

A COMPARISON OF RESULTS FROM PLANNED AND ACTUAL
OPERATION ON FARM SECURITY ADMINISTRATION FARMS,
PAWNEE AND PAYNE COUNTIES, OKLAHOMA

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PAWNEE AND PAYNE COUNTIES, OKLAHOMA

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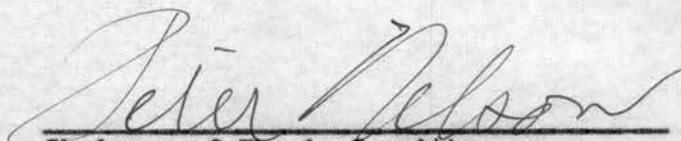
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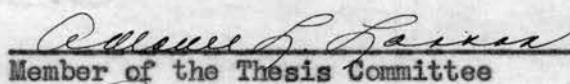
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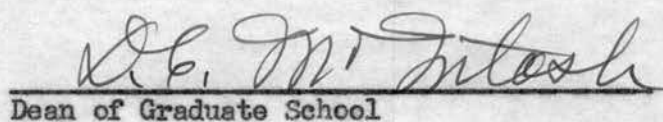
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CHAPTER I. INTRODUCTORY

Scope and Objective

The Rural Rehabilitation Division of the Farm Security Administration had its origin in the rural relief agencies set up by the various states in the early days of the late depression. These relief organizations developed into State Rural Rehabilitation Corporations that were farm loan agencies. These State organizations were first subsidized by Federal funds in April of 1934. On April 30, 1935 the Resettlement Administration was created as a separate agency by executive order of the President. This same agency, on July 1, 1935, took over the business of and replaced the State Rural Rehabilitation Corporations. By Executive Order of the President the Resettlement Administration became a division of the United States Department of Agriculture on December 13, 1936. On September 1, 1937 the Secretary of Agriculture issued a memorandum creating the Farm Security Administration to succeed the Resettlement Administration.^{1/}

The State Rural Rehabilitation Corporations being created as emergency relief measures made loans and grants to low income farm families who were on relief.

These first loans were made for the purchase of feed, seed, and enough capital to enable the farmer to produce on a subsistence basis. Little regard was given to the farm as a business unit. Experience taught that a farmer producing on a subsistence basis with one team

^{1/} The chronological data given above are taken from History of the Farm Security Administration, a mimeographed report of the Farm Security Administration, March 27, 1939. The more general statements concerning the development and characteristics of the Farm Security Administration are made from the experience of the writer who was Rural Supervisor for the Farm Security Administration in Payne County, Oklahoma, from October, 1937 to June, 1941.

and a cow or two could not repay a loan of which a large percentage was for feed, seed, other operating capital, and food for the family.

With the enlargement of the farm loan program by the Federal government under the Rural Rehabilitation Division of the Resettlement Administration in 1935 and 1936 it became necessary to make these farm loans on a more business-like basis. It was at this time that the use of the farm and home plan as a basis for making these loans was improved and developed.^{2/} This along with other changes in the program developed a much more respectable attitude toward the program both by the borrowers (including applicants for loans) and those outside the program.

By the time the rural rehabilitation loan program became a part of the Farm Security Administration in the United States Department of Agriculture, several policies that would be of interest in this study were fairly well established. In Oklahoma the state was divided into districts with a district rural supervisor, and a district home supervisor jointly in charge of the work for the district. Each district was composed of several counties. The county rural supervisor administered the program in the county, being assisted by a home supervisor who worked with him in the supervision of farm and home planning and in the supervision of the carrying out of the plans. Varying with the volume of loans there might be an assistant home management supervisor and one or two assistant rural or farm management supervisors and one or more clerks. There was a committee of leading farmers of the county who were to pass on the applicants from the standpoint of character and ability.

^{2/} The Farm Security farm plan reflects the influence of research and thought on the subject in the latter 1920's and early 1930's-- see review of literature.

Each applicant, unless he happened to own a farm, was required to file a written lease contract with his application for a loan. After the farmer had been approved by the county committee and by whatever investigating procedure was in force by the rural supervisor, the applicant, his family, and the farm were visited by a home management supervisor and a farm management supervisor. If it was thought possible by the supervisors for the farm and improvements to support the family adequately and permit the repayment of the loan, the farm and home plan was begun. Depending upon the work load of the supervisors and the apparent ability of the applicant and his wife, the plan might be worked out and completed at the time of the first visit, with the supervisor and the farmer working together until the plan was finished. The plan might be explained to the applicants and left for completion by them to be checked by the supervisor with the farmer at a later date; or the plans might be completed by the applicants at a later date with a group of other applicants where the farm and home plan, step by step, was explained to the group^{3/} by the supervisors.

The farm and home plan was drawn up on quite a comprehensive form^{4/} that accounted in detail for all the income and expenditures of the coming year for the farm and family. The operator and his family were considered as a unit. The plan was also a budget for the land use, estimation of all crop production, the production of livestock and the disposition of all such production, including use for feed, seed, and carryover for sale or home use.

^{3/} This method of working the farm plan in group meetings was not generally used until 1939 and 1940.

^{4/} See Appendix Exhibit A.

If the plan did not appear to be satisfactory the applicant was notified and the plan was revised by the leasing of more land or the reorganization of enterprises. The applicant was dropped if a satisfactory plan could not be completed.

The applicant and his wife signed a loan agreement that they would cooperate with the supervisors, that they would comply with the farm and home plan, keep records of farm operations and farm family income and expenditures and that they would execute a mortgage on their personal property, crops, and household goods at the time their loan funds arrived. This loan agreement included a statement that the funds of the loan would be expended as set forth in the farm plan.

The attitude of cooperation by the applicants and borrowers was generally good. The popularity and prestige of the program was generally improved from the days of relief until in 1939 the borrowers made up approximately 10 to 15 percent of the farm operators in many of the counties of Oklahoma.

With the above qualifications and restrictions the loan, in some cases, went to farm laborers or share croppers for a complete setup of livestock and equipment plus the necessary feed and seed for the first crop, to other farmers for additional equipment, and/or the refinancing of farmers who were in danger of being repossessed by some other credit agency and to those who were unable, because of lack of security or length of loan, to obtain satisfactory credit elsewhere.

When any program within an area involves as many farms and the standard of living of approximately 10 percent of the farm people, a large amount of research on the specific problem would be justified. The amount of research would seem more thoroughly justified when it can

be shown that a comparatively larger number of farmers within an area have the same problems as the borrowers of the Farm Security Administration. Experience of the writer has shown that many people on farms are able to secure capital funds from relatives, friends, landlords, banks, personal savings in other occupations, or various other sources, yet, their problems are very similar to those of the people in the Farm Security Program. Another group of people within the area who have similar problems are those farmers who are retrogressing on the scale of success.^{5/} Without going further into the ramifications of the problems of these people it will suffice to say one of their primary concerns is to set up a properly balanced farm organization or business. This would bring up the question of what is meant by balanced farming. One farm management research worker answered this question when he made the statement:

"Everyone will no doubt agree that the best balanced farm is the one which year by year yields the most satisfactory living (return) to the farmer.

"In the technical economic sense that which is popularly spoken of as balance in farming really means proportionality. That is, to balance a farm as commonly understood by economists would mean proportioning the elements composing the farm unit, namely, land, capital (in the way of improvements, machinery, etc.), labor and management, in a way that could be expected to yield the highest possible continuous return from its operation."^{6/}

Balancing a farm then would require an assembly of the parts of the unit in such relations to each other as to produce the "highest

^{5/} The writer's observations of applicants for Farm Security loans show that there are many farmers within an area that have been fairly successful farmers in times past, who are at the time of their application in destitute need.

^{6/} Peter Nelson, "What is Balanced Farming?" Current Farm Economics, Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma, February-April, 1940, Vol. 13, Nos. 1 and 2, pp. 4 and 5.

possible continuous returns."^{7/} The proper proportioning of the parts (factors of production) would be concerned with the most profitable production and not with diversity, with the degree of diversification depending upon the economic and physical forces that are in operation in the particular locality at the time.^{8/}

After the nature of this common problem is decided the question immediately arises, "How can balanced farming be determined?" This same farm management research worker struck upon one of the first essentials in a practical answer when he said:

"If farms are tested and compared experimentally, a practical standard may be developed for a given type-of-farming area that most nearly approximates the proper proportion or balance for the area."^{9/}

This answer suggests the comparative method of studying the farm organization whereby, "Differences in income on the different farms are compared with differences in their organization---, and from this study generalizations are made concerning the organization best suited to the farms of the area."^{10/}

The other principal method of studying the farm organization is the synthetic method which:

".....attempts to provide all the detailed information necessary for constructing a budget, i.e., a forecast of receipts and expenses, for the combinations of enterprises characteristic of the farms of the area and by constructing budgets for typical farm organization in the area and for promising modification of those organizations to determine the incomes to be expected on farms with different organizations. A comparison of these returns will

^{7/} Ibid. p. 5.

^{8/} Ibid. pp. 4 and 5.

^{9/} Ibid. p. 10.

^{10/} Mordecai Ezekiel, "Project 8 Most Advantageous Organization and Practices in an Area," Research in Farm Management, Social Science Research Council, Bulletin No. 13, June, 1932, p. 110.

indicate the combinations of enterprises (the farm organization) which are likely to be most advantageous on the farms of the area." 11/

In order, then to give accurate results the synthetic method would depend upon the accuracy of complete knowledge of the details of the farm operation in the particular area. With information on prospective prices, feed requirements, production standards for various qualities of livestock, most probable yield for the principal soil types of the area, and all other enterprise standards worked out as nearly accurate as possible, the next step would be to construct budgets for the sizes and types of farms to be considered. 12/

The last step but an essential portion of the research work by the synthetic method is to test the budget under actual operation.

"This procedure will determine how closely actual results can be expected to follow the estimated results, and whether the conclusions reached by the budget computations as to the relative advantage of different systems of organizations are sustained in practice." 13/

This study will show the value and applicability of Farm Security data to research in an area by the synthetic method. Due to the volume of Farm Security loans and their requirements for budget making and record keeping, there is an abundance of available data in almost any major type-of-farming area. With technical guidance in the selection and analysis of these data this would seem to be an excellent method in testing the synthetic method. The analysis of these budgets (farm plans) along with the farm records for the same farms from year to year would show the close relationship in the application of results

11/ Ibid. p. 111.

12/ Ibid. pp. 125-128.

13/ Ibid. p. 129.

between the comparative and synthetic methods of research. One statement regarding this relationship follows:

"The synthetic method has the disadvantage that the conclusions are ordinarily not applicable in total to many of the farms of an area; also that the conclusions are based on forecasts of what is most likely to happen rather than on deductions from what has already happened. But deductions from what has already happened are of no value until applied to future situations, and when so applied, one is no more sure as to what is going to be the outcome than if an out and out forecast were made. Hence, in effect there is no essential difference in this respect between the comparative and the synthetic method." 14/

This would indicate that the results of research to be of benefit to the individual farm operator must be adapted and applied as the formulation of plans for changes in "proportioning" within his individual organization. These further statements regarding the individual application of results should be considered:

"The research worker who bases his conclusions on the showing of a series of carefully constructed budgets is viewing his problem from the standpoint of the farm proprietor endeavoring to make the best use of his resources." 15/

and

"The farmer must follow this kind of procedure if he is to apply 'principles' successfully and intelligently no matter how they were arrived at. The synthetic method is essentially the intelligent farmers' method of planned progress." 16/

14/ Ibid. p. 130.

15/ This citation is taken from comments contributed by H. R. Tolley, Director, Giannini Foundation of Agricultural Economics, University of California, Berkeley, California and J. D. Black, Professor, Department of Economics, Harvard University, Cambridge, Massachusetts. These comments are concerning the article listed in Footnotes 10-14 inclusive.

16/ Cited from Footnote, page 131, regarding comment referred to in Footnote 15. Contributed by J. D. Pope, Senior Economist, Federal Farm Board, Washington, D. C.

The Farm Security attacks the problem of organization or reorganization of a farm unit through the individual with his specific problems on the specific farm. However, in the absence of detailed information on normal yields, input and output ratios, and detailed price outlooks for the area along with other factors that are normally highly unpredictable, many mistakes are made.

It would appear that with the extra supervision ^{17/} given the Farm Security borrowers, their farm records would furnish information on yields, operational time requirements, input and output information for the various enterprises that would be representative of the typical situation of the area. This information should be more accurate than any other information obtained outside the area. These records are kept under actual farm conditions, where type of equipment, quality of productive livestock, type of soil, size of farms, size and shape of fields, weather conditions, and market locations are representative.

This information on Farm Security farms could be obtained from year to year. The careful comparative analysis on these farms from year to year would be invaluable as a check on the budgets and the synthetic method.

Since it is evident that a relatively large number of farm operators in an area have similar problems in balancing their farm organization, it is hoped that this study will show the need for increased use of data that are available or could be available for research by areas.

^{17/} Because of lack of time for more assistance by the supervisors and lack of proper record book forms the records used in this study are deficient in detailed information such as individual feed requirements and weights of production for the various classes of livestock, etc.

It is the specific purpose of this study to compare the results of the planned operations (in the budget) with the results of actual operations, determine the relationship of following the farm plan to the successful operation of the farm and note the items for which planning is most difficult. This study is intended, also, to point out general weaknesses in farm planning and suggest methods by which these weaknesses and difficulties might be overcome.

Review of Literature

In addition to the material already discussed in the previous section much has been written in regard to individual farm planning or farm budgeting as related to the synthetic method of research, to test recommendations for improved farm organization in an area, to determine the most advantageous system of farming for an area or to determine the effect of price changes and outlook material in an area. Much has been written also concerning the development of farms or the mechanics of farm budgeting. Only a brief summary of the material that is very closely related to the problem at hand will be given here.

What is a farm budget? ^{18/} Hutson gives the answer as a plan for the system of farming for the coming year or period of years; which shows crops to be grown, the livestock to be kept, estimated production of livestock and crops, estimated receipts and expenses from the various sources, and it includes the plan for the future use of land, man labor, horse labor, equipment, and other resources.

^{18/} J. B. Hutson, Farm Budgeting, United States Department of Agriculture, Farmers' Bulletin No. 1564, p. 1.

A farm budget is a definite plan for using the resources of the ^{19/} farm.

Some advantages of budgeting. Finn and Galloway ^{20/} believed that farm budgeting was coming into widespread use and incomes had been increased greatly by farmers using the budget method. They gave the reasons as follows: budgeting is a systematic method of estimating income and expense, a schedule for spending, utilization of farm land, that it permits a balance between feed and livestock and a formation of a year-round labor program. In addition to these advantages ^{21/} Hutson stated that budgeting helped to keep a better "balance" between the crop and livestock enterprises, it helps to determine in advance how much seed, fertilizer, and other supplies are needed, how much are available, to be bought, and how much may be sold, and that budgeting helps to determine what financial arrangements must be made and to estimate the total net return.

^{22/} Eke and Benson found that budgeting was the best and simplest method for the individual farmer to arrive at the proper size of farm and the proper combination of crops and livestock that would result in the greatest returns, and since conditions affecting returns are continually changing, plans should be made each year in advance and that several plans using different combinations should be made.

^{19/} W. G. Finn and Z. L. Galloway, The Budget Method of Improving Farm Organization and Management, University of Kentucky, Agricultural Experiment Station Bulletin No. 312, December, 1930, p. 604.

^{20/} Ibid. pp. 604-605.

^{21/} Hutson, op. cit. p. 4.

^{22/} Paul A. Eke and Ezra T. Benson, Planning the Farm Business for the Year Ahead, University of Idaho, Agricultural Experiment Station, Bulletin 188, June, 1932, pp. 7-33.

"The greatest value of a budget as it has been used here lies in the fact that it involves clear and systematic thinking in advance of the time when final decisions must be made." ^{23/}

Some types of information necessary for successful farm budgeting.

^{24/} Sallee, Pond, and Crickman found that regardless of the amount of effort, prices and costs could not be forecast with enough accuracy to make it unnecessary to be on the alert for minor changes in the direction of economic adjustments from which substantial gains may be realized and that good judgment is required to meet ever changing conditions.

^{25/} Eke and Benson were quite all inclusive when they stated that all available information such as crops and livestock reports on intentions to plant and breed, acreage expansion, price information as to position of cycle, and information on other outside factors were necessary to farm planning as well as the information to be gained by a complete analysis of records on the previous operations on the farm.

^{26/} McNall, Kifer, and Mitchell were a little more specific and detailed when they stated that to be successful in farm planning, not only probable prices of products to sell and relative costs of various enterprises were required, but that probable yield of crops (including alternate crops) and probable production of livestock along with feed

^{23/} George A. Sallee, George A. Pond, and C. W. Crickman, An Economic Study of Livestock Possibilities in the Red River Valley of Minnesota, University of Minnesota, Agricultural Experiment Station Bulletin 283, September, 1931, p. 84.

^{24/} Ibid. pp. 83-84.

^{25/} Eke and Benson, op. cit. pp. 7 and 32.

^{26/} P. E. McNall, R. S. Kifer, D. R. Mitchell, Planning the Farm for Profits, University of Wisconsin, Agricultural Experiment Station Bulletin No. 395, December, 1927, pp. 3-6-9-10-24.

requirements per 100 pounds of butterfat, beef, pork, etc., (including the various feeds that were available or could be available under alternate plans) were also very important.

The relationships of farm accounts to farm planning. Eke and Benson ^{27/} stated that farm accounts, in order to supply the necessary facts of yields, costs, measures of accomplishments of the various enterprises in the budget, and in order to be a check on the budget, must be a complete record; this record must consist of beginning and ending inventory, record of acreages, and location of crops each year (including a farm map), complete records on number and kinds of live-stock, total feeds consumed, total production, quantities sold, prices received, etc.

Hutson ^{28/} indicated that analysis of the farm business was essential to better planning because accounts provide a basis for determining how the labor, building, and machinery costs and other expenses compare with those contemplated and those prevailing on other farms, that attention to such points makes economic production possible.

Finn and Galloway ^{29/} agreed with the two foregoing contributions and made the further statements that accounts furnish the most important information needed in deciding upon profitable changes to make

^{27/} Eke and Benson, op. cit. p. 32.

^{28/} J. B. Hutson, Farm Budgeting, United States Department of Agriculture Bulletin No. 1564, March, 1933, p. 10.

^{29/} W. G. Finn and Z. L. Galloway, The Budget Method of Improving Farm Organization and Management, University of Kentucky, Agricultural Experiment Station, Bulletin No. 312, December, 1930, p. 619.

in the farm business. For this reason farmers who have been keeping records and studying them are making the most consistent improvements in organization and management of their farms and on a whole are obtaining the most satisfactory results from the use of the budget, and that an important feature of the relationship of accounts to the budget is that it is a continuous relationship.

Concerning results of application. Finn and Galloway ^{30/} stated that farmers using budgets (in their experiment) were clearly in need of increasing their incomes and many were, before using the budgets, in danger of losing their farms and that a method which could produce such improved results (examples were given) under unfavorable circumstances should produce even better results when used by farmers who were circumstanced more favorably.

Area and Material Studied

Some physical factors of the area. Pawnee and Payne counties join on about a 24 mile front along the east half of the north boundary of Payne County. There is very little difference in the sizes of the two counties. The approximate distance from the southwestern corner of Payne County near Pleasant Valley to the eastern-most part of Pawnee County, near Keystone, is 54 miles and to the northern-most part of Pawnee County, near Fairfax, is 46 miles. The greater part of the area lies within the transition belt between the plains and the prairies and for the greater part is treeless. The uplands, in general, are undulating. The area as a whole is well drained, having many creeks with narrow bottoms. The area is drained on the north by

^{30/} Ibid. p. 628.

the Arkansas River and on the south by the Cimarron River.³¹ The average elevation of the area ranges from about 800 feet above sea level to approximately 1,100 feet above sea level. The mean annual temperature is about 59° F. The approximate length of the growing season is 200 days, with an approximate average precipitation of 34 inches.^{32/}

The principal soil types of Payne County are from the Kirkland series; Vernon predominates on the upland with Bates and Summit in between, and Alluvium makes up the soil of small areas in the narrow bottoms.³³

The year the sample represents is 1939. The precipitation record by months (Table 1) and the data regarding crop yields for Oklahoma,

Table 1
Precipitation in Inches by Months with 1938 and 1939
Compared to 10-Year Average at Stillwater, Oklahoma

	: 1938 :	1939 :	Average, 1931-1940
Total for Year	35.29	26.95	30.99
January	.57	3.42	1.35
February	2.25	.61	1.44
March	5.63	1.09	1.90
April	2.51	3.64	2.57
May	5.71	2.99	2.99
June	4.80	4.23	4.32
July	3.88	2.87	3.25
August	4.39	3.62	3.71
September	2.16	.39	3.07
October	.37	1.18	1.90
November	2.60	1.59	2.86
December	.42	1.32	1.63

SOURCE: Based on U.S.D.A. Weather Bureau Annual Reports, 1931-1940, for Stillwater Station, Payne County, Oklahoma.

^{31/} This general description of the area is from the writer's knowledge of the area, from interviews with others who have worked the area, and from the Soil Survey Report of Payne County, U.S.D.A., Bureau of Soils--1918. There is no soil survey report for Pawnee County.

^{32/} Soil Survey Report of Payne County, Oklahoma, U.S.D.A., Bureau of Soils, 1918, p. 8. (It is believed there are no material or major differences between Pawnee and Payne County).

