
6. Do you write down, or graph, or chart any market information?
YES
IF "NO" SKIP TO 7.....
- a. What information do you keep in this way?
- b. On what products do you keep this information?
- a. Information recorded b. Products used in records
- Prices on certain local markets
Prices on interior markets

Prices at local auction
Releases from cold storage
Est. receipts on markets (Central)
(Interior)
(Local)
Price on the dressed meat markets
Monthly slaughter figures
Cost of living index
Index of wholesale prices
Index of department store sales
Other

7. Did you buy or sell any grain on the futures markets in 1948?
YES
IF "NO" THIS IS THE END
- a. What was the purpose of the last transaction?
To hedge
To speculate
Other
- (for people who sell hogs and cattle)
8. Market news reports from the different stock yards usually quote prices by grade—choice, good, commercial, etc.; do you feel confident that you, personally, are able to judge the grade of your hogs or cattle sufficiently close so as to compare them with the animals being reported, or do you rely on the opinion of others to determine what the grades of your animals are?
Confident can judge grade
Relies on opinion of others
Pays no attention to grade

CHECK SHEET FOR NONINTERVIEWS

- Interviewer Location of farm:
Name of Operator
Postal Address State
Date of 1st call County
2nd call Township
3rd call Segment No. Farm No.
- A. Why an interview was not obtained:
1. Segment or farm inaccessible
2. Respondent not available
3. Refusal
4. Call-back instructions
5. Subsampling
6. Other reason (specify)
- B. Information to be obtained from neighbors or other members in household: (except for refusal)
1. Do you know whether he farms his farm for himself, or in a partnership?
SELF
PARTNERSHIP
2. If partnership: Who is the senior partner?
Relationship Address
3. Do you know how many acres are in the operator's farm? acres
4. Does he own or rent his land?
OWN
RENT
BOTH
5. Do you know whether he operates or shares in the operation of farms other than this one?
YES
NO
6. About how old is he? years.
7. Does he raise any cattle and calves or hogs and pigs for slaughter?
Cattle? YES
NO
Hogs? YES
NO
8. Do you have any idea how many he sold last year?
Cattle
Hogs
9. Does he have electricity?
YES
NO
- If YES: What type is it? Powerline:
REA
Other
Home plant:
10. How many people are now living in his household? No.

STATE LIBRARY OF IOWA



3 1723 02044 6027