^{33/} Ibid. p. 15.

1930-1939, (Appendix Table 11) indicate that 1939 was not far from a normal year in Oklahoma.

^{34/} Crop Yields and Weather states that the percentage of normal precipitation for Oklahoma for the crop year 1938-1939 by periods are as follow: September-November, 1938, 56 percent; December-February, 1938-1939, 113 percent; March-May, 1939, 78 percent; and June-August, 1939, 43 percent.

In considering the normalcy of the year used the price trends just prior to 1939 and the farm price index for 1939 would be of importance. The annual Oklahoma farm price indexes for the principal commodities sold on the farms studied do not indicate any radical or material departure from normal in 1939 (Table 2).

Table 2
Annual Price Indexes of Oklahoma Farm
Products for 1936-1939
(Base 1910-1914)

Commodity	: 1936	: 1937	: 1938	: 1939
All commodities	109	111	82	84
Cattle	112	124	117	131
Butterfat	124	130	97	91
Hogs	123	127	104	85
Poultry	136	131	129	114
Eggs	114	103	95	81
Cotton and seed	99	95	69	73

SOURCE: From unpublished data that are computed currently by the Department of Agricultural Economics, Oklahoma A. and M. College.

Application of Outlook Information. By way of an applicable example of the type of material that is available and apparently

^{34/} Crop Yields and Weather, U.S.D.A. and U.S.D.C., Miscellaneous Publication 471, February, 1942, p. 60.

should be distributed to the Farm Security Administration supervisors for use in farm planning, the Agricultural Outlook for Hogs in 1939 gave a discussion of the hog situation and summarized as follows:

"It would seem that the increased production in other areas and the less favorable supply of corn in Oklahoma will tend to minimize profits from hog production in Oklahoma during the next year." ^{35/}

The correctness of this prediction is shown in the price indexes (Table 2) and the fact that this information was not used in planning for 1939 is shown throughout the study.

The material for this study includes a total of 36 farms, 19 of which were located in Pawnee County, Oklahoma, and 17 in Payne County, Oklahoma. During 1939 each of these farms was operated by a borrower of the Farm Security Administration. For each farm there was a budget or farm and home plan prepared in advance and a record of farm and family income and expenses kept in a Farm Security record book. The farms used are quite widely distributed over the two counties. Rather than location the basis of selection was to represent so much as possible, the typical Farm Security farm and the farms of the area as to size of farm and type of organization. About 100 farms with complete records and plans were available at the time these 36 farms were selected.

At the time of this study the numbers of farms in Pawnee and Payne Counties were 1,318 and 2,543, respectively, ^{36/} and the

^{35/} Staff, Department of Agricultural Economics and Extension Economists, "Agricultural Outlook for 1939," Current Farm Economics, Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma, December, 1938, Vol. 11, No. 6, p. 133.

^{36/} Number of Farms April, 1940, from 1940 Census, Vol. 1, Part 5, p. 229.

approximate number of farms operated by Farm Security borrowers during 1939 for Pawnee and Payne Counties were 442 and 365, respectively.^{37/}

The sizes of the farms in the sample range from 80 acres of which there were two farms, to 280 acres of which there was only one farm. There were 13 farms with acres in farm ranging from 81 acres to 159 acres; 12 farms had 160 acres, and 8 farms had 161 acres to 279 acres.

Nineteen of the 36 operators were share tenants; 10 cash tenants; 4 were part share and part cash tenants; there were 2 who owned their improvements on Oklahoma School land and one owner operator.

The type-of-farming area in which Pawnee and Payne Counties are located is Number 7.^{38/} A very small portion of Payne County, in the northwest corner, is included in Area 3; however, all the farms used in this study were located in Preliminary Type-of-Farming Area Number 7. The type of farming in this area is described, generally, as "general farming, cotton, livestock, dairy and poultry";^{39/} Area 7 is further described as one of the five areas of the sixteen major areas in Oklahoma, in which oats is a favored crop and also one of the five areas in which hay is most abundant.^{40/}

The representativeness of the sample used in this study is shown to be of a satisfactory degree when the factors of organization of the

^{37/} Estimated from progress reports in the respective county offices. The exact numbers are not administratively released for publication.

^{38/} Peter Nelson, "Geographical Variability in Types of Farming in Oklahoma," Current Farm Economics, Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma, February, 1936, Vol. 9, No. 1, p. 4.

^{39/} Loc. cit.

^{40/} Ibid. p. 8.

36 farms of the sample are compared to those same factors of Payne County farms which were used as typical of Area 7 ^{41/} (Table 3). The differences in the percentages of land in sorghum and hay might be accounted for by the fact that in the 36 farms of this study sorghum for forage is listed with hay (Table 3).

Table 3
Size of Farm, Percentage of Farm Land in Selected Crops and Pasture and Number of Selected Classes of Livestock per 100 Acres in Farm in Payne County Representing Type-of-Farming Area 7 as Compared to the 36 Farm Security Farms in Pawnee and Payne Counties, Oklahoma

	: Area 7 ^{1/} : Payne	: 36 Farms ^{2/} : Pawnee and Payne
Average size of farm	134	155
Percent farm land in crops	47.2	42.6
Percent in:		
Corn	8.3	5.3
Wheat	1.5	2.0
Oats	4.0	4.9
Hay	5.4	8.0
Cotton	10.2	3.7
Sorghum	7.1	3.9
Other crops	.8	4.5
Idle, fallow, and failure	9.9	10.3
Pasture	46.0	55.7
Other farm land	5.6	1.7
Livestock per 100 acres in farm land:		
Horses and mules	2.7	1.6
Cattle	6.5	9.2
Swine	3.5	4.9
Sheep and lambs	.8	0.0
Chickens	55.8	46.9

^{1/} Peter Nelson, "Geographical Variability in Types of Farming in Oklahoma," Current Farm Economics, Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma, February, 1936, Vol. 9, No. 1, Table 2, p. 7.

^{2/} The 36 farms used in this study.

^{41/} Ibid. p. 6.

Table 4
 Yields for Selected Crops for Pawnee and Payne Counties
 as Compared to the Yields for the 36 Farm Security
 Farms in Pawnee and Payne Counties, Oklahoma
 for the Year 1939

		Yield : Pawnee and Payne :	36 Farms in
	(Unit)	: Combined 1/	: Pawnee and Payne 2/
Wheat	Bu.	11.9	9.8
Corn	Bu.	17.2	17.8
Oats	Bu.	15.0	13.3
Barley	Bu.	14.6	13.2
Cotton	Lbs. of lint	232	214
Sorghum for grain	Bu.	8.0	11.4
Sorghum for hay	Ton	1.1	.9 ^{3/}
Wild hay	Ton	.9	.6 ^{4/}

1/ Computed from acreage and production from 1940 Census.

2/ 36 Farms used in this study.

3/ Other hay is composed largely of sorghum hay.

4/ Prairie hay only.

Further evidence that the sample was representative of the area lies in the fact that the 1939 yields of selected crops for the sample were reasonably close to those yields for the area as a whole (Table 4).

Definition of Terms

Before discussing further the method of analysis of the material it is deemed advisable to define the terms as used in this study.

These terms are treated alphabetically as follows:

Actual is used to denote the achievements of the operator or the result as was reflected by the record book.

Acres failed, land that was planted to crops and not harvested or planted to pasture and not pastured because of lack of production.

Animal units, one animal unit equivalent for the various classes of livestock used in the data of this study are as follows: one horse or mule, 2 colts, one cow or bull 2 years or older, 3 other cattle, 4 sows, 6 other hogs, 100 chickens.

Cash family expenses, all cash expenditures for family living including any purchases of furniture or household equipment.

Cash farm expenditures, all money spent by the operator for farm operation or marketing products produced on the farm and money spent for the purchase of livestock and equipment.

Cash farm receipts, all money received from farm sources including operators' labor off farm and sale of livestock or equipment. This does not include any money borrowed.

Colt sales would include the sale of any other work stock sold.

Crops harvested, or acres harvested, all land harvested including truck crops, wild hay, and land planted to pasture, providing it was pastured.

Digestible nutrients, used for the purpose of reducing various feeds to comparable units in number of nutritive units, used in this study to compare the yield of all feed of the different groups. The values in digestible nutrients for the various feeds were taken from Henry and Morrison, Feeds and Feeding, Eighteenth Edition, Unabridged, 1923, Appendix Table III, pp. 728-743.

Ending Cash on hand, cash on hand at end of the year.

Ending farm inventory, value of all farm property, excluding the value of land and permanent improvements, at the end of the year. Because of the large amounts of livestock and equipment purchased shortly after the beginning of the year the ending farm inventory is more representative of the size of the organization during the year than average of beginning and ending inventories.

Farm income, computed by subtracting the total of cash farm expenditures and beginning farm inventory from the total of cash farm receipts and ending farm inventory.

Farm inventory, the value of the operator's farm property including seed, feed, growing crops, and cash rent paid in advance with the exception of farm land and permanent improvements.

Farm products used in home, value of all produce, food, and fuel used by the family excluding rental value on the house.

Feed crops, all grain and hay crops harvested including wheat and excluding planted pastures.

Group number, after the farms are arrayed according to a factor they are grouped into three groups, high, middle, and low or Groups I, II, and III, respectively.

Increase in animal units, computed by subtracting the total of all animal units on hand at the beginning of year and all animal units purchased from the total of the ending inventory of animal units, number of animal units sold and used in the home. This figure represents the growth of natural production in animal units.

Investment in productive livestock, in this study represents an average investment in mares, cows, sows, and chickens; this item was computed by adding the value of these items in the beginning inventory and purchases to the ending inventory and sales of these items and dividing the total by two.

Net family earnings is the total of net worth increase, cash family living expenses and value of farm products used in home.

Net worth increase, increase in net worth from beginning to end of the year 1939.

Net worth, the value of all units less the total indebtedness excepting the value of the farm land and improvements of the farm operated and debts on the real estate excepted.

Other hay is composed largely of surghum for hay or forage with grain on the stalk.

Planned, this may refer to a planned operation or expected achievement or to a factor computed from planned items.

Ratio of compliance is expressed as the percentage that actual operation is of planned operations. In tables were associated with actual and planned is labeled only as Ratio.

The 36 farms or 36 Farm Security farms refer to the farms that were used in this study.

Total cropland, all land in cultivation plus the acreage of wild hay excluding plowable permanent pasture.

Method of Analysis

The analysis consists of five chapters each of which is divided into two sections. In the first section the farms are arrayed from high to low according to a factor of actual achievement. The various arrays are made on the basis of net family earnings, farm income, net worth increase, increase in animal units, and crop acres harvested. Under each of these arrays the 36 farms are divided into three groups, high

middle, and low or Groups I, II, and III, respectively. The first study under each array or classification consists of an analysis of factors of actual organization associated with high, medium, and low groups after which various other actual factors are compared to planned; the relationships of the various factors to the factor on which the classification is made are studied. The relationship of this classification factor (net family earnings, farm income, etc.) with success and the relationships of compliance with plans to success are studied. The cash farm receipts and cash farm expenditures are analyzed in detail.

In order to analyze further the relationships between following the plan and success, in each chapter, the second section consists of an array of the farms from the high to low ratio of actual to planned for the factor on which the farms were classified in the first section (farm income, etc.). Then the farms are divided into a high, middle, and low compliance ratio group or Groups I, II, and III, respectively. The study of the compliance ratio groups is similar to that of the first section except not so much in detail.

In general the same factors are treated similarly in each chapter except in some chapters the analysis is more in detail on the factors that are more applicable to that particular classification.

The general treatment in the five chapters of the analysis is from the standpoint of group averages; therefore, the averages of the various factors are not carried for all 36 farms. For that reason it was considered desirable to present here a summary of the factors associated with success throughout this study (Table 5). The slight discrepancy between actual results and planned operations for beginning inventory

Table 5
Averages per Farm of Factors Associated with Success, Actual
Compared to Planned, on 36 Farm Security Farms in
Pawnee and Payne Counties, Oklahoma, 1939

	: Unit	: Actual	: Planned
Farm income	Dollars	336	542
Farm inventory at beginning of year	Dollars	533	522
Farm inventory at end of year	Dollars	1,092	1,049
Cash farm receipts	Dollars	489	672
Cash farm expenditures	Dollars	712	657
Total money borrowed	Dollars	604	609
Cash paid on debts	Dollars	224	210
Cash on hand at beginning of year and non-farm <u>1/</u> receipts	Dollars	61	12
Cash on hand at end of year	Dollars	19	237
Net worth beginning of year	Dollars	382	372
Net worth at end of year	Dollars	583	758
Net worth increase	Dollars	201	386
Cash family expenses	Dollars	199	189
Farm products used in home	Dollars	252	268
Net family earnings	Dollars	652	843
Animal increase	Animal Units	4.64	6.69
Land in farm	Acres	155	155
Total cropland	Acres	66	66
Crops harvested	Acres	50	63
Portion of cropland harvested	Percent	76	97

1/ Includes family labor off farm and any other non-farm receipts.

and beginning net worth is that in some cases the inventory and indebtedness at the time of the farm plan was slightly different than at the time the inventories were entered in the record book at the beginning of the year.

CHAPTER II. NET FAMILY EARNINGS

Classified on Actual Net Family Earnings

These farms were classified on net family earnings because the net family earnings per farm are considered by the Farm Security Administration to be a fairly accurate measure of success.^{1/} Net family earning is a figure that is comparable to gross earnings of a family on salary or wage income, and since these same farms were classified on other factors that are used as measures of success in farm management studies, here was a chance to evaluate net family earnings as a measure of success of the operator or farm family.

These 36 Farm Security farms were classified into three groups on actual net family earnings per farm. In this, as well as in all groupings to follow, attempts were made to divide the farms into three groups of equal size, however, in most of the arrays of this study it seemed more logical to divide the sample according to the apparent tri-modal arrangements.

The farms were arrayed according to actual net family earnings. The high farm had a net family earning of \$1,163 and the low farm had a net family earning of \$320. The middle group had a low net family earning of \$555 and a high of \$721. The high group, or Group I, consisted of ten farms with an average net family earning of \$366. The middle group, or Group II, of 14 had an average net family earning of \$656, while the low group, or Group III, consisted of 12 farms with an average net family earning of \$467 (Table 6).

^{1/} Archie L. Leonard, Farm and Home Management Report for 260 Farm Ownership Borrowers in 9 Counties in Southwest Oklahoma in 1944, Mimeographed Report of the Farm Security Administration, June, 1945, p. 2.

Table 6
 Factors of Actual Organization Associated with High,
 Medium, and Low Net Family Earnings on
 36 Farm Security Farms

		: 10 Farms : with Highest : Unit : Net Family : Earnings : (Average)	: 14 Farms Com- : prising the : Middle : Group : (Average)	: 12 Farms : with Lowest : Net Family : Earnings : (Average)
Farm income	Dollars	434	320	273
Net family earnings	Dollars	866	656	467
Net worth increase	Dollars	301	168	155
Crops harvested	Acres	55	47	48
Land in farm	Acres	169	146	152
Total cropland	Acres	69	68	60
Portion of land in cropland	Percent	41	46	40
Portion of cropland harvested	Percent	80	70	80
Farm income per 100 acres of cropland	Dollars	626	472	452
Investment in productive livestock	Dollars	659	594	551
Farm income per \$100 invested in productive livestock	Dollars	66	54	50
Investment in productive livestock per 100 acres in farm	Dollars	389	408	362

The data in Table 6 show that actual farm income decreased quite consistently as net family earnings diminished. The average net worth increase also diminished with net family earnings, however, the relation between net worth and net family earnings is not quite so consistent as is the relation between net family earnings and farm income (Table 6).

Acres in farm, crops harvested, and acres of cropland did not decrease consistently with net family earnings, and yet the average per farm in each of these items was higher in Group I. The investment in productive livestock per farm was, also, higher in Group I and decreased consistently as net family earnings diminished (Table 6). Since the operators of the Group I was highest in size of farm and investment in productive livestock, thereby having the greater volume of business, they might be expected to exceed in net family earnings and farm income; however, there might be indications of a more efficient utilization of resources in the Group I as farm income per 100 acres in cropland and farm income per \$100 invested in productive livestock decreased consistently with the decrease of net family earnings (Table 6). Some relation of net family earnings to success is shown.

The data in Table 7 compare actual operations and planned operations as related to net family earnings. The ratios of compliance with plans in the various factors are listed.

The relative spread from group to group in actual net family earnings is greater than in farm income or net worth increase. The ratio of actual to planned in these respective items indicates closer compliance with plans in net family earnings (Table 7), although net worth increase is one of the items that make up net family earnings.

Table 7
Comparing Actual to Planned in Various Farm Management Factors with Averages
per Farm on 36 Farms, Classified on Actual Net Family Earnings

	Unit	10 Farms Having the Highest Net Family Earnings			14 Farms Comprising the Middle Group			12 Farms Having Least Net Family Earnings		
		Actual	Planned	Ratio ^{1/}	Actual	Planned	Ratio	Actual	Planned	Ratio
Farm income	Dollars	434	612	71	320	474	68	273	563	48
Net family earnings	Dollars	866	951	91	656	841	78	467	756	62
Net worth increase	Dollars	301	469	64	168	295	57	155	421	37
Animal increase	Animal Units	5.74	7.91	73	4.03	5.85	69	4.44	6.65	67
Farm products used in home	Dollars	324	290	112	276	329	84	165	180	92
Cash family expenses	Dollars	241	192	126	212	217	98	147	155	94
Cash paid on debts	Dollars	281	245	114	192	172	111	216	226	96
Cash farm expenditures	Dollars	709	699	101	755	671	112	664	604	110
Cash farm receipts	Dollars	528	758	70	492	600	82	451	683	66
Ending cash on hand	Dollars	13	295	04	17	177	10	27	259	11
Ending farm inventory	Dollars	1,293	1,202	108	1,018	973	105	1,011	1,009	100
Crops harvested	Acres	55	65	86	47	67	70	48	58	83
Cotton	Acres	5.9	7.2	82	5.3	5.1	103	6.1	5.8	104
Cotton yield	Lbs.Lint	206	169	122	215	171	126	214	169	127
Feed crops	Acres	46	55	84	40	58	68	41	49	83
Feed yield	Digestible Nutrients	572	769	74	559	755	74	710	863	82

^{1/} Ratio is percentage that actual is of planned in each item. Ratio computed from group totals.
^{2/} See definition of terms.

The reason for this closer compliance in net family earnings is that the other two items of net family earnings, value of farm products used in the home, and cash family living expense have a much higher degree of compliance with plans (Table 7).

Group I made a net worth increase of only 64 percent of the planned increase while the ratio of actual to planned cash family expense and value of farm products used in home were 126 and 112, respectively, thus bringing the compliance in net family earnings to 91 percent. Group I, then, was holding their net family earnings near 100 percent of that planned by spending much more than planned on cash family living expenses while their cash farm receipts were only 70 percent of planned receipts. However, Group I overpaid the anticipated debt repayments. Group I had the largest volume of business, had the highest actual cash receipts, and had held the farm expenditures down to that of the planned expenditures. Therefore, the most likely place to apply the balance would be on living expenses. According to observation of the writer, planned family living expenses were held to a minimum. It might be pointed out that Group III paid 94 percent of the anticipated debt repayment while the net family earnings of this group were only 62 percent of planned net family earnings (Table 7). The net worth increase of Group III was only 37 percent of that planned. In order to meet this debt repayment Group III sacrificed items other than anticipated cash for family living.

It would appear that planning for the cash paid out items was more accurate than planning for farm receipts. This being true, the failure of compliance in farm receipts consequently would be reflected in cash on hand at the end of the year. The amount and degree of error in planning ending cash on hand was relatively stable from group

to group and this item is directly reflected in net worth. This being true, the application of this error in Groups II and III, which have smaller income and smaller volume of business, would largely explain why the ratio of compliance in net worth increase diminished so much more sharply than the compliance ratio of family earnings, farm income, and animal units increase as net family earnings diminished (Table 7).

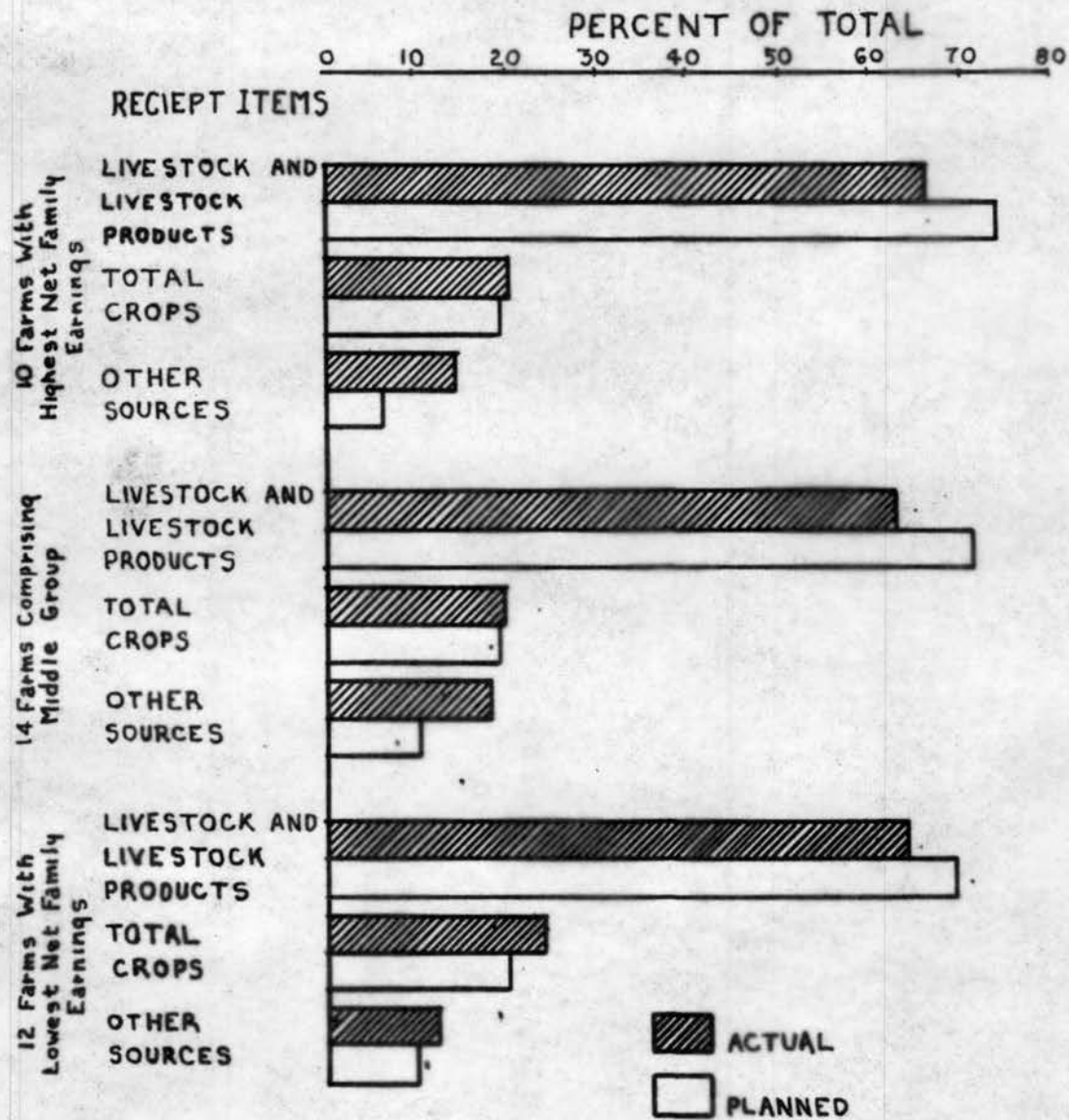
The foregoing indications with the fact that Group III planned their farm income, net family earnings, net worth increase, and cash farm receipts to be as high as was planned by Group I would show there was too much rigidity in planning.

There was little indicated relationship of net family earnings to total acres harvested, cotton acres, cotton yield, total feed acres or feed yield, except Group I was below compliance in cotton acres. The lack of relation of these items to net family earnings held true in considering their respective compliance ratios (Table 7).

Total actual cash farm receipts decreased as actual net family earnings decreased, and yet, there was no such relationship concerning the compliance ratios of these items. It was felt here that a need for a more complete analysis of the actual farm receipts, as regards the actual and planned distribution of sources, was indicated.

This study of the distribution of receipts as regards the three main divisions of sources indicated relative stability throughout and from group to group. This same analysis would indicate fairly accurate planning throughout with no important relations between receipts and net family earnings within the various net family earnings group or from group to group (Figure 1). However, a more detailed analysis of

FIGURE 1
 Distribution of Cash Farm Receipts
 Actual Compared to Planned on 36 Farms
 Grouped According to
 Actual Net Family Earnings



SOURCE : APPENDIX TABLE 1

individual sources of receipts shows that sale of cattle was more important than planned sale of cattle in each group and relatively more important in Group I (Figure 2). The importance of dairy sales was practically the same as planned in each group. The planned importance of the sale of hogs, colts, poultry and eggs, as related to total planned receipts, was more important than actual receipts in these items (Figure 2).

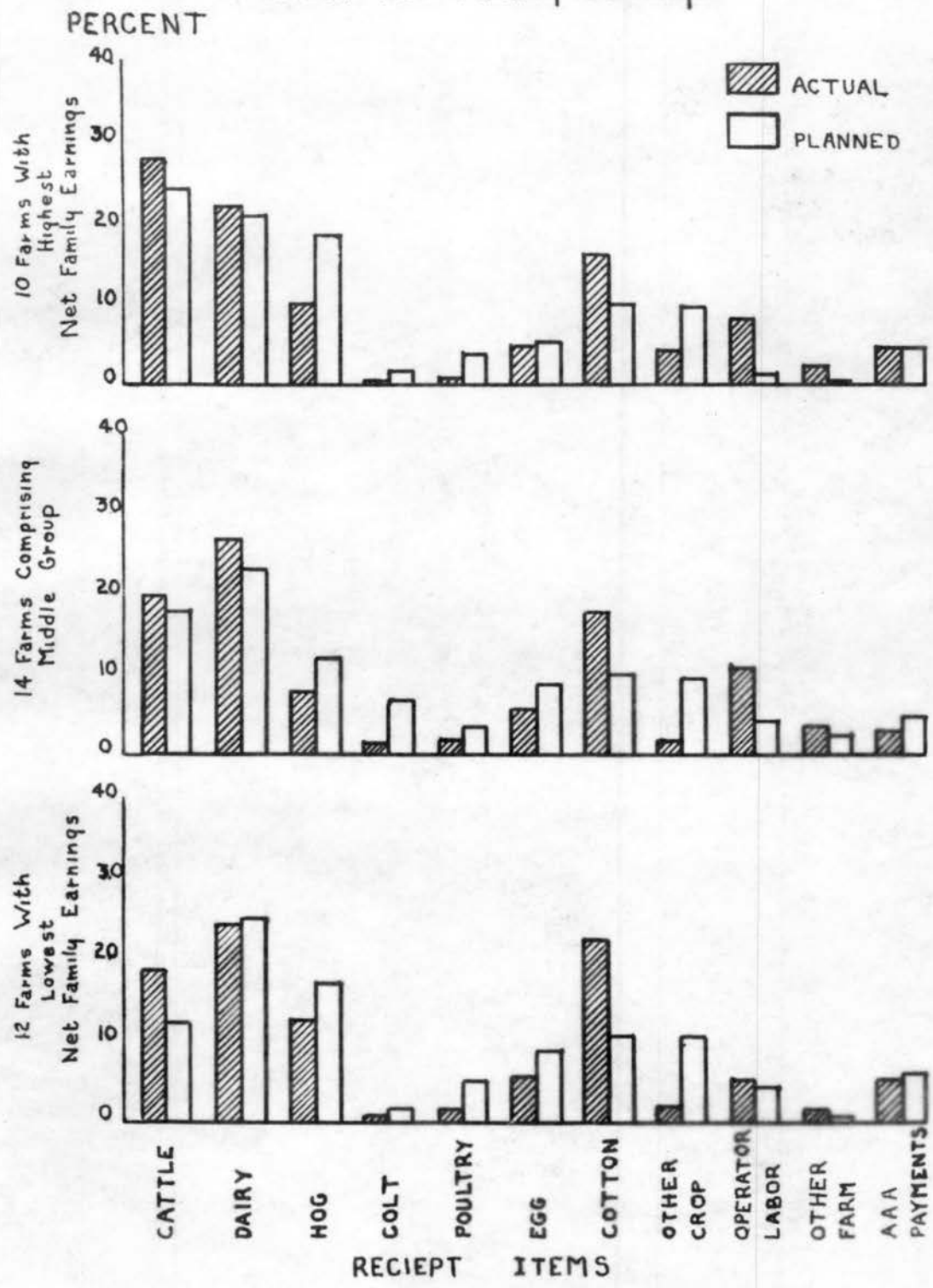
The importance of actual cotton sales was more than the planned importance in each group and became a greater proportion of total receipts as net family earnings decreased, while the importance of the actual sales of other crops fell far short of planned importance in each group. Operator's labor off farm exceeded the planned in each case. Other farm sources^{2/} were relatively unimportant. These counter-balancing influences made the overall planning as shown in Figure 1 appear fairly accurate. This indicates that without a detailed analysis diversity with its compensating errors in the farm organization overshadows rigidity in planning.

Total cash farm expenditures were not directly related to net family earnings (Table 7). However, there was believed to be a need of more thorough analysis of this item.

In Group I the total actual cash farm expenditures were only 1 percent more than planned (Table 7); however, when the individual items of farm expenditure are considered as percentages of total farm expenditures, actual livestock expenditures were less than planned, actual

^{2/} Other sources are farm sources not included in any other items such as sale of posts, gravel, scrap iron, wild pelts, etc.

FIGURE 2
 Distribution of Cash Farm Receipts-Actual Compared to
 Planned on 36 Farms, Grouped According to
 Actual net Family Earnings



SOURCE: APPENDIX TABLE I

machinery expense almost doubled that of the planned and other farm expense ^{3/} was less than planned while seed, feed, and labor expenses were remarkably close to the planned proportion of total expense (Figure 3). All farm expense items of Group I were remarkably close to that of the planned items except machinery expense which was much more than planned. The indications are that the original plan set the farmer up with inadequate machinery. In Group II actual livestock expense was much less than planned while feed and other farm expenses were more than the planned percentage of total. In Group III the planning was fairly accurate as far as distribution of expense was concerned; however, in both Groups II and III the actual feed expense exceeded the planned by 135 percent and 65 percent, respectively (Appendix Table 2). On these farms for 1939 feed expense was, as related to total expenditures, an unimportant item; however, considered as a portion of operating expense, ^{4/} only, this would represent a grave error in planning. This first year's experience and records should help to prevent such an error in feed estimates the following year.

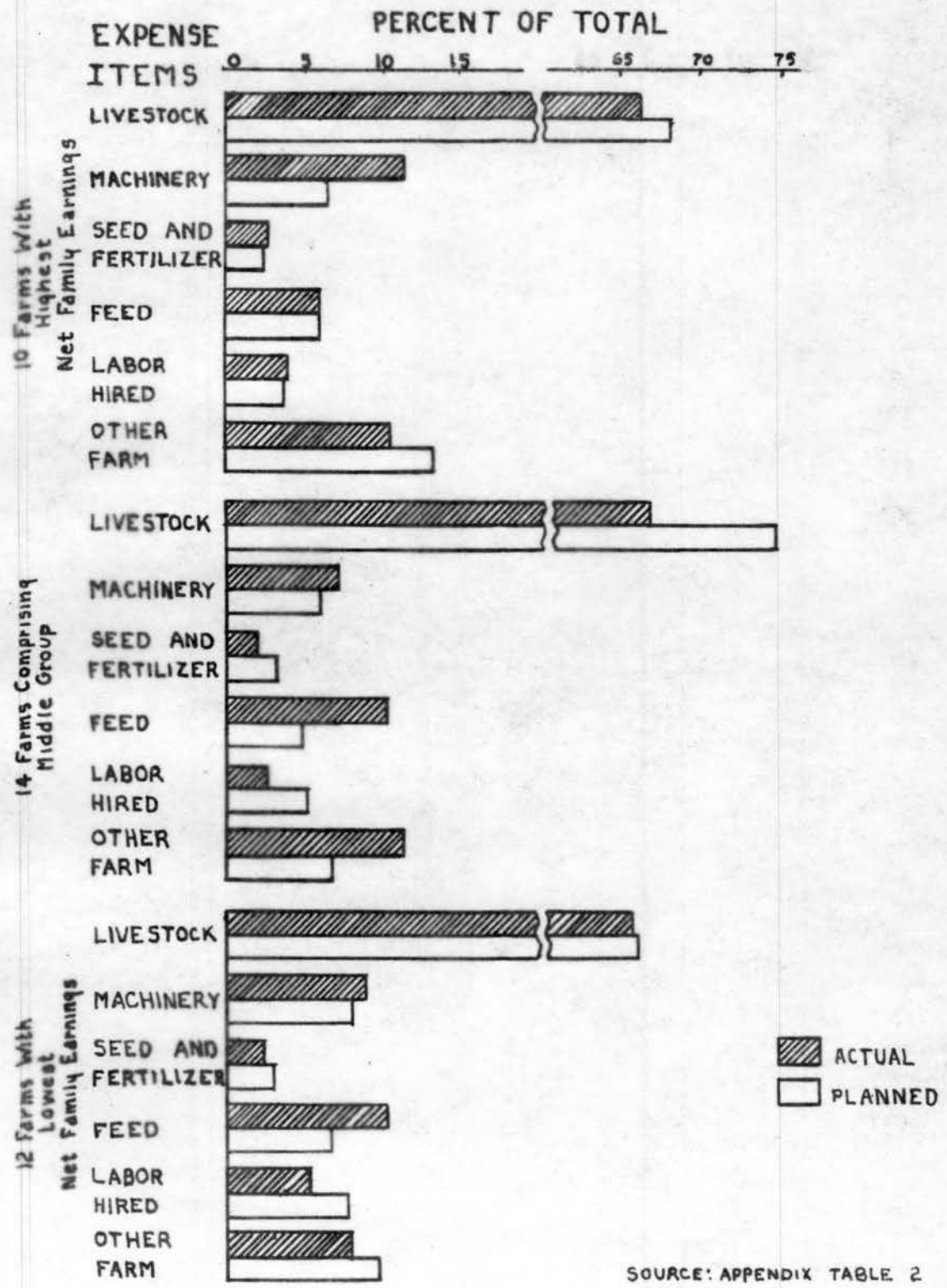
The indications here are that there was no definite relationship of farm expenditures to actual net family earnings.

This study of these farms classified on actual net family earnings indicated that the planning for the family was more accurate than farm planning and that net family earnings as a measure of success was

^{3/} Other farm expense includes such items as cattle hauling, milk hauling, cotton hauling, feed grinding, and automobile expense.

^{4/} The way the data were recorded on the Farm Security Administration cards, it was impossible to accurately separate operating expense from purchases of capital equipment. See sample of card in Appendix, Exhibit B.

FIGURE 3
 Distribution of Farm Expenditures, Actual Compared to
 Planned on 36 Farms - Grouped According to
 Actual net Family Earnings



SOURCE: APPENDIX TABLE 2

fairly consistent. The indications are that there was rigidity of planning and there is some relationship between compliance with plans and success. In order to analyze more fully the relationship of success to compliance with plans in net family earnings, the farms were classified on the basis of the ratio of actual to planned net family earnings as shown in the following section.

The Ratio of Actual to Planned Net Family Earnings

The 36 farms were arrayed according to individual ratios of actual to planned net family earnings. The high farm had a ratio of 113.5 compared with a ratio for the low farm of 39.8. The individual farms were fairly evenly distributed between these limits; however, the tri-modal appearance logically put 11 farms in the high ratio group or Group I, 15 farms in the middle ratio group or Group II, and 10 farms in the low group or Group III. The low and high ratios for Group II were 71.0 and 86.9 respectively.

In this classification seven of the same farms that made up Group I of the previous classification remained in Group I here. Only one farm that was in Group III of the previous grouping was in Group I of this section and none of the farms that made up Group I previously were switched to Group III of this section. This is further indication that the farms with the high net family earnings came nearer to making the planned net family earnings. However, the switching described above narrowed the spread between the average net family earnings of Groups I and III as compared to the average net family earnings of Groups I and III of the previous classification (Tables 7 and 8).

Actual farm income does not decrease consistently with the net family earnings compliance ratio, but the ratio of actual to planned

Table 8
 Comparing Actual to Planned in Various Farm Management Factors with Averages per Farm
 on 36 Farms, Classified on Ratio of Actual to Planned Net Family Earnings

		: 11 Farms Having the			: 15 Farms Comprising			: 10 Farms Having the		
		: Highest Ratio			: Middle Group			: Lowest Ratio		
	Unit	:Actual:	:Planned:	Ratio	:Actual:	:Planned:	Ratio	:Actual:	:Planned:	Ratio
		:Average:	:Average:	Ratio	:Average:	:Average:	Ratio	:Average:	:Average:	Ratio
Farm income	Dollars	366	470	78	370	537	69	253	628	40
Net family earnings	Dollars	769	789	98	675	857	79	486	883	55
Net worth increase	Dollars	251	323	78	218	379	58	120	464	26
Animal increase	Animal Units	4.80	5.49	88	4.50	6.99	64	4.68	7.56	62
Farm products used in home	Dollars	298	271	110	249	285	87	206	241	85
Cash family expenses	Dollars	220	195	113	208	193	108	161	178	90
Cash paid on debts	Dollars	201	204	98	210	180	117	273	263	104
Cash farm expenditures	Dollars	547	535	102	727	671	108	869	768	113
Cash farm receipts	Dollars	423	602	70	522	681	77	510	734	69
Ending cash on hand	Dollars	22	188	12	11	229	05	29	302	10
Ending farm inventory	Dollars	1,044	932	112	1,079	1,023	105	1,165	1,215	96
Crops harvested	Acres	53	62	86	54	66	83	39	62	63
Cotton	Acres	5.6	6.1	93	5.8	5.9	99	5.7	6.5	88
Cotton yield	Lbs. Lint	176	176	100	249	166	150	199	167	119
Feed crops	Acres	44	51	87	46	56	82	33	55	60
Feed yield	Digestible Nutrients	600	731	82	631	818	77	589	813	72
Total cropland	Acres	65			68			62		
Land in farm	Acres	141			151			175		
Investment in productive livestock	Dollars	482			573			764		

farm income diminishes with about the same rate as the compliance ratio of net family earnings, while actual net worth increase diminished quite consistently with net family earnings. The ratio of actual to planned net worth increase diminished much faster than the compliance ratio of net family earnings (Table 8). This can, partially, be explained by the fact that the amount of error in planning cash farm receipts was, by way of ending cash on hand, largely reflected in net worth increase (Table 8). This amount of error in planning ending cash on hand increased as the net family earnings compliance ratio decreased.

Further evidence that the degree of accuracy in planning, in general, decreased with the degree of accuracy in planning net family earnings is shown by the fact that Group III planned a greater net family earnings, farm income, net worth increase, animal units increase, and cash farm receipts than was planned by Group I. In actual achievement, Group III was least in the first three of those items and lowest in compliance ratio of all those items (Table 8).

In addition to failing in planned carryover of cash, in order to meet debt repayments, Group III had all but to eliminate their planned reserves of feed and seed or young livestock. This is indicated in that the compliance ratio of ending farm inventory decreased steadily from Group I to Group III (Table 8), and that actual cattle and hog sales increased consistently as the net family earnings compliance ratio decreased (Appendix Table 12). Therefore, Group III came nearer selling all their production than did the other groups. Although Group III produced only 62 percent of the anticipated animal units increase (Table 8) the actual cattle and hog sales of this group were more than planned (Appendix Table 12).

Debt repayments per farm increased as net family earnings compliance decreased. Debt repayments might be expected to increase since ending farm inventory, investment in productive livestock, and acres in farm increased in the same manner (Table 8). This tendency for the farms nearest compliance in net family earnings to be on the farms with fewer acres and smaller investment might indicate that Group III was over-invested in productive livestock from the standpoint of ability and experience of the operators or adequacy of equipment and improvements for these larger farms. The cotton yields or feed yields do not indicate that the smaller farms were more productive (Table 8). Group III is farthest from compliance with planned crops harvested and feed acres. This again might indicate the fault of management.

The indications here are that it is possible some of the larger cattle loans were made on farms that had more acres and at the same time, the carrying capacity of the pasture, the adequacy of improvements or the ability and experience of the operators were over-estimated. While a loan might be repaid under these conditions the family earnings would be low.

In both classifications in this study on net family earnings there is relation between net family earnings and the other measures of success and the degree of compliance with plans in net family earnings is closely related to the compliance with plans in other factors. There are also indications that there was rigidity in planning which was based on acres in farm and investment regardless of adaptability of farm and operator to the organization. There are other indications that planning for the family expenses and farm expenditures was more accurate than planning farm receipts.

Farm income includes only net income from farm sources and increase in farm inventory. Since farm income does not include the net worth or net income of the family it was considered expedient, by way of contrast, to study these farms next while classified on farm income.

CHAPTER III. FARM INCOME

Classified on Actual Farm Income

An array of actual farm income of the 36 Farm Security farms ranged from \$106 to \$830 with a break in the array between \$387 to \$419. There were seven farms with farm income of \$419 and above which comprise the high farm income group or Group I. The middle group, or Group II, consists of 17 farms with incomes ranging from \$302 to \$387. The 12 farms in the low farm income group, or Group III, had incomes ranging from \$106 to \$296. The average farm incomes for Groups I, II, and III were \$525, \$345, and \$213, respectively (Table 9).

The data in Table 9 give a general picture of the actual farm organization and of the results from the farm records before attempting to compare actual to planned operations.

It is noted that a clearly distinct relationship existed between farm income and net worth increase. While the difference in acres in farm was slight, there was an indication that the farms making the higher farm income were the larger farms. Average total acres in farm, average acres harvested, average acres in all cropland, and percentage of total cropland harvested decreased quite consistently as the farm income diminished (Table 9). The farm income per 100 acres of cropland decreased quite sharply from Group I to Group III. Group III farms had fewest acres and least investment in productive livestock. However, the data indicated the lack of consistent relationship between investment in productive livestock and farm income (Table 9). This, with the fact that there was no relationship between farm income and investment per 100 acres in farm might indicate that Group III was over-invested in livestock. The farm income per \$100 invested in productive

Table 9
 Factors of Actual Organization Associated with
 High, Medium, and Low Farm Income on
 36 Farm Security Farms

		7 Farms with Highest Unit : Farm Income (Average)	17 Farms prising the Middle Group (Average)	12 Farms with Lowest Farm Income (Average)
Farm income	Dollars	525	345	213
Net worth increase	Dollars	357	208	100
Crops harvested	Acres	62	51	41
Land in farm	Acres	164	161	141
Total cropland	Acres	74	67	59
Portion of land in cropland	Percent	45	42	42
Portion of cropland harvested	Percent	83	76	69
Farm income per 100 acres of cropland	Dollars	706	513	364
Investment in productive livestock	Dollars	590	648	532
Farm income per \$100 invested in productive livestock	Dollars	89	53	40
Investment in productive livestock per 100 acres in farm	Dollars	360	404	378

livestock indicated that productive livestock was utilized more efficiently by the farmers making the higher farm income (Table 9).

The data in Table 10 show the variations in items from one farm income group to another and at the same time compare the actual operations to the plans for the same items.

Actual net family earnings and net worth increase diminished quite consistently as actual farm income decreased. The same relationships existed among the compliance ratios of those items; in each group the degree of compliance in net family earnings was higher than these other items (Table 10).

In Group III the extremely sharp decrease in actual net worth increase and in the compliance ratio of this item might partially be explained by the amount of error in planning ending cash on hand. This item was about the same as in the other groups and was reflected in the net worth on farms with fewer acres and smaller investment. Group III farms had fewer acres in cropland (Table 9) and was on the less productive farms; this productivity was indicated by both cotton and feed yields (Table 10). Regardless of these preceding facts, Group III planned roughly as much farm income, family earnings, cash farm receipts, cotton and feed acres, and about as high yields as were planned by Group I. Group III fell far short of plans in all of these items (Table 10). Too much rigidity in planning is indicated by these facts.

The decrease in the compliance ratio of crops harvested from Group I to Group III might indicate the managerial ability of the operator decreased as the farm income diminished. Further indication of this fact lies in that Group III produced as many animal units as

Table 10
 Comparing Actual to Planned in Various Farm Management Factors with Averages
 per Farm on 36 Farms, Classified on Actual Farm Income

		: 7 Farms with Highest			: 17 Farms Comprising			: 12 Farms with Lowest		
		: Farm Income			: the Middle Group			: Farm Income		
: Unit		:Actual	:Planned:		:Actual	:Planned:		:Actual	:Planned:	
		:Average:	:Average:	Ratio	:Average:	:Average:	Ratio	:Average:	:Average:	Ratio
Farm income	Dollars	525	673	78	345	489	70	213	539	40
Net family earnings	Dollars	876	1,003	87	622	796	78	563	818	67
Net worth increase	Dollars	357	506	70	208	349	60	100	359	28
Animal increase	Animal Units	4.10	7.70	65	4.85	6.40	76	4.14	6.50	64
Cash family expenses	Dollars	253	214	118	192	182	105	176	186	95
Cash farm expenditures	Dollars	830	752	110	723	685	106	626	562	112
Cash paid on debts	Dollars	252	201	126	266	239	112	149	175	85
Cash farm receipts	Dollars	600	703	86	522	682	76	375	638	59
Ending cash on hand	Dollars	35	274	13	18	215	08	13	246	08
Ending farm inventory	Dollars	1,155	1,082	107	1,151	1,032	112	972	970	100
Crops harvested	Acres	62	69	90	51	65	79	41	58	70
Cotton	Acres	8.1	7.8	103	5.2	5.2	100	5.1	6.2	81
Cotton yield	Lbs. Lint	253	186	136	246	161	153	129	168	77
Feed crops	Acres	48	54	88	45	58	77	34	50	70
Feed yield	Digestible Nutrients	657	762	86	611	751	81	576	880	65

Group I and yet, this increase is not reflected in ending farm inventory or cash farm receipts. The supposition might be that, due to the quality of livestock marketed, Group III sold at a much lower price per animal unit (Table 10).

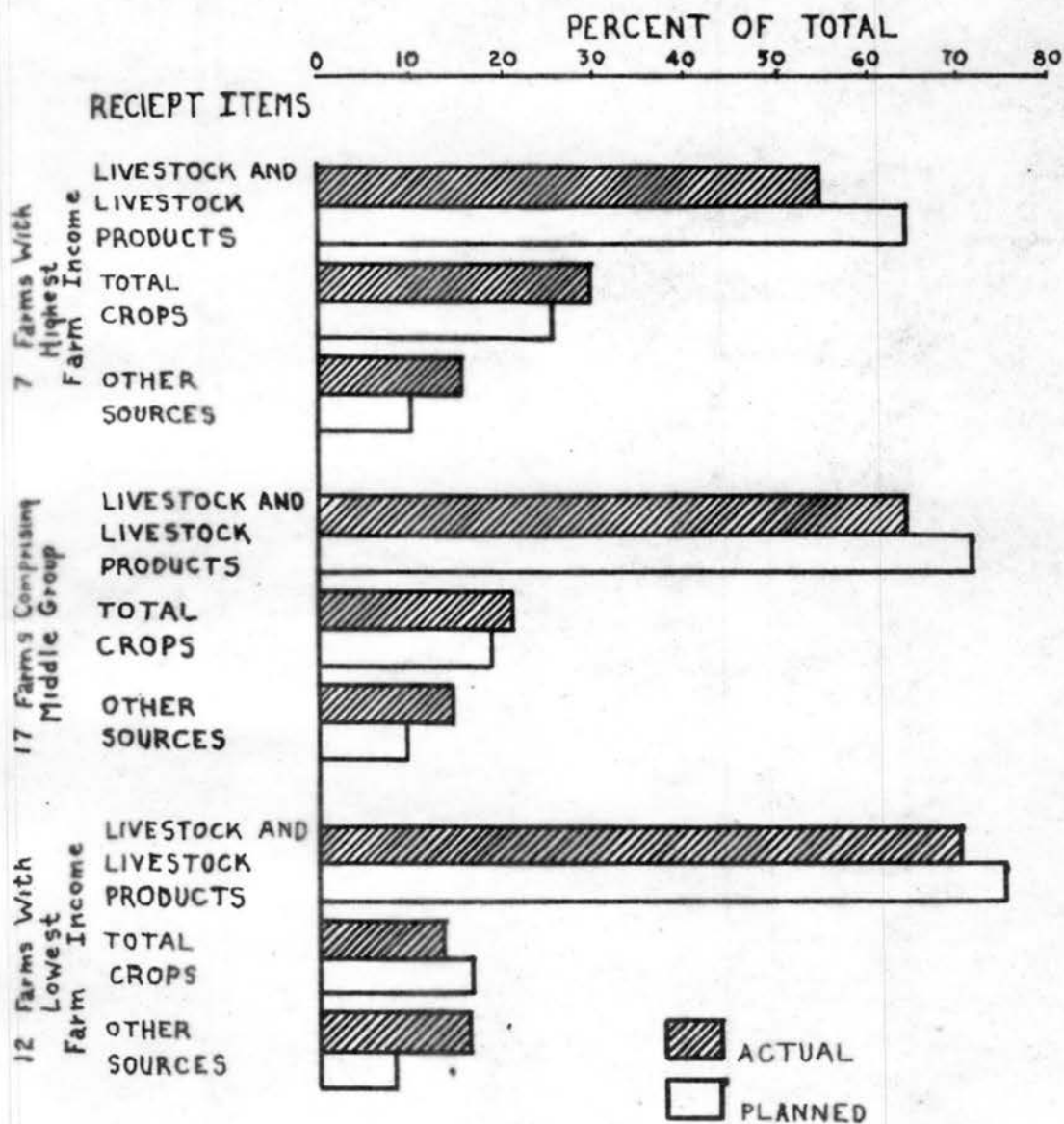
The decrease in ending farm inventory from Group I to Group III, proportionally, is not nearly so sharp as the decrease in average farm income from Group I to Group III. This is an indication that Group III was not so well equipped regarding experience or ability to manage their organization.

Actual cash farm receipts decreased as actual farm income decreased and the compliance ratio of cash farm receipts decreased in the same manner (Table 10). This close relationship of cash farm receipts to farm income suggested a further analysis of farm receipts on these farms, classified on farm income.

With the farm receipts divided into three main types of sources the receipts from livestock and livestock products were, by far, the most important sources in each farm income group; the percentage that the livestock sources were of total receipts increased as farm income decreased (Figure 4). The relationship of all crop sales to farm income was exactly opposite that of livestock and livestock products; the actual percentages that each of these items were of total receipts were relatively close to that of the planned percentages in each farm income group (Figure 4). The receipts from other farm sources were relatively more important than planned and remained fairly near the same proportion of total receipts in each of the farm income groups (Figure 4).

After studying the distribution of individual receipts, each as a percentage of total receipts for both actual and planned, it was found

FIGURE 4
 Distribution of Cash Farm Receipts
 Actual Compared to Planned on 36 Farms
 Grouped According to
 Actual Farm Income



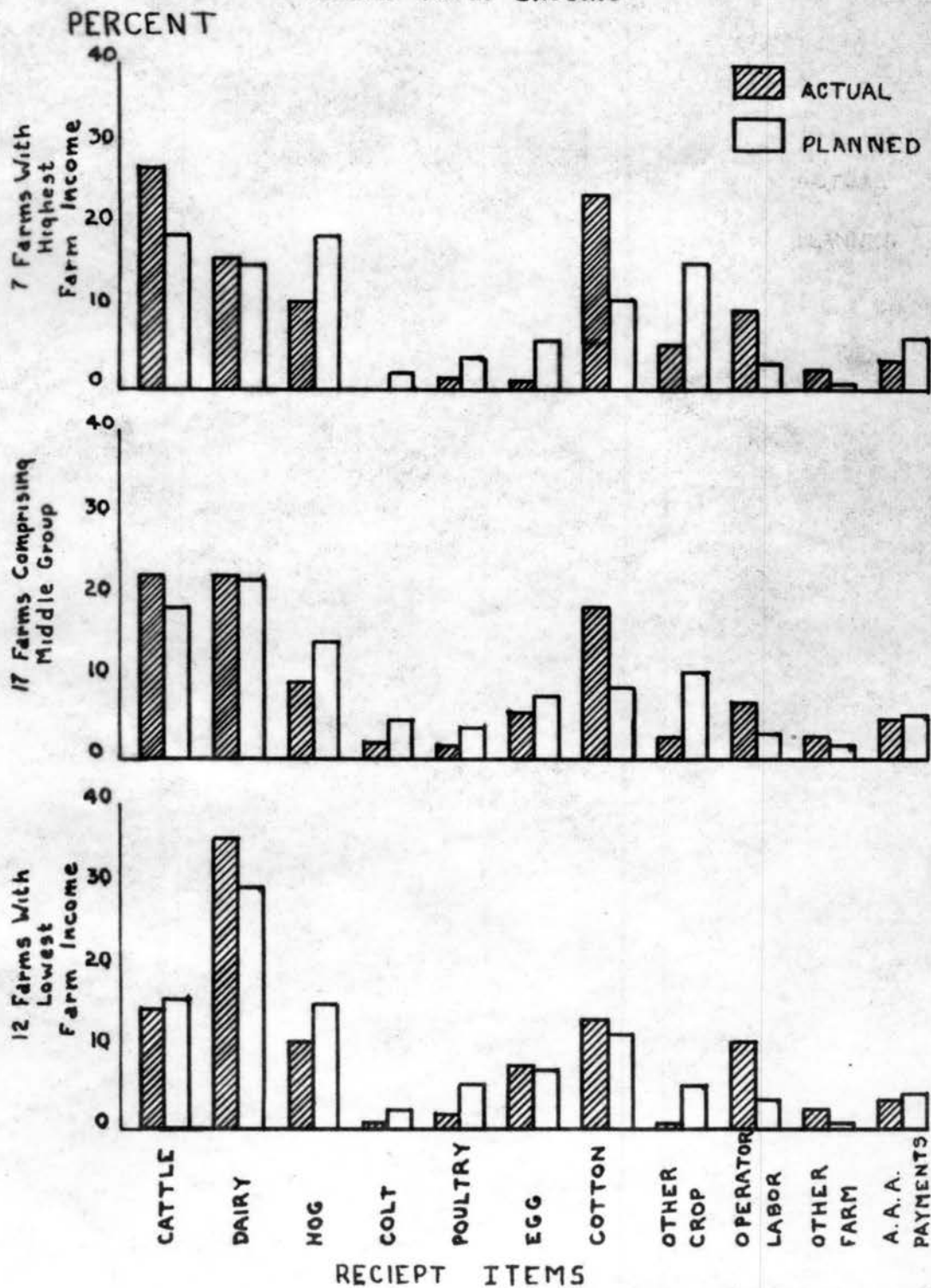
SOURCE: APPENDIX TABLE 3

that both cotton sales and all other crop sales decreased consistently as farm income decreased (Figure 5). This might be accounted for by the fact that total acreage in farms and acres of cropland decreased as farm income decreased. In all groups the importance of the sale of cotton was more than planned, with the margin of this difference decreasing with farm income (Figure 5); this change in margin between actual and planned cotton sales was represented by a corresponding decrease in actual cotton yield and decrease in cotton acreage compliance from Group I to Group III (Table 10). The importance of the sale of other crops was much lower than planned and relatively unimportant throughout (Figure 5). This might have been caused partially by the under-estimation of feed needs, since the importance of feed (other crop) sales decreased with farm income (Figure 5) as did acreage and yield of all feed (Table 10). It is probable that a greater than planned proportion of grain and hay crops was used as feed, thereby decreasing the amount for sale.

The relative importance of the sale of hogs and poultry remained about the same in all farm income groups while that of cattle sales decreased as farm income diminished. Dairy and egg sales became relatively more important as farm income decreased (Figure 5). The planning appeared more accurate for dairy sales than for any other important item. However, the actual amount of receipts from the sale of dairy products was less than the amount planned in all groups (Appendix Table 3).

With the exception of the planned increase in the importance of dairy sales for Group III the planned distribution of receipts was fairly rigid throughout all groups. The consistent relative changes

FIGURE 5
 Distribution of Cash Farm Receipts-Actual Compared to
 Planned on 36 Farms, Grouped According to
 Actual Farm Income



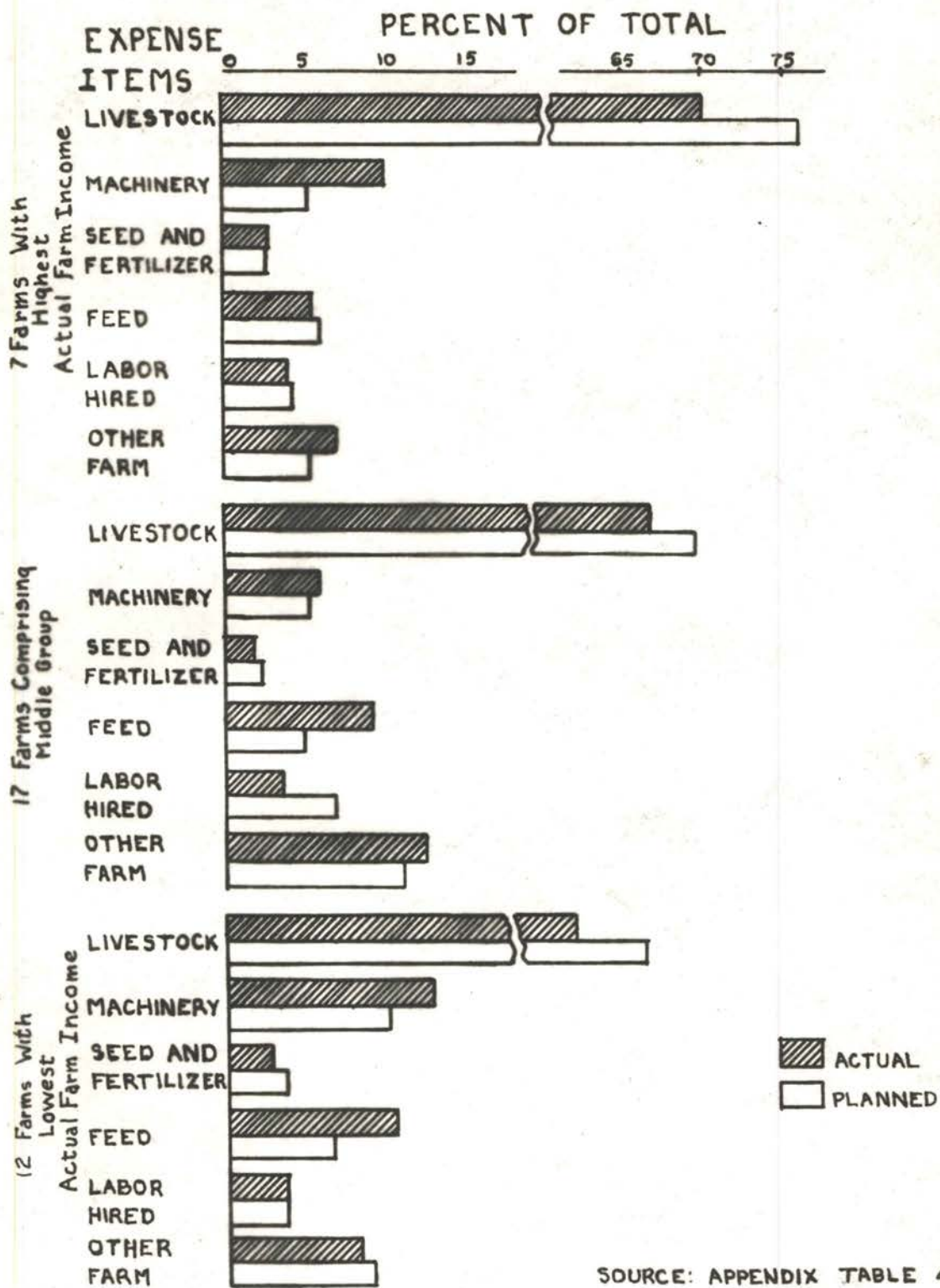
SOURCE: APPENDIX TABLE 3

between the importance of the various enterprises from group to group in actual operations might be caused by differences in experience and aptitude of the operators in the various enterprises of their organizations. It was probable, for example, the farmers in Group III, when purchasing their cattle, picked dairy cattle and those of Group I purchased dual purpose and beef cattle.

From the point of view of the total farm expenditures there was little or no apparent relationship of either the actual expenditures per farm or the compliance with planned expenditures to farm income (Table 10). Because of possible variations of the items of expenditure it was considered necessary to make a more detailed analysis of farm expenditures.

In Group I the importance, as related to total expenditures, of seed, feed, labor, and other farm expenses, was remarkably near the planned importance of these items (Figure 6). The indications are that Group I was set up with inadequate machinery for which they had to make up by a slight decrease in livestock purchases in that the proportionate share of expenditures for livestock was less than planned and actual machinery expenditures were much more than planned (Figure 6). Expenditures for livestock and livestock expenses decreased in relation to total expenditures as the farm income decreased. This trend corresponds to the decrease in size of farm but would not be expected since the relationship of the importance of receipts from livestock and livestock products was exactly opposite to that of expenditures for livestock. In view of the comparative income the indications are that Group III was invested too heavily in farm machinery and equipment. Another indication of inefficient utilization in this low income group is in the case of the feed expense as compared

FIGURE 6
 Distribution of Cash Farm Expenditures Actual
 Compared to Planned on 36 Farms, Grouped According to
 Actual Farm Income



SOURCE: APPENDIX TABLE 4

to total expense. This additional feed expense is not reflected in receipts from livestock and livestock products. The actual average feed expense of Group III was one-third higher than that of Group I while actual average receipts from all livestock and livestock products were one-third higher in Group I than in Group III (Appendix Tables 3 and 4).

It should be kept in mind that the total feed acreage and all feed yield decreased as farm income decreased. The indications are that Group I through better planning created a more efficient organization or combination of enterprises for the particular conditions involved. This might be due to more efficient management in applying the plans. This brings out the importance of the more or less unpredictable human factors.

In this study there are indications of rigidity in planning, that farm income is a more satisfactory or more true measure of success than net family earnings, and yet there is a close relationship of farm income to net family earnings and the other measures of success. There are also indications that compliance with farm plans was directly related to success. In order to analyze this indicated relationship more fully, the farms were classified on the basis of the ratio of actual to planned farm income. The treatment of this analysis follows in the next section.

The Ratio of Actual to Planned Farm Income

These 36 farms were arrayed on the basis of the ratio of actual to planned farm income. The high ratio was 165 and the low was 21. With the exception of the one top case the individual farms were fairly well distributed from a ratio of 21 to 100. The groups were divided on the basis of class intervals with the high group, or Group I, including 12

farms with farm income compliance ratio of 76 and above, the middle group, or Group II, was composed of 13 farms with ratios from 51 to 75, inclusive, and the low group, or Group III, was composed of 11 farms that had ratios of 50 or below. The farm income compliance ratio for Group I was 88 and Groups II and III had a ratio of 66 and 37, respectively.

The data in Table 11 show the relationships of farm income and various other factors to compliance with planned farm income and the relationship of compliance in farm income to compliance with plans in these other factors.

The group making the highest ratio of actual to planned farm income did not make the highest average farm income; however, Group III had, by far, the least average farm income (Table 11). The relationship of actual to planned net worth increase among the farm income ratio groups was quite comparable to that of farm income including a consistent decrease in the net worth compliance ratio as the farm income compliance ratio diminished. The relationship of actual cash farm receipts to the farm income compliance ratio is similar to those of actual farm income and actual net worth increase (Table 11).

There is a consistent relationship between the compliance with planned farm income to both actual net family earnings and actual increase in animal units; each of these factors diminished as the farm income compliance ratio decreased and the compliance ratio of each of these factors decreased in the same manner (Table 11).

Group III planned more farm income than was planned by Group I; the same was true of net family earnings, increase in animal units, cash farm receipts, and in net worth increase. Group III planned almost

Table 11
Comparing Actual to Planned in Various Farm Management Factors with Averages per
Farm on 36 Farms, Classified on Ratio of Actual to Planned Farm Income

		: 12 Farms with			: 13 Farms comprising			: 11 Farms with		
		: Highest Ratio			: the Middle Group			: Lowest Ratio		
	Unit	Actual	Planned	Ratio	Actual	Planned	Ratio	Actual	Planned	Ratio
		Average	Average	Ratio	Average	Average	Ratio	Average	Average	Ratio
Farm income	Dollars	377	428	88	394	592	66	223	607	37
Net family earnings	Dollars	725	812	89	668	841	79	552	881	63
Net worth increase	Dollars	217	268	81	262	449	58	111	430	26
Animal increase	Animal Units	5.05	5.90	86	4.61	7.11	65	4.23	7.05	60
Cash family expenses	Dollars	239	228	105	189	160	118	166	182	91
Cash farm expenditures	Dollars	713	684	104	769	686	112	643	593	109
Cash paid on debts	Dollars	218	199	109	256	216	118	195	216	91
Cash farm receipts	Dollars	506	616	82	545	671	81	402	734	55
Receipts from:										
Livestock and livestock products	Dollars	306	423	73	352	465	76	264	554	48
Crop sales	Dollars	112	143	78	122	131	93	72	121	59
Other farm sources	Dollars	87	50	173	71	75	96	66	59	111
Ending cash on hand	Dollars	16	165	09	19	236	08	24	316	07
Ending farm inventory	Dollars	1,082	903	120	1,143	1,111	103	1,043	1,044	100
Crops harvested	Acres	51	68	76	53	60	88	44	62	71
Cotton	Acres	5.4	5.5	98	6.5	5.8	112	7.7	7.1	108
Cotton yield	Lbs. Lint	232	170	136	218	174	125	186	165	113
Feed crops	Acres	42	60	71	46	51	90	37	53	70
Feed yield	Digestible Nutrients	545	724	75	738	777	95	511	892	57
Total cropland	Acres	71			63			62		
Land in farm	Acres	156			163			143		
Investment in productive livestock	Dollars	581			641			567		

twice as much net worth increase as was planned by Group I (Table 11). For each of these factors for which Group III planned higher than was planned for the same items by Group I, the actual achievement for Group III was lowest of the three groups. The amount of error in planning ending cash on hand increased as farm income compliance ratio decreased. From the standpoint of size of farm organization (acres in farm, acres in cropland, amount invested in productive livestock, and ending farm inventory), (Table 11) it is difficult to understand the radical over-planning of Group III. However, this low ratio group did not fail to so great an extent in complying with plans in crops harvested, cotton acres, cotton yield or receipts from other sources. There is some indication that Group III was on the less productive farms as cotton yield and feed yields were lowest in this group. According to compliance in feed acres and feed yield, Group III produced less than one-half of planned feed production (Table 11).

In observing comparative actual achievement and compliance ratios of Group III in net worth increase, increase in animal units and receipts from livestock and livestock products, the indications are that the source of failure in Group III was in the livestock enterprise (Table 11). These indications, with the fact that farm inventory and average investment in productive livestock were about as high in Group III as in the other groups, would indicate that the operators of Group III were over-invested in the livestock enterprises. This over-investment might exist not only from the standpoint of the acres in farm, but also from the standpoint of the operator's ability and experience in management of the livestock enterprises. This item might include the operator's ability to judge the productivity of the farm and its adequacy of improvements for the particular livestock

enterprises. It would seem that this lack of experience of the operator not only is revealed in actual production and achievements but in his ability in projecting a reasonable plan. The operator's idea and thoughts, in advance, on the organization and possibilities on the particular farm are the most important item in formulating the plan.

The Farm Security Administration supervisor approved the farm plan after seeing the farm for which the plan is made. However, this is true not only for the low compliance group but for all the farms on which plans are approved. This fact with the observations of the writer indicate that the factor most often misjudged by the supervisor is the ability and experience of the particular operator. This leads to rigidity in planning and over-investment on some farms.

This study of these farms classified on the compliance ratio of farm income not only reveals a relationship between success and following the farm plan and a relationship between the operator's ability and success, but that compliance with the farm plan might also be closely related to the operator's ability in that the more capable operator would be able to project a more reasonable and workable plan.

Due to the fact that net worth increase was closely related to both net family earning and farm income and seemed to be a consistent measure of success, it was decided to analyze these farms classified on the basis of net worth increase from beginning to the end of the year. This analysis follows in the next section.

CHAPTER IV. NET WORTH INCREASE

Classified on Actual Net Worth Increase

These 36 Farm Security farms were arrayed according to actual increase in net worth from beginning to end of the year. The individual farms were fairly well distributed. The low farm had an actual net worth increase of negative \$35 and the highest net worth increase was \$626. The farms were divided into three groups of 12 farms each. The low actual net worth increase in the high group or Group I was \$279 and the highest net worth increase for the low net worth increase group, or Group III, was \$133. The high and low net worth increase for the middle group, or Group II, was \$260 and \$149, respectively. The average net worth increase per farm for each Group I, II, and III, was \$339, \$200, and \$64, respectively (Table 12).

According to the data in Table 12 farm income for these various groups, to a little less marked degree, decreased quite consistently as the rate of actual net worth increase diminished. There was no indicated relationship of total acres in farm or acres in cropland to actual net worth increase (Table 12). Concerning all crops harvested and percentage of cropland harvested, the trend was downward as the amount of net worth increase diminished. This indicates a close relationship of the utilization of cropland available to net worth increase and farm income. This relationship is shown more clearly by the fact that farm income per 100 acres of cropland decreased as net worth increase and farm income diminished (Table 12).

Roughly, the investment in productive livestock per farm varied from group to group in about the same relationship to net worth increase as did acres in farm; this investment in Group III was only

Table 12
 Factors of Actual Organization Associated with High,
 Medium, and Low Net Worth Increase on
 36 Farm Security Farms

		: 12 Farms :with Highest : Unit : Net Worth : Increase : (Average)	:12 Farms Com- :prising the : Middle : Group : (Average)	: 12 Farms :with Least : Increase in : Net Worth : (Average)
Net worth increase	Dollars	339	200	64
Farm income	Dollars	437	338	233
Crops harvested	Acres	60	48	41
Land in farm	Acres	142	176	146
Total cropland	Acres	67	67	63
Portion of land in cropland	Percent	47	38	43
Portion of cropland harvested	Percent	90	72	65
Farm income per 100 acres of cropland	Dollars	655	503	368
Investment in productive livestock	Dollars	636	670	488
Farm income per \$100 invested in productive livestock	Dollars	69	51	48
Investment in productive livestock per 100 acres in farm	Dollars	449	381	334

slightly lower than that of Group I as compared to the great difference in net worth increase of the two groups. However, the investment in productive livestock per 100 acres in farm decreased consistently as actual net worth increase became smaller. These trends might still indicate an over-investment in productive livestock in the low net worth increase group. Farm income per \$100 invested in productive livestock decreased directly with the rate of net worth increase. This might indicate a relationship of efficiency in utilization of productive livestock to the rate of net worth increase.

The data in Table 13 show the relationships of actual achievement for these several other factors to actual net worth increase and compare actual to planned in each of the factors for the three groups. Further evidence of the close relationship of farm income and net worth increase and of their relative value as a measure of success is the similarity of results obtained when classified on each of the respective factors (Tables 10 and 13).

Actual farm income, net family earnings, increase in animal units, and cash farm receipts decreased with some consistency, although with a less marked degree, from group to group as the rate of actual net worth increase diminished. The ratio of actual to planned in each of these factors decreased in the same manner (Table 13). This indicates a close relationship between the following of the farm plan to the success of the operator. The relative sharp decrease in actual net worth increase and the compliance ratio of net worth increase as compared to the other items might be partially explained in that the amount of error in planning ending cash on hand was about the same from group to group, since this item is directly reflected in net worth the same

Table 13
 Comparing Actual to Planned in Various Farm Management Factors with Averages
 per Farm on 36 Farms, Classified on Actual Net Worth Increase

	Unit	: 12 Farms with Highest			: 12 Farms comprising			: 12 Farms with Least		
		: Net Worth Increase			: the Middle Group			: Net Worth Increase		
		:Actual:	:Planned:	:Ratio:	:Actual:	:Planned:	:Ratio:	:Actual:	:Planned:	:Ratio:
		:Average:	:Average:	:Average:	:Average:	:Average:	:Average:	:Average:	:Average:	:Average:
Farm income	Dollars	437	612	71	338	480	70	233	534	44
Net family earnings	Dollars	763	904	84	640	781	82	551	846	65
Net worth increase	Dollars	339	469	72	200	346	58	64	341	19
Animal increase	Animal Units	5.40	7.21	75	4.87	6.63	73	3.65	6.22	59
Farm products used in home	Dollars	241	253	95	241	253	95	274	299	92
Cash family expenses	Dollars	183	181	101	199	182	110	213	205	104
Cash farm expenditures	Dollars	768	720	107	718	683	105	648	567	114
Cash paid on debts	Dollars	255	228	112	245	208	118	174	195	89
Cash farm receipts	Dollars	523	692	76	497	670	74	445	652	68
Ending cash on hand	Dollars	35	232	09	13	238	05	21	242	08
Ending farm inventory	Dollars	1,205	1,139	106	1,154	1,078	116	917	929	99
Crops harvested	Acres	60	63	95	49	64	76	41	63	66
Cotton	Acres	5.0	5.1	99	4.9	5.3	92	7.2	7.9	92
Cotton yield	Lbs. Lint	250	182	137	225	164	137	180	165	109
Feed crops	Acres	51	53	96	42	58	73	33	52	62
Feed yield	Digestible Nutrients	695	809	86	532	776	69	587	791	74

amount applied to the net worth increase of the farms with lower earnings and receipts would result in a more abrupt decrease in the compliance ratio of net worth increase. It will be noted that Group III was the only group that did not meet the expected debt repayments; however, Group III lacked only 11 percent making the planned payment on debts (Table 13).

The compliance ratio of net family earnings in each net worth increase group is higher than the ratio of actual to planned farm income, net worth increase, or increase in animal units (Table 13); the reason for this is that net family earnings are partially composed of two relatively inelastic items, value of farm products used in home, and cash family expense. This would indicate that net family earnings are less valuable as a measure of success of the operator's management. However, this factor might be of more value in comparing the family's earnings on the farm with a salary off the farm. The fact that net family earnings do not include the house rent would have to be considered in a comparison of that kind.

The size of the farm inventory was not closely related to actual net worth increase, in fact, the farm inventory increased by only one-third from Group III to Group I, while the net worth increase of Group I was a little more than five times that of Group III. Here again, the indications are that Group III was over-invested.

The crop acres harvested and acres in feed decreased as the rate of net worth increase diminished and the same was true of the compliance ratio of these items. This is further evidence that the utilization of available resources was closely related to net worth increase and to the success of the farm operation (Table 13). The compliance with planned

cotton acreage was high throughout with the highest average acreage in Group III. The actual cotton yield decreased directly with net worth increase with each group making planned yield or better (Table 13).

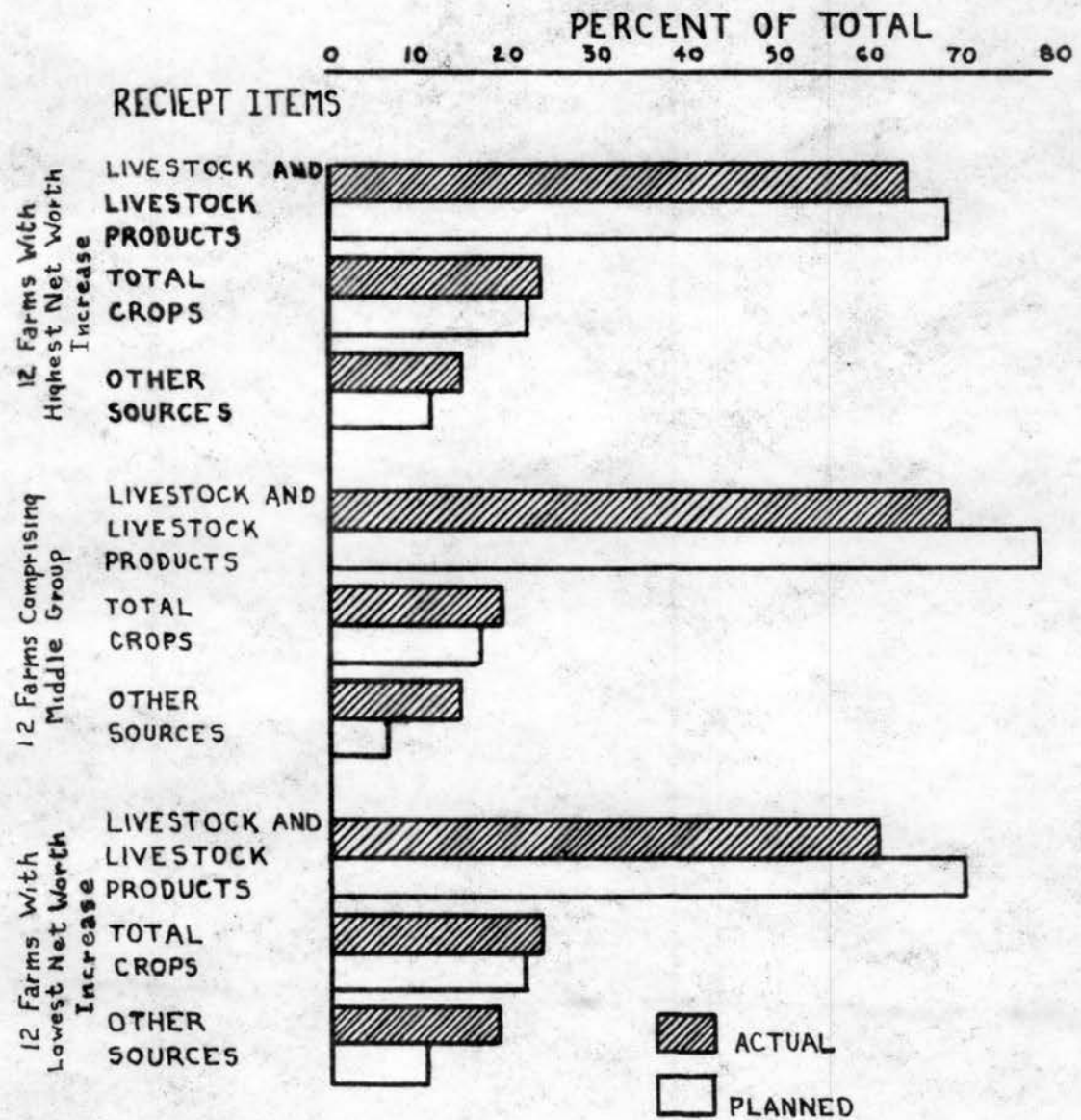
There is no indicated consistency in the relationship of feed yield to net worth increase; however, Group III was lower than Group I in actual feed yield and in compliance with planned yield (Table 13).

Actual cash farm receipts decreased directly with the rate of net worth increase; the decrease in the compliance ratio of cash farm receipts was consistent, but slight, as net worth increase became smaller. With this direct relationship it was considered to be desirable to make a more detailed study of farm receipts.

The sources of receipts were divided into three divisions, livestock, crops, and other sources, with the percentage distribution of these three sources by net worth increase groups. There was no indicated relationship of receipts to changes with net worth increase except that the actual percentages in the cases of livestock and livestock products and other sources were nearer the planned percentages in Group I (Figure 7). This indicated that planning was more accurate in Group I and was fairly accurate throughout. This apparent accuracy in planning was no longer evident when these receipt sources were analyzed more in detail showing both the actual and planned percentage that each item of receipt was of the respective total receipts (Figure 8).

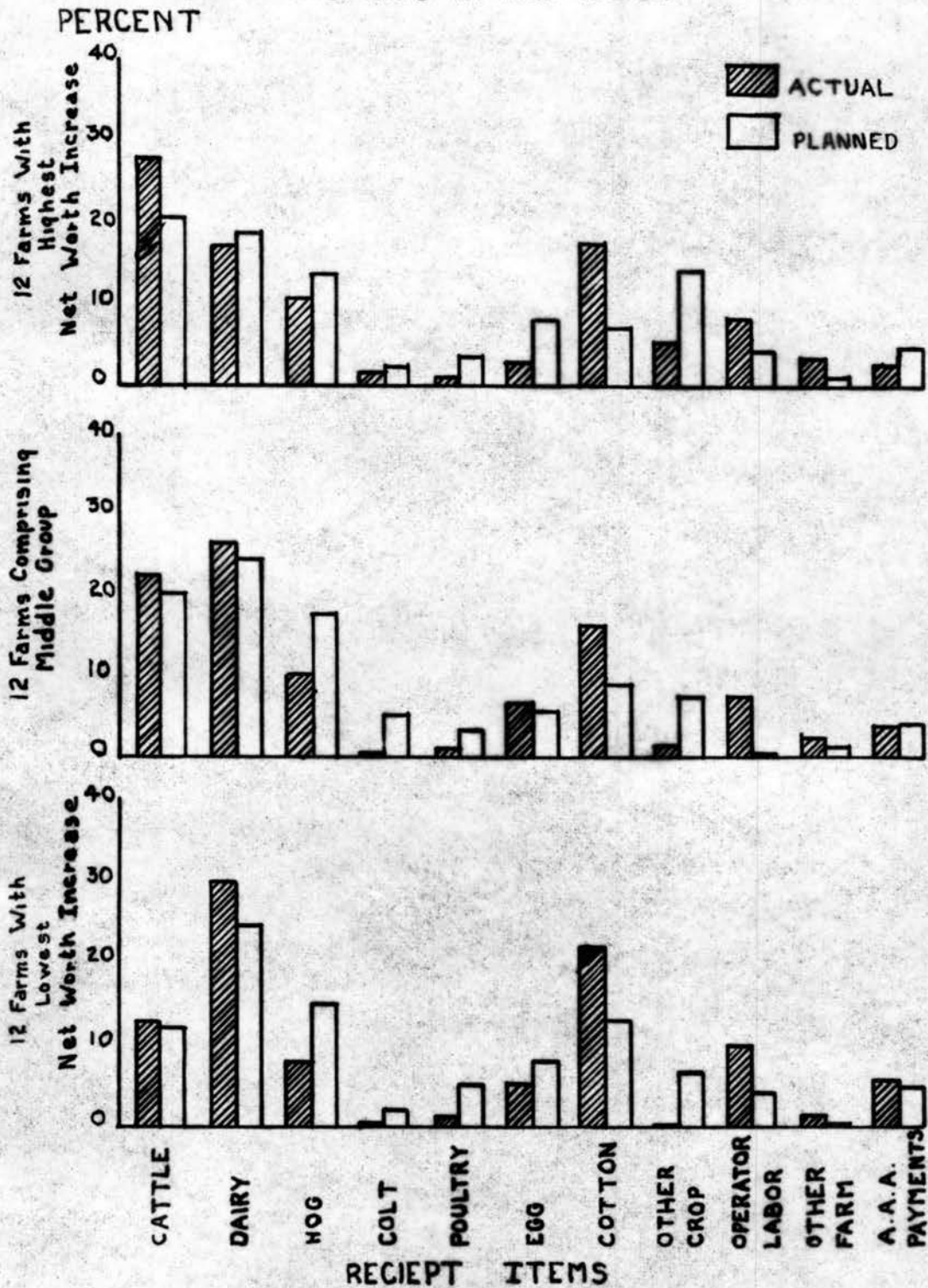
The importance of cotton with respect to total receipts was much more than planned in each net worth increase group while the reverse was true for sale of other crops. The relative importance of cotton sales increased from Group I to Group III and the opposite was still true of other crop sales (Figure 8). This reflects the non-compliance

FIGURE 7
Distribution of Cash Farm Receipts
Actual Compared to Planned On 36 Farms
Grouped According to
Actual Increase in net Worth



SOURCE: APPENDIX TABLE 5

FIGURE 8
 Distribution of Cash Farm Receipts-Actual Compared to
 Planned on 36 Farms, Grouped According to
 Actual Increase in net Worth



SOURCE: APPENDIX TABLE 5

in acreage of feed crops in that the quantity of grain or hay contemplated for sale was not available (Table 13).

Hog receipts were more important in Group I and decreased in relative importance as net worth increase diminished with the degree of compliance with planned importance decreasing in the same relation. In all cases the receipts from hogs were much less than planned (Figure 3 and Appendix Table 5). This would indicate that the price received for hogs was far below the expected price.^{1/}

The actual percentages that cattle sales and dairy sales were of total receipts were fairly near that of the planned percentages throughout. The relative importance of cattle sales was more than planned in Group I and the proportion that cattle sales were of total sales decreased, quite sharply with the diminution of the rate of net worth increase; this same set of relationships, as regards dairy sales to net worth increase, was reversed (Figure 3).

This situation regarding the dairy and beef enterprises largely reflects the choice of the operators. From the observations of the writer, in general, the plans were made more or less rigidly on the basis of averages. This was especially true when the operator did not know in advance the exact cattle that he intended to purchase. Then at the time of purchase if the operator decided whether he wanted specialized dairy cattle or dual purpose cattle, his choice influenced the purchases. His management of calves and the milking habits decided still further whether production of beef or sale of dairy products was to be the more important. From this point of view the rigidity in

^{1/} See Table 2 and related discussion in Chapter I.

planning might be a factor to permit a more or less desirable flexibility in compliance with plans. However, the direction in which the operator might go, in regard to this choice, as related to his comparative success, is an important matter. Here is where a more or less unpredictable human element enters.

Egg sales were less important in Group I. Poultry and colt sales were of little consequence in either group. Operator's labor off farm was more important in Group III (Figure 8). The tendency was for the operator's labor to be more important in the groups which had the lower actual receipts.

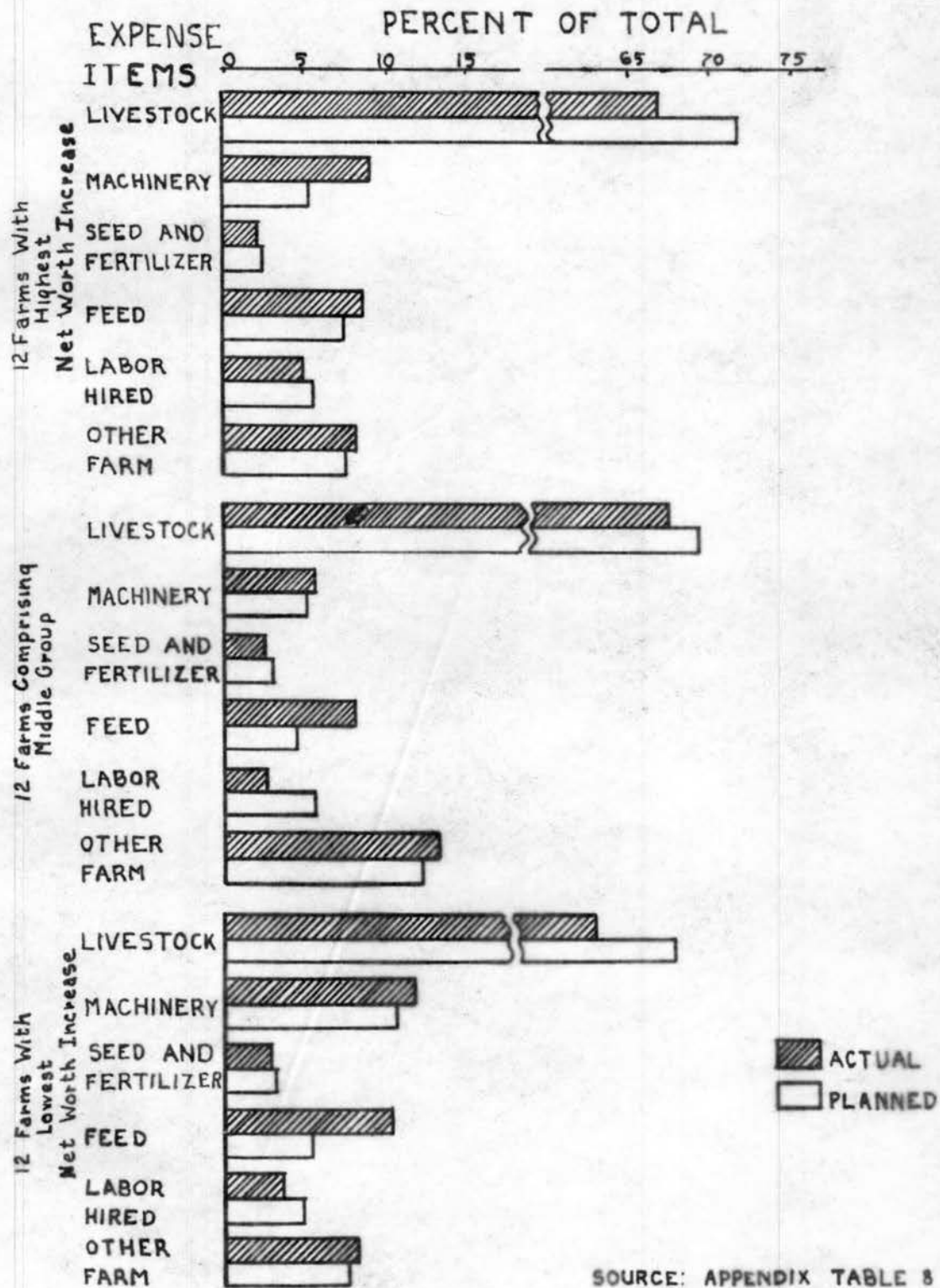
Total actual farm expenditures decreased with the rate of net worth increase and the low net worth increase group exceeded planned expense by a greater percentage than either of the other two groups (Table 13). It was considered necessary to inquire further into this direct relationship of farm expenditures to net worth increase. The data in Figure 9 compare actual to planned with each item of farm expenditure expressed as a percentage of the total.

As was true in the low farm income group (Chapter III), Group III spent a smaller proportion of the funds for livestock and a greater proportion for machinery than did the respective higher groups (Figures 6 and 9). This situation might be associated with lack of success.^{2/}

Feed expense is much higher than planned in both Groups II and III. There was no indicated direct relationship of farm expenditures to net

^{2/} This might indicate that less workstock was purchased and more tractors purchased in these low farm income and low net worth increase groups. However, from the data available this cannot be authenticated.

FIGURE 9
 Distribution of Cash Farm Expenditures Actual
 Compared to Planned on 36 Farms, Grouped According to
 Actual Increase in net Worth



SOURCE: APPENDIX TABLE 8

worth increase. Hired labor was less important than planned in each group.

The data in Table 14 give a more detailed picture of the financial condition on averages per farm in the three net worth increase groups.

At the beginning of the year there was only a slight difference in assets or debts among the three groups. Group III had the highest net worth at the beginning of the year; this group made a net increase in net worth of only about one-fifth of that of the high net worth increase group. There seemed to be very little relationship of amount of debts at end of year or the size of farm investment to the amount of net worth increase during the year (Table 14). The ending farm inventory decreased slightly as the net worth increase diminished; however, compared to the rate that net worth increase diminished, this difference is of little consequence.

At the end of the year the indebtedness, expressed as a percentage of the ending farm inventory, increased slightly as the net worth increase diminished (Table 14). All three groups represented fairly safe loans. As far as financial security is concerned, this sample is not exactly typical of all Farm Security borrowers.^{3/} From the observation of the writer the borrowers who kept the most usable farm records were a little more advanced toward self-sufficiency or rehabilitation.

In the study of these farms classified on net worth increase, it was found that net worth increase and farm income were, in many ways,

^{3/} The following report expressed a similar view: Planning VS. Performance in Oklahoma in 1939, Mimeographed Report of Farm Security Administration, Region VIII, Dallas, Texas, July, 1940, p. 7.

Table 14
Averages per Farm on Items of Financial Statement in
Actual Organization of 36 Farms, Classified
on Actual Net Worth Increase

	:	:	: 12 Farms	: 12 Farms Com-	: 12 Farms
	:	:	:with Highest:	prising the	:with Least
	:	Unit	: Net Worth	: Middle	: Net Worth
	:	:	: Increase	: Group	: Increase
<u>1/</u>					
Total assets:					
Beginning of year	Dollars		643	672	565
End of year	Dollars		1,387	1,285	1,051
<u>1/</u>					
Total debts:					
Beginning of year	Dollars		276	297	160
End of year	Dollars		681	710	582
Net worth:					
Beginning of year	Dollars		367	375	405
End of year	Dollars		706	575	469
Increase in net worth from beginning to end of year	Dollars		339	200	64
Cash paid on debts	Dollars		255	245	174
Ending farm inventory	Dollars		1,205	1,154	917
Portion ending farm inventory is of total assets	Percent		87	90	87
Percentage that debts at end of year are of ending farm inventory	Percent		56	62	63

1/ Debts and assets do not include value of land or improvements or real estate debts.

comparable measures of success, and were related to net family earnings. Net worth increase was closer related to increase in animal units than was farm income or net family earnings. There was a relation of success to compliance with farm plans; therefore, it was considered to be of interest to analyze the farms further classified on the basis of the ratio of actual to planned net worth increase. This analysis follows in the next section.

The Ratio of Actual to Planned Net Worth Increase

These farms were arrayed from highest to lowest ratio of actual to planned net worth increase. The individual farms were fairly well distributed from a high ratio of 149 down to a negative 15. However, the middle group, or Group II, of 13 farms formed a distinct modal group with ratios ranging from 52 to 64. The low group, or Group III, was composed of 13 farms with a ratio of actual to planned net worth increase below 50, and the high group, or Group I, of 10 farms had a ratio of 70 or above. The group ratio of actual to planned net worth increase for Groups I, II, and III were 90, 58, and 24, respectively.

The compliance ratios of farm income, net family earnings, increase in animal units and crops harvested, decreased consistently as the compliance ratio of net worth increase diminished (Table 15). The decrease in the net worth increase ratio is more marked than in any of the above related factors. The reason for this might be because the amount of error in planning ending cash on hand increased as net worth ratio decreased (Table 15).

The actual achievement in the factors of net worth increase, net family earnings, increase in animal units and crops harvested, decreased as the net worth increase compliance ratio diminished. This

Table 15
Comparing Actual to Planned in Various Farm Management Factors with Average per Farm
on 36 Farms, Classified on Ratio of Actual to Planned Net Worth Increase

Unit	: 10 Farms with the Highest Ratio			: 13 Farms comprising the Middle Group			: 13 Farms with the Lowest Ratio				
	: Actual	: Planned	: Ratio	: Actual	: Planned	: Ratio	: Actual	: Planned	: Ratio		
Farm income	Dollars	379	492	77	382	529	72	257	593	43	
Net family earnings	Dollars	706	770	92	694	865	80	567	879	64	
Net worth increase	Dollars	287	318	90	234	403	58	102	420	24	
Animal increase	Animal Units	5.29	5.59	96	4.85	6.95	70	3.93	7.27	54	
Farm products used in home	Dollars	238	252	94	257	278	92	259	272	95	
Cash family expenses	Dollars	181	200	91	204	184	111	207	188	110	
Cash farm expenditures	Dollars	508	505	100	897	736	112	701	644	109	
Cash paid on debts	Dollars	165	183	90	293	231	127	202	210	96	
Cash farm receipts	Dollars	435	650	66	646	568	83	450	710	63	
Ending cash on hand	Dollars	22	174	13	12	223	05	24	300	08	
Ending farm inventory	Dollars	1,033	921	112	1,198	1,167	103	1,032	1,029	100	
Crops harvested	Acres	54	58	93	51	67	76	46	65	71	
Cotton	Acres	4.6	4.8	95	4.5	4.8	95	7.8	8.5	93	
Cotton yield	Lbs. Lint	241	171	141	262	160	164	174	174	100	
Feed crops	Acres	44	49	91	46	60	77	36	54	68	
Feed yield	Digestible	Nutrients	733	872	84	629	690	91	477	848	56
Total cropland	Acres	64			68			65			
Land in farm	Acres	122			181			153			
Investment in productive livestock:											
Per farm	Dollars	456			741			564			
Per 100 acres	Dollars	369			409			374			
Farm income:											
Per \$100 in productive livestock	Dollars	83			52			46			
Per 100 acres in farm	Dollars	311			211			168			

would indicate a fairly close relationship between success in achievements and the following of the farm plan. However, while Group III had the lowest actual farm income, Group II had the highest farm income. This might be explained by the fact that Group II had the highest investment in productive livestock per farm and the highest per 100 acres in farm, the highest ending farm inventory, and by far the greatest total number of acres per farm (Table 15). The cash farm receipts were higher for Group II; the farm expenses for Group II were much higher, consequently, bringing the actual farm income down almost to that of the farm income of Group I which was made up of the farms with the fewest acres and the least investment in productive livestock (Table 15).

Although Group I had the lowest compliance ratio in cash farm receipts and the lowest actual receipts in general, this group showed a higher degree of compliance throughout. Group I was the only group that held its farm and family expenditures below that of the planned. Group I paid 90 percent of the planned payment on debts and had a higher ending farm inventory than planned. The indications are that frugality, the high cotton yield, the higher degree of compliance in feed production, and the exceeding in animal unit production, enabled Group I to exceed in farm income per \$100 invested in productive livestock, farm income per 100 acres in farm, and net worth increase. It will be noted that the farm income per \$100 investment in productive livestock and farm income per 100 acres in farm decreased consistently as the net worth increase compliance ratio decreased; this was probably because the productivity of the farms decreased in the same relationship to net worth compliance, this being indicated by both feed yield

and cotton yield (Table 15). However, the human factors already noted above should be kept in mind.

The study on this classification, as well as on other classifications, indicates a close relationship between the operators following the farm plan and his success.

In the study up to this point, lack of compliance in feed production and excessive expense in feed purchases have been prevalent on the more unsuccessful farms. This is closely associated with lack of compliance with planned feed acres.

The production of animal units is a physical factor or physical measure of compliance instead of a money result and since this item was shown to be related to net worth increase it was decided to study these farms classified on the basis of increase in animal units from beginning to end of the year of 1939. This analysis follows in the next section.

CHAPTER V. ANIMAL UNITS PRODUCTION

Classified on Actual Increase in Animal Units

Arrayed in order of actual net increase in animal units from beginning to end of year, these 36 farms fall into three modal groups. The high group, or Group I, of eight farms had an actual increase of 11.43 animal units for the high farm down to 6.24 for the low; the middle group, or Group II of 15 farms from 5.89 to 3.81, and the low increase group, or Group III of 13 farms had a high of 3.24 and a low of .01 animal units increase.

There was a close relationship of actual increase in animal units to actual farm income, net worth increase, and acres in farm. These factors decreased as the rate of increase in animal units diminished; while acres in cropland, percentage of land in cropland, and crops harvested increased as the rate of actual increase in animal units decreased (Table 16). This indicated the larger farms were more predominantly livestock farms with a greater percentage of land in pasture.

The decrease in the production of animal units from Group I to Group III was much faster in proportion than the decrease in investment in productive livestock per farm or per 100 acres in farm (Table 16). This might indicate the operators of Group III were less capable and less efficient in their animal enterprises. They may have been more efficient in dairy or crops; however, this did not prevent them from falling down in actual net worth increase, farm income, net family earnings, and total farm receipts. These latter items decreased as the rate of increase in animal units diminished (Table 17). The ratio of compliance with plans in increase in animal units decreased as actual animal units increase became smaller; this same

Table 16
 Factors of Actual Organization Associated with High,
 Medium, and Low Increase in Animal Units
 on 36 Farm Security Farms

		3 Farms with Highest Unit Increase in Animal Units (Average)	15 Farms prising the Middle Group (Average)	13 Farms with Least Increase in Animal Units (Average)
Animal increase	Animal Units	5.93	4.75	1.87
Farm income	Dollars	403	351	277
Net worth increase	Dollars	280	218	132
Crops harvested	Acres	44	48	55
Land in farm	Acres	177	158	137
Total cropland	Acres	60	62	74
Portion of land in cropland	Percent	34	39	54
Portion of cropland harvested	Percent	74	77	75
Farm income per 100 acres of cropland	Dollars	674	566	377
Investment in productive livestock	Dollars	350	640	395
Farm income per \$100 invested in productive livestock	Dollars	43	55	73
Investment in productive livestock per 100 acres in farm	Dollars	430	406	287

Table 17
 Comparing Actual to Planned in Various Farm Management Factors with Averages
 per Farm on 36 Farms, Classified on Actual Increase in Animal Units

		: 8 Farms with Highest			: 15 Farms Comprising			: 13 Farms with Lowest		
		: Increase in Animal Units			the Middle Group			: Increase in Animal Units		
	Unit	: Actual	: Planned	:	: Actual	: Planned	:	: Actual	: Planned	:
		: Average	: Average	: Ratio	: Average	: Average	: Ratio	: Average	: Average	: Ratio
Animal increase	Animal Units	8.93	9.22	97	4.75	7.43	64	1.87	4.27	44
Farm income	Dollars	403	628	64	351	572	61	277	454	61
Net family earnings	Dollars	700	886	79	684	868	79	584	789	74
Net worth increase	Dollars	280	447	63	218	428	51	132	298	44
Cash family expenses	Dollars	214	199	108	199	178	112	188	197	95
Cash farm expenditures	Dollars	1,018	941	108	640	606	106	605	540	112
Cash paid on debts	Dollars	242	206	118	237	237	100	200	183	110
Cash farm receipts	Dollars	620	753	82	474	709	67	424	578	73
Ending cash on hand	Dollars	17	263	06	13	248	05	29	208	14
Ending farm inventory	Dollars	1,381	1,394	99	1,141	1,067	107	858	815	105
Crops harvested	Acres	44	58	77	48	58	83	55	73	76
Cotton	Acres	3.6	4.2	85	6.0	6.4	94	6.7	6.9	97
Cotton yield	Lbs. Lint	173	171	101	186	170	109	278	169	164
Feed crops	Acres	37	53	70	40	48	83	47	61	76
Feed yield	Digestible Nutrients	713	894	80	583	771	76	591	756	78

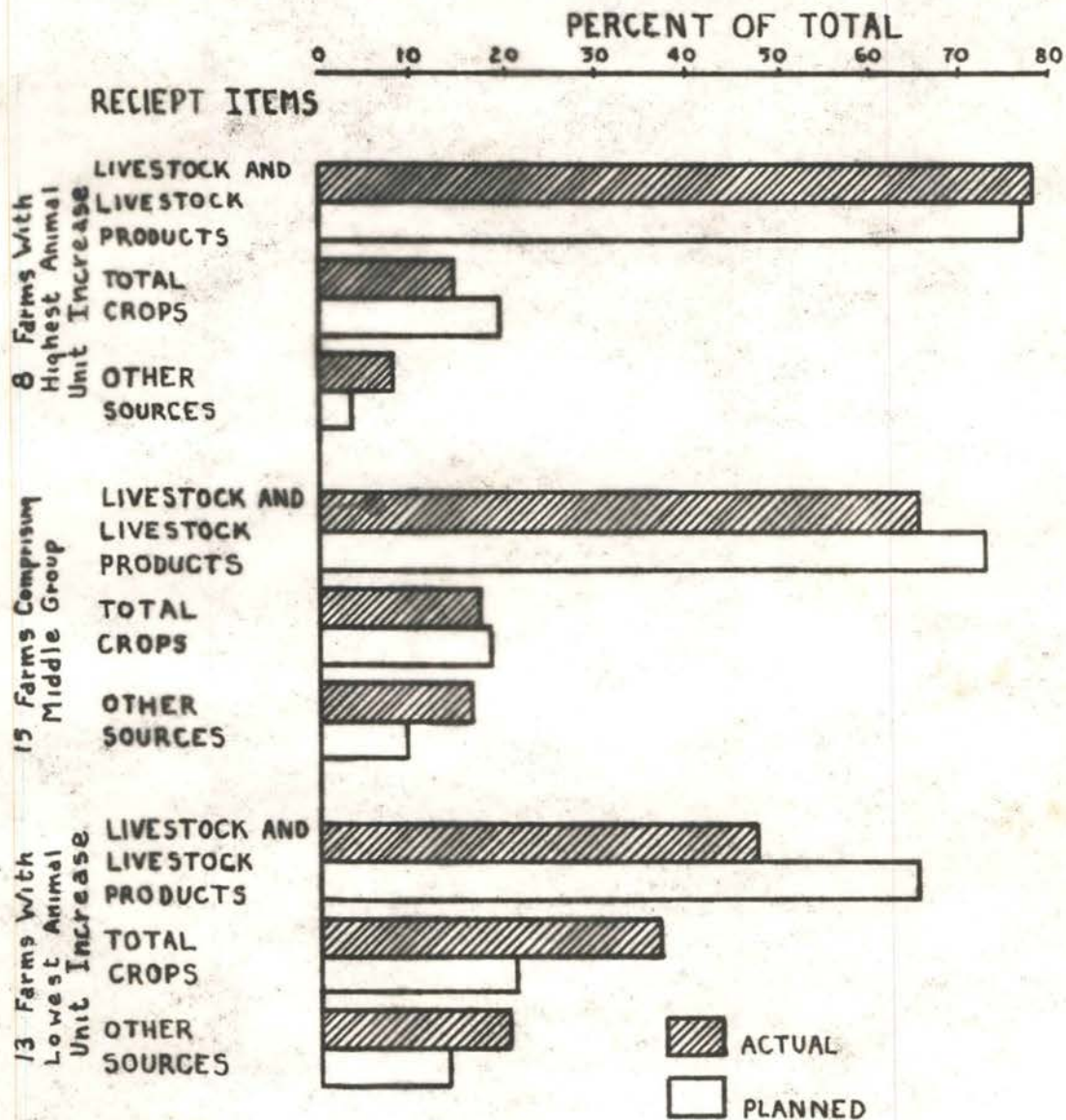
relationship of increase in animal units to the compliance ratio of farm income and net worth increase was indicated (Table 17).

Actual crop acres harvested, total feed acreage, and cotton acreage increased as the rate of animal units increase became smaller; there is little relationship of the compliance ratios of the former two items to increase in animal units. The cotton acreage compliance ratio and actual cotton acreage increased as animal units increase became smaller. The same relationship existed as regards increase in animal units to actual cotton yield and the degree of compliance with planned yields (Table 17). This might be further indication that those interested in cash crops and with little experience or ability with livestock should not be heavily invested in livestock, but, should specialize toward the cropping enterprises. The feed yield was highest in Group I where cotton yield was lowest (Table 17). This difference in yield was probably due to the selection of land for the respective crops by the operators. Those operators who were more interested in livestock production apparently selected the most productive land for feed crops.

The apparent indication of differences in the experience and interests of the operator as related to the following of the farm plan in the various enterprises might be seen in Figures 10 and 11. In Figure 11, there is a more detailed analysis of the sources of farm receipts.

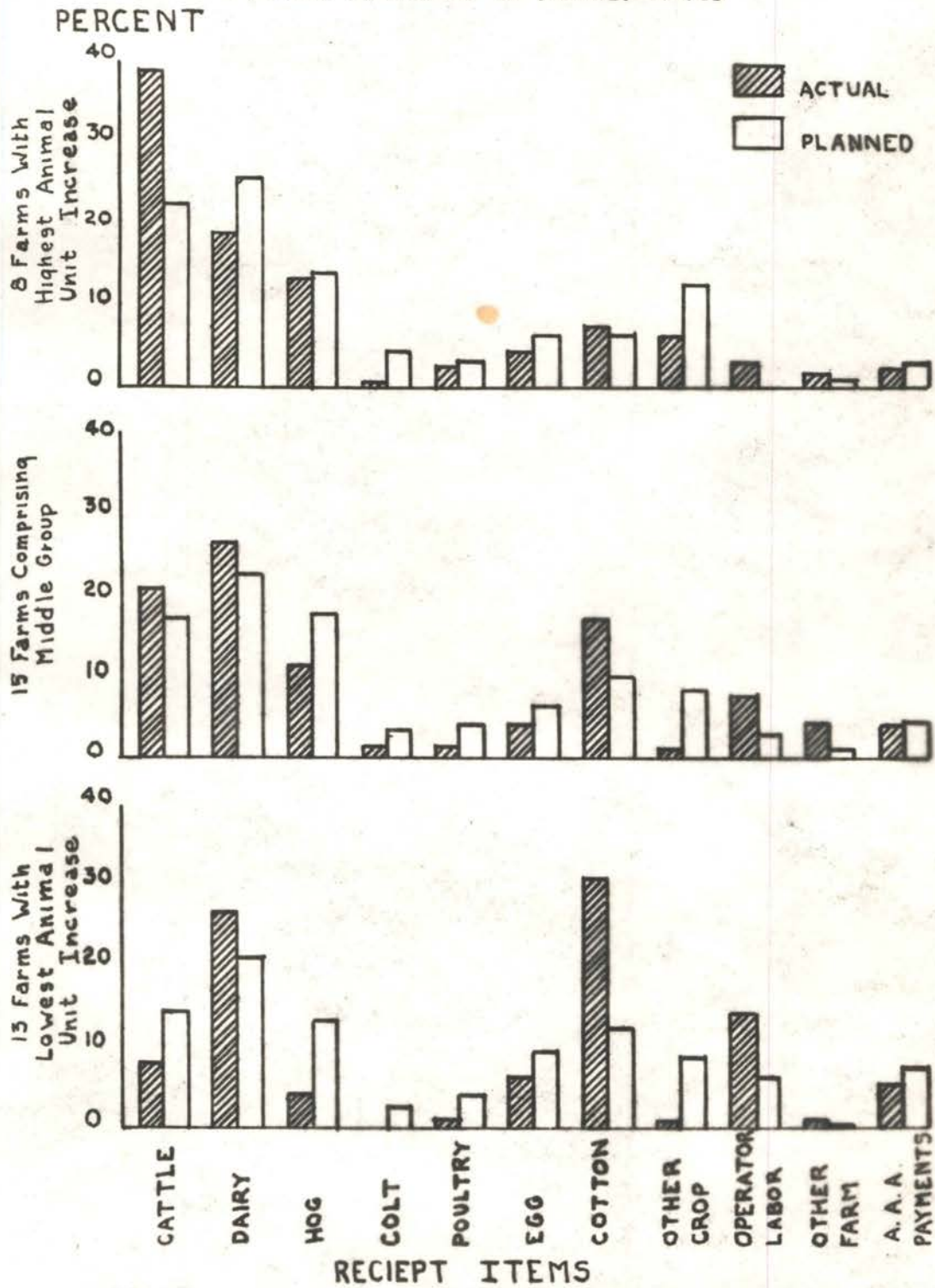
In Group I the proportion that receipts from livestock and livestock products was of total receipts equaled that of the planned proportion; while the percentage that actual receipt from all crops was of total receipts was less than had been planned. This situation

FIGURE 10
 Distribution of Cash Farm Receipts
 Actual Compared to Planned on 36 Farms
 Grouped According to
 Actual Increase in Animal Units



SOURCE: APPENDIX TABLE 7

FIGURE 11
 Distribution of Cash Farm Receipts-Actual Compared to
 Planned on 36 Farms, Grouped According to
 Actual Increase in Animal Units



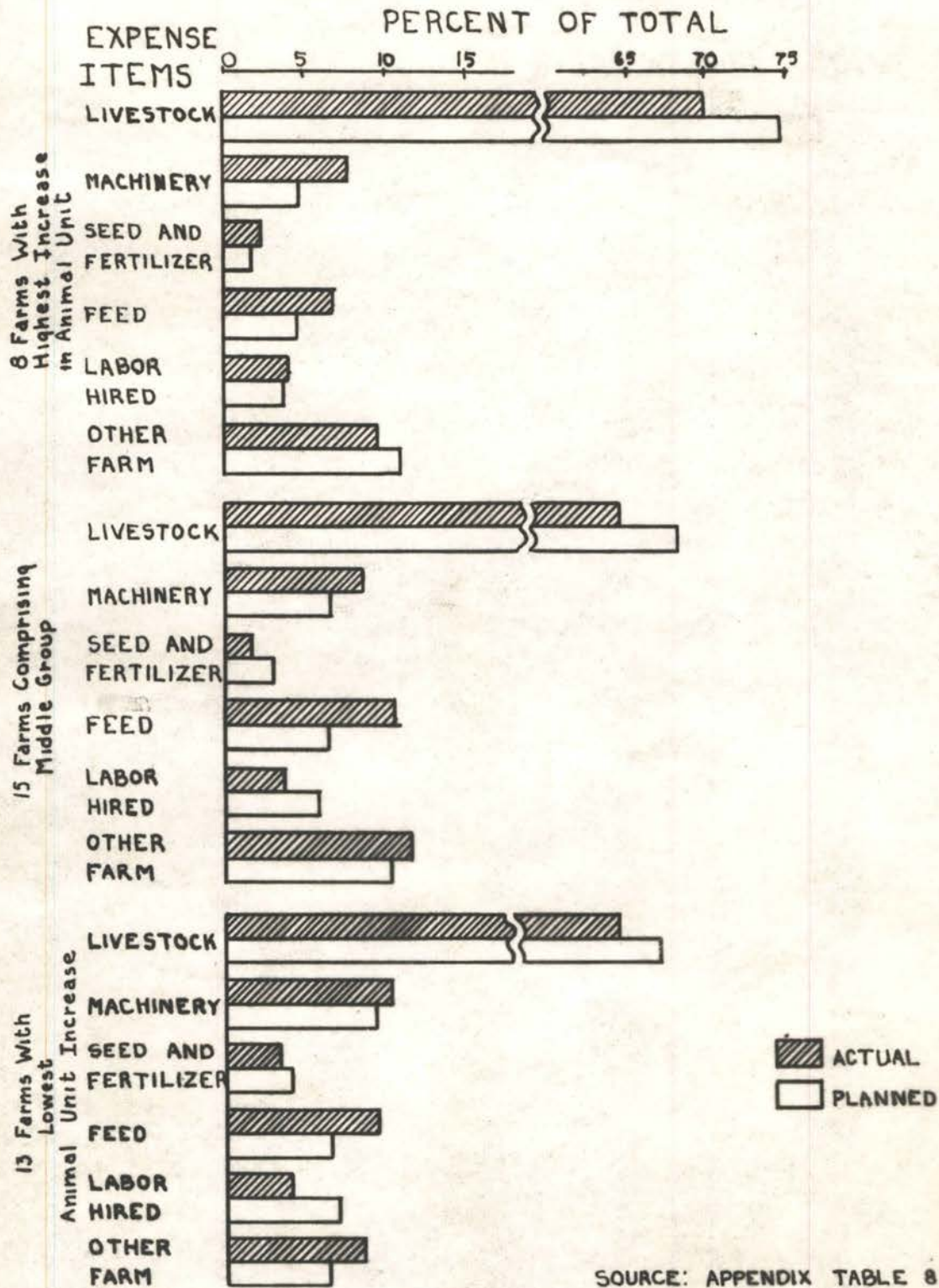
SOURCE: APPENDIX TABLE 3

changed greatly in Group III where the actual receipts from livestock and livestock products was a much smaller percentage of total receipts than had been planned with the exact opposite being true for the receipts from sale of all crops (Figure 10). It may be noted, also, that receipts from other farm sources became increasingly more important as the average actual animal units increase became smaller. In all cases receipts from other sources were of more importance than had been planned (Figure 10). The most important farm receipt item in other sources was the operator's labor off farm; the importance of this item increased rapidly as animal units increase became smaller (Figure 11). The probable indications are that in Group III the operators, because of experience, preference, or habit, neglected the beef and pork enterprises and expected to make up the deficiency in planned income from labor off farm and from the cotton crop (Figure 11). It was probable that many of the operators of Group III had been farm laborers or share croppers before getting their Farm Security loan. Others in this group might have had a personal preference to specialize in dairy and crops instead of hogs and beef cattle (Figure 10).

The probable indications here are that the factors most likely to be overlooked in farm planning are the ability, experience, habit, personal preference, and aptitude of the individual operators. The foregoing statements regarding receipts and the fact that the planned distribution of receipts more nearly coincided with investment indicated too much rigidity in planning.

The rigidity in planning the organization may be noted by the fact that livestock expenditures, which are almost all livestock purchases, remain about the same proportion of total farm expenditures in all

FIGURE 12
 Distribution of Cash Farm Expenditures Actual
 Compared to Planned on 36 Farms, Grouped According to
 Actual Increase in Animal Units



SOURCE: APPENDIX TABLE 8

animal unit increase groups (Figure 12). However, in each group the percentage that actual livestock expenditure was of total expenditure remained less than planned. The opposite is true in the case of feed expense with the importance of feed expense in Group III exceeding the planned about as much as in Group I (Figure 12). And yet, Group I exceeded Group III in animal unit production by about five times (Table 17) and income from sale of cattle was more than six times that of Group III (Appendix Table 7). The foregoing discussion of the expenditures by animal units increase groups indicates, still further, differences in personal characteristics of the operators that are almost impossible to foresee.

While classified on actual animal unit increase, the data in Table 18 show the organization in animal units by classes of livestock, and compare actual animal unit production and distribution of production for the various classes of livestock to the respective plans. It is evident that actual ending inventory in animal units (the same being true of investment in productive livestock, Table 16) does not decrease nearly as sharply from Group I to Group III as does the actual increase in animal units (Table 18). According to the ratio of actual to planned animal units increase, the degree of compliance with plans in cattle and hogs was higher in each group than with the other classes of livestock. The degree of compliance with planned animal unit production in both hogs and cattle decreased as the total animal units increase per farm became smaller.

A result of a much lower than planned farm price for hogs ^{1/} might be shown in that the proportion that animal units increase for hogs was

^{1/} See Table 2 and related discussion in Chapter I.

Table 18

Actual Ending Inventory in Animal Units and the Distribution
of Increase in Animal Units by Classes of Livestock
as Percentage of Total with Ratio of Actual to
Planned, Classified on Actual
Animal Unit Increase

	: Actual Ending :	Average Animal		:	Percent of	
	: Inventory in :	Unit Increase		:	Total Increase	
	: Animal Units :	Actual :	Planned :	Ratio :	Actual :	Planned

Total 36 Farms:

Total	15.35	4.64	6.69	69	100.0	100.0
Cattle	10.81	2.38	3.12	76	51.3	46.6
Hogs	1.39	2.09	2.32	90	45.1	34.8
Poultry	.72	.39	1.00	39	8.4	14.9
Colts <u>1/</u>	2.43	-.22	.25	-89	-4.8	3.7

8 Farms with Highest Animal Units Increase:

Total	20.76	8.93	9.22	97	100.0	100.0
Cattle	15.25	4.64	5.41	86	52.0	58.7
Hogs	2.13	3.72	2.65	140	41.6	28.7
Poultry	.82	.69	.91	76	7.8	9.9
Colts <u>1/</u>	2.56	-.12	.25	-50	-1.4	2.7

15 Farms Comprising the Middle Group:

Total	15.66	4.75	7.43	64	100.0	100.0
Cattle	11.29	2.17	3.02	72	45.8	40.6
Hogs	1.24	2.29	2.89	79	48.1	38.8
Poultry	.66	.29	1.19	24	6.1	16.1
Colts <u>1/</u>	2.47	.00	.33	00	0.0	4.5

13 Farms with Lowest Animal Units Increase:

Total	11.67	1.87	4.27	44	100.0	100.0
Cattle	7.53	1.23	1.82	67	65.5	42.6
Hogs	1.09	.87	1.43	60	46.6	34.5
Poultry	.74	.31	.82	38	16.6	19.3
Colts <u>1/</u>	2.31	-.54	.15	-35	-28.7	3.6

1/ Including animal units of all work stock.

of total in the actual organization was a much higher percentage than planned (Table 18), while actual hog sales were a lower percentage of total receipts than had been planned (Figure 11). These statements were true of all three groups. A portion of this discrepancy, described above, between animal units of hogs produced and receipts from hogs was probably due to the fact that the operator did not feed the hogs to the planned degree of finish. This departure from planned operation would be due to the unexpected drop in hog prices and the relative high price of feed. The analysis showed a shortage of feed to be prevalent, generally. In order to explain the augmentation of the above described situation in Group III, a further study of operator's experience and choice, feed production, and adequacy of improvements would be required. These factors probably would explain other changes in the other sources of receipts as already discussed (Figure 11).

The minus quantities in net animal units increase in colts and workstock might be explained by both failure of colt production to materialize and by occasional deaths of workstock. From observation of the writer ^{2/} these deaths in workstock were due frequently to disease, largely unpreventable, while many fatalities were caused by lack of care and attention by the operator who was inexperienced in handling livestock. This might help to explain the extreme net decrease in animal units of workstock in Group III. This low group that, according to indications, specialized in crops, apparently had more workstock fatalities. Increasing cropping work with livestock would decrease chances for success in colt production and increase workstock losses.

^{2/} See Introductory, p. 1.

Since actual animal unit increase from beginning to end of year appears to be related to success and the indications are that compliance with planned animal unit increase is related to the actual increase it was considered of importance to analyze, still further, by classifying these farms on the ratio of actual to planned animal units increase. This section follows immediately.

The Ratio of Actual to Planned Increase in Animal Units

With the 36 farms arrayed from high to low ratio of actual to planned increase in animal units the individual farms were fairly evenly distributed with the highest ratio being 160 and the lowest ratio 01. They were classified into three approximately equal groups making the division at logical breaks in the tri-modal arrangement. The outside of the middle groups was a high ratio of 72 and a low of 51. The ratio of actual to planned animal units increase in the high, middle, and low ratio groups, or Groups I, II, and III was 106, 62, and 38, respectively, (Table 19). Groups I, II, and III were composed of 13, 12, and 11 farms, respectively.

Actual increase in animal units diminished as the ratio of actual to planned or compliance ratio for increase in animal units became smaller. The above indicates a close relation between actual increase in animal units and following of the farm plan in this item; however, some of the farms which produced a high actual animal unit increase fell far short of planned increase which would shift them to a lower ratio group thereby reduce the spread of actual increase in animal units from the high to the low group, as compared to this spread in the previous classification. These trends and relationships concerning increase in animal units are similarly true of farm income (Tables 17 and 19).

Actual net worth increase and net family earnings and the compliance ratio for each of these factors decreased as the compliance ratio of increase in animal units became smaller (Table 19). There was no indicated relationship between animal units increase and cash farm receipts (Table 19). However, the amount of error in planning ending cash on hand increased as the compliance ratio of increase in animal units became smaller. This with the above described relationships of farm income, net worth increase, and net family earnings indicate a relationship of following the plan in general, to complying with planned increase in animal units.

There is no indicated relationship of size of ending farm inventory to complying with planned animal unit production; however, investment in productive livestock decreased slightly as the compliance ratio of increase in animal units became smaller. Group III was highest in crops harvested, total cropland, cotton acres and feed acres; and yet, because of lack of compliance in planned feed acres and feed yield this same group produced about one-half of the planned feed production (Table 19). Further evidence of the poor quality of planning or lack of compliance with plans by Group III is in that this group planned to be higher than either of the other groups in animal unit increase, farm income, net family earnings and net worth increase, but, in actual results was lowest in each of these items. The relationships of plans and results in each of these items in Group I were opposite those described above for Group III (Table 19). Acres per farm were smallest in Group I and according to feed yield the farms of Group I were more productive. However, the exact opposite indication was shown regarding the cotton yield. Because the

Table 19
 Comparing Actual to Planned in Various Farm Management Factors with Averages per Farm on
 36 Farms, Classified on Ratio of Actual to Planned Increase in Animal Units

		: 13 Farms with : Highest Ratio			: 12 Farms Comprising : the Middle Group			: 11 Farms with : Lowest Ratio		
	: Unit	:Actual	:Planned:		:Actual	:Planned:		:Actual	:Planned:	
		:Average:	:Average:	: Ratio	:Average:	:Average:	: Ratio	:Average:	:Average:	: Ratio
Animal increase	Animal Units	6.75	6.38	106	4.01	6.43	62	2.83	7.32	38
Farm income	Dollars	352	499	71	348	573	61	304	558	54
Net family earnings	Dollars	701	790	89	615	839	73	632	911	69
Net worth increase	Dollars	231	325	71	202	428	47	163	409	40
Cash family expenses	Dollars	202	198	102	187	170	110	207	200	103
Cash farm expenditures	Dollars	639	585	109	751	678	111	754	717	105
Cash paid on debts	Dollars	212	227	94	193	161	120	274	244	112
Cash farm receipts	Dollars	508	666	76	473	625	76	482	729	66
Ending Cash on hand	Dollars	11	185	06	36	261	14	12	272	04
Ending farm inventory	Dollars	1,190	1,117	107	954	953	100	1,127	1,073	105
Crops harvested	Acres	45	54	83	43	59	74	63	80	79
Cotton	Acres	4.0	4.2	96	6.5	7.0	92	7.0	7.3	94
Cotton yield	Lbs. Lint	168	165	102	263	164	160	223	179	125
Feed crops	Acres	38	49	77	36	47	78	53	69	77
Feed yield	Acres	705	780	90	638	791	81	513	802	64
Total cropland	Acres	57			60			82		
Land in farm	Acres	147			160			159		
Investment in productive livestock	Dollars	640			579			569		
Farm income per 100 acres in farm	Dollars	239			218			191		
Farm income per \$100 invested in productive livestock	Dollars	55			60			53		

differences in relative degrees of success between Group I and Group III are not fully explained by the size of farm inventory, amount invested in productive livestock, acres in farm, productivity of farm or cash farm expenditures (Table 19) the indications are that the explanation lies in the quality of the human factors. These human factors might include managerial ability (experience and aptitude) condition of health of operator and his family or willingness of the operator and his family to do the work required.

The above described relationship between relative success to following the farm plan regarding Group I as compared to Group III has been apparent in each of the preceding chapters. The above described condition regarding the quality of the human element would indicate that the operators of Group I were more capable not only from the standpoint of achievements but they were able to project a more reasonable and workable farm plan, thereby, linking success and compliance with plans.

The planned quantities of one group as compared to the planned quantities of either other group indicated rigidity in planning and yet this planning was more adaptable to the more capable operators.

Since all these farms had plans this study would not point out the advantages of following a farm plan as compared to the use of no plan at all. From observations of the writer a generally accepted statement would be that most farm operators have no plan whatever. It has been pointed out that one of the chief advantages of farm planning is that it requires systematic thinking on the problems in advance of the time that a final decision has to be made.

Another physical measure of achievement and compliance with plans is the number of acres of crops harvested. In order to know the relation between crops harvested; success, as measured by these various factors, and the following of the farm plan, a further study was made with the farms classified on actual crop acres harvested. The results of this analysis follow in the next section.

CHAPTER VI. CROP ACRES HARVESTED

Classified on Actual Crop Acres Harvested

Arrayed according to actual acres harvested, the highest number of acres harvested on these 36 farms was 135 acres and the lowest was 14. As in other classifications studied, the individual cases fall into three fairly definite groups. The middle group, or Group II, was composed of 19 farms in which the high farm harvested 59 acres and the low, 43. The high and low groups, or Groups I and III, were composed of 3 and 9 farms, respectively. The average acres harvested for Groups I, II, and III were 77, 49, and 23, respectively (Table 20).

There was a very close relationship between actual acres harvested to actual farm income and net worth increase (Table 20). As could be expected, the average total acres of cropland per farm and the percentage of land in cropland decreased consistently with actual acres harvested. Group I was on the larger farms; however, the total acres in farm did not decrease consistently as acres of crops harvested decreased (Table 20). This would be due to the greater percentage of the land in pasture in Group III. ^{1/} Although Group III had the smallest acres in cropland per farm and the least percentage of land in cropland, this group harvested only 50 percent of the cropland as compared to 82 percent and 83 percent by the other groups (Table 20). This would indicate a lack of utilization of available resources in Group III. The average actual farm income per 100 acres in farm and average

^{1/} Pasture land was not carried in the tables. Table 3, Chapter I shows that practically all the land not in cropland was in pasture on all the 36 farms. The data give no information on the quality of the pasture land.

Table 20
 Factors of Actual Organization Associated with High,
 Medium, and Low Crop Acres Harvested on
 36 Farm Security Farms

		8 Farms	19 Farms Com-	9 Farms
		with Highest	prising the	with Lowest
	Unit	Acres	Middle	Acres
		Harvested	Group	Harvested
		(Average)	(Average)	(Average)
Farm income	Dollars	430	331	262
Net worth increase	Dollars	286	209	108
Crops harvested	Acres	77	49	28
Land in farm	Acres	177	144	157
Total cropland	Acres	94	59	55
Portion of land in cropland	Percent	53	41	35
Portion of cropland harvested	Percent	82	83	50
Farm income per 100 acres of cropland	Dollars	456	563	479
Farm income per 100 acres of farm land	Dollars	243	230	167
Investment in productive livestock	Dollars	646	556	644
Farm income per \$100 invested in productive livestock	Dollars	67	60	41
Investment in productive livestock per 100 acres in farm	Dollars	366	386	409

farm income per \$100 invested in productive livestock decreased consistently as actual crops harvested decreased. This is further indication that the efficiency in the utilization of resources was closely related to actual crops harvested (Table 20). The investment in productive livestock per farm and investment in productive livestock per 100 acres in farm, again, indicated too much rigidity in setting up the farm organization (Table 20) in that investment per farm is too near the same in each group disregarding size of farm or comparative amounts of cropland and pasture per farm. These same indications are prevalent regarding ending farm inventory (Table 21).

The data in Table 21 compare actual achievements to the planned activities of various factors as well as point out the existing relationship of these various factors to actual acres harvested.

Actual farm income, net family earnings, and rate of increase in net worth diminished directly with actual acres harvested. Furthermore, the compliance ratios of the items also decreased directly with actual acres harvested. However, the compliance ratio for crop acres harvested was the same in Groups I and II and much lower in Group III (Table 21). The probable explanation that the compliance ratio for crops harvested was not higher in Group I as was the compliance ratio for net worth increase, farm income, and net family earnings, is there were more chances for crop failure in Group I where the cropland per farm almost doubled that of the other groups. Group I had an average of 5.14 acres of crop failure per farm while Group III had only 1.84 acres of crop failure per farm (Table 24). In previous discussion it had been shown that investment was fairly rigid from group to group and since machinery expenses and amount of hired labor was fairly rigid

Table 21
 Comparing Actual to Planned in Various Farm Management Factors with Averages
 Per Farm on 36 Farms, Classified on Actual Acres Harvested

		: 8 Farms with Highest			: 19 Farms Comprising			: 9 Farms with Lowest		
		: Acres Harvested			: the Middle Group			: Acres Harvested		
: Unit		: Actual	: Planned		: Actual	: Planned		: Actual	: Planned	
:		: Average	: Average	: Ratio	: Average	: Average	: Ratio	: Average	: Average	: Ratio
Crops harvested	Acres	77	90	86	49	56	86	28	54	51
Farm income	Dollars	430	589	73	331	529	63	262	527	50
Net family earnings	Dollars	766	956	80	634	786	81	586	864	68
Net worth increase	Dollars	286	445	64	209	379	55	108	345	31
Animal increase	Animal Units	4.98	8.38	60	4.91	5.74	86	4.56	7.28	63
Cash family expenses	Dollars	214	210	102	186	174	107	211	205	103
Cash farm expenditures	Dollars	824	809	102	597	539	110	852	770	111
Cash paid on debts	Dollars	318	239	133	207	209	99	180	187	96
Cash farm receipts	Dollars	562	719	78	463	662	70	476	651	73
Ending cash on hand	Dollars	28	236	12	17	242	07	16	226	07
Ending farm inventory	Dollars	1,269	1,219	104	1,054	994	106	1,017	1,013	100

from group to group (Figure 15), it is quite probable that Group I had more cropland than they could adequately tend with the equipment on hand.

The rate of actual increase in animal units decreased consistently, but very slightly, as acres harvested decreased; Group I had the lowest compliance ratio of increase in animal units. Since Group I was on the larger farms, this above described relationship of animal unit production might partially invalidate the indicated tendency for the larger farms to have the highest increase in animal units. This tendency was shown in a previous classification^{2/} (Table 16). The differences in pasture land help to explain this described discrepancy in indications of the two classifications.

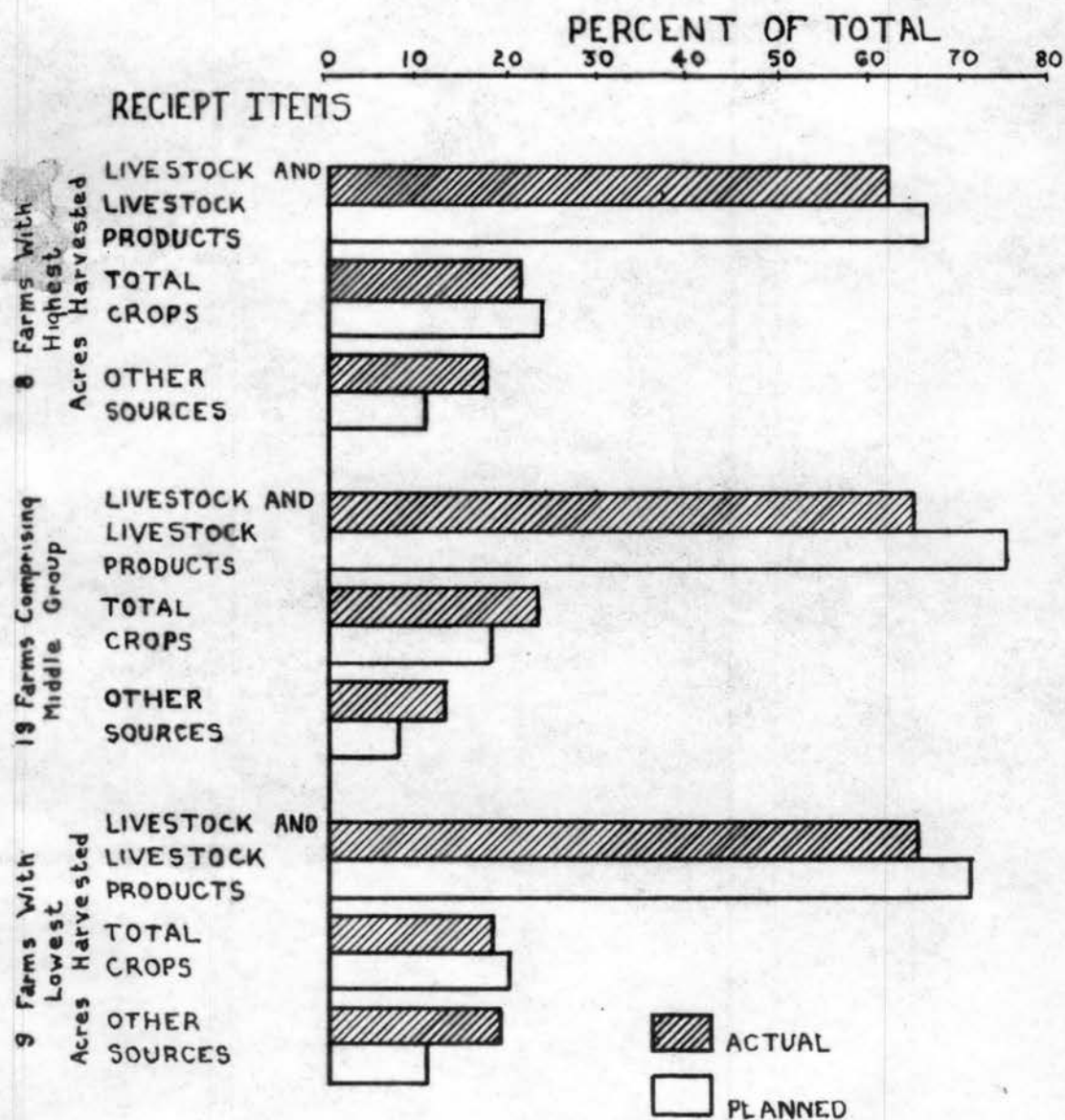
The amount of error in planning ending cash on hand was about the same in each group. Debt repayment decreased as acres harvested decreased, however, Group III paid 96 percent of planned payments. Cash farm expenditures, family expenses, and cash farm receipts seemed to be fairly stable from group to group. This was true regarding actual results and compliance ratios (Table 21). It is noted, also, that the relative importance of receipts from livestock and livestock products, total crops, and other sources remained about the same from group to group; the relationship of actual to planned in these items, also, remained about the same from group to group (Figure 13).

This condition regarding the stability in sources of cash farm receipts more or less reversed when analyzed more in detail as in

^{2/} The average acres per farm in the high groups of Table 16 and Table 20 were the same and the percentage of land in cropland for the same groups was 53 percent in Table 20 as compared to 34 percent in Table 16.

FIGURE 13

Distribution of Cash Farm Receipts
Actual Compared to planned on 36 Farms
Grouped According to
Actual Acres Harvested



SOURCE: APPENDIX TABLE 9

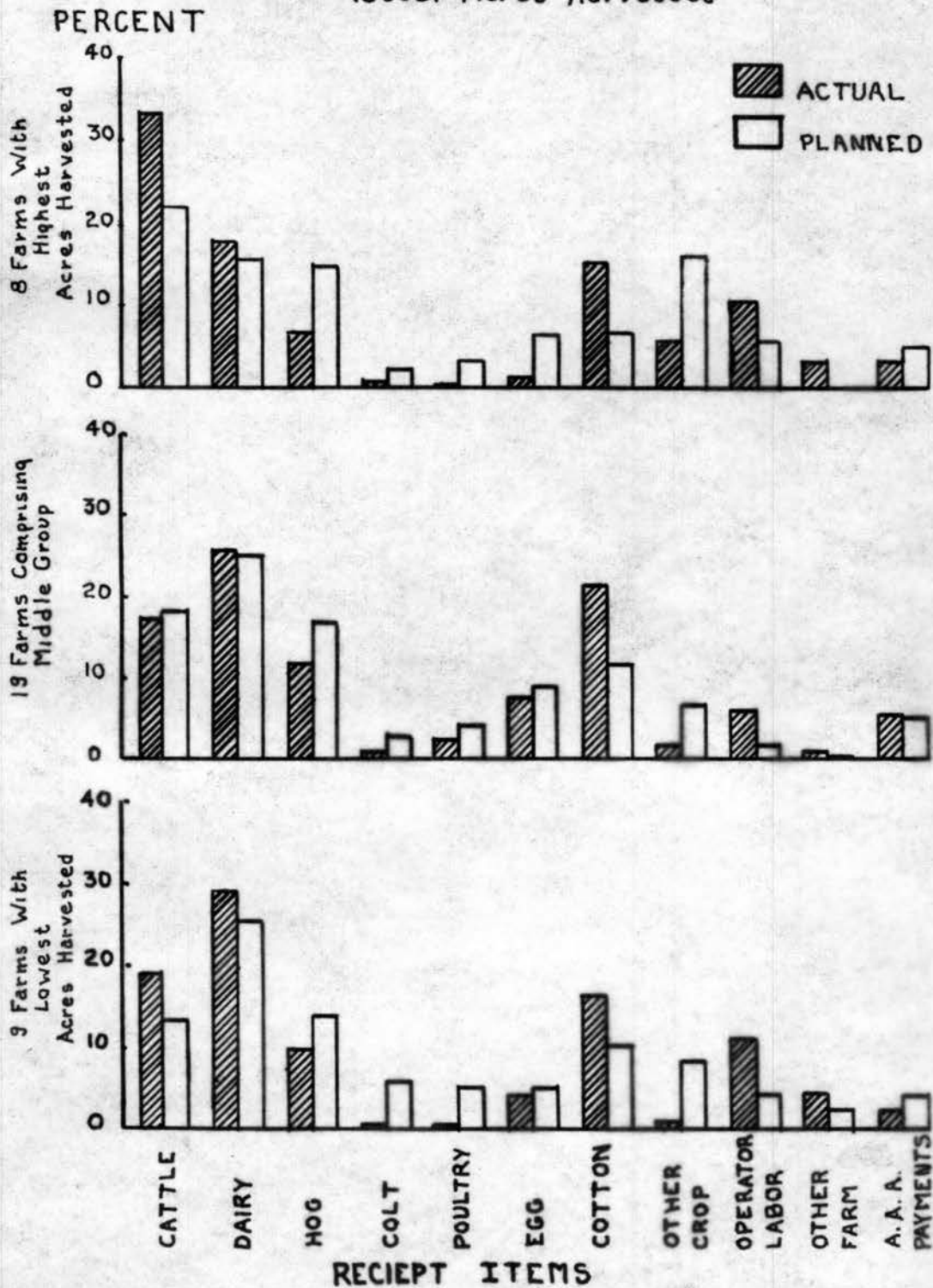
Figure 14. In Group I, sale of cattle, which was much more important than planned, was by far the most important source of receipts. In this same group, the proportion that cotton sales were of total receipts was much more important than planned while the opposite was true of sale of hogs, poultry, eggs, and other crops (Figure 14).

In Group II, as a whole, the importance of the various sources of receipts in relation to total receipts was much nearer the planned than was true of the other groups. In this group the importance of sale of cattle decreased greatly, as compared to Group I, while that of dairy products, hogs, and poultry increased. In this same group, the percentage that cotton sales were of the total increased and was more than the planned percentage, and more than in either other group (Figure 14).

In Group III the situation regarding sources of receipts remained about the same as in Group II with the exception that the importance of dairying increased and the importance of sale of cattle and operator's labor increased slightly over the middle group, while the importance of cotton and egg sales decreased (Figure 14).

In this analysis of the sources of receipts there is an excellent example whereby the over-all planning and compliance with plans was apparently satisfactory throughout as reflected in Figure 13. The analysis above shows that in a highly diversified organization the errors in planning tend to offset each other (Figure 14). The above situation might indicate, that in the absence of specialized price information, marketing and production forecasts, a detailed farm records study in the area, and more detailed and reliable information on the operator's past experience and ability, that such rigidity in planning

FIGURE 14
 Distribution of Cash Farm Receipts-Actual Compared to
 Planned on 36 Farms, Grouped According to
 Actual Acres Harvested



SOURCE: APPENDIX TABLE 9

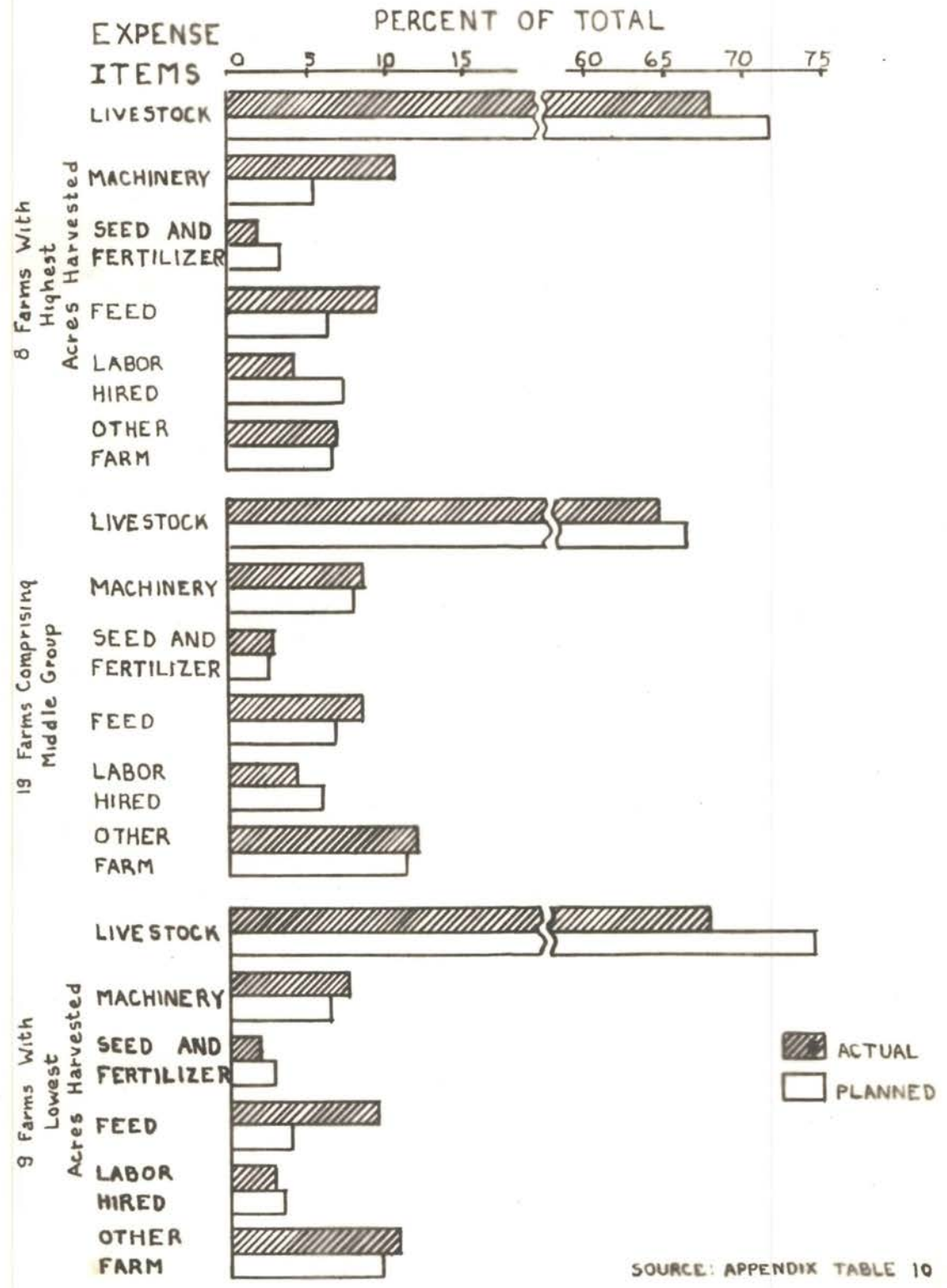
is unavoidable. Although these imperfections in planning exist where there is a high degree of diversification with its compensating errors, the farmer's ability to live and repay his loan can be forecast with some degree of accuracy. Diversification might be of benefit to the farmer who operates on a subsistence level. However, with the necessary types of information named above a better balanced^{3/} organization could be projected in the plans.

The average actual cash farm expenditures per farm remained fairly near that planned (Table 21) throughout the actual acres harvested groups. The example given below of a more detailed analysis of the distribution of the farm expenditures as compared to planned expenditures show a number of variations from group to group (Figure 15). For instance Group I under-estimated their machinery costs by almost one-half (Figure 15). This is apparently an indication that the planned organization for the group left them with inadequate equipment to cultivate the farms with the larger acreage in crops. This group also under-estimated their feed needs. Group II came nearer to planning the actual distribution of farm expenditures (Figure 15). A similar situation in Group II was noted in the analysis of sources of farm receipts (Figure 14). This might be due to the fact that rigid planning on a basis of averages would be more nearly accurate in the middle group which more nearly represents the averages for the entire sample. In Group III livestock purchases and livestock expense were of a somewhat smaller proportion of total expense than was planned, and yet, this group under-estimated their feed needs by about one-half (Figure 15). This failure in estimating feed needs might be more

^{3/} See Introductory, p. 5.

FIGURE 15

Distribution of Farm Expenditures, Actual Compared to Planned on 36 Farms - Grouped According to Actual Crop Acres Harvested



SOURCE: APPENDIX TABLE 10

adequately accounted for in the more detailed analysis of the cropping enterprises and feed production which follows:

Since wheat was of such minor importance and only a portion of that wheat produced was sold, it has been included as a feed crop as were all other grains. The data in Table 22 compare actual to planned total acreage of feed crops per farm with subdivisions of all grain and all roughage. The corresponding yields are given in total digestible nutrients per acre.

Average actual acres of both all grain and all roughages decreased as total acres harvested decreased. In the case of roughage for both Groups I and II, actual acres harvested exceeded the planned; however, there is a likelihood that most of this difference could be accounted for by the fact that some crops planned as grains, such as grain sorghums and oats, were actually harvested and reported as roughages, such as oats hay or sorghum hay. In total feed acreage there was a tendency for the compliance ratio to decrease as all crops harvested per farm decreased (Table 22). However, the ratio of actual to planned feed acres for Groups I and II were almost the same (83 and 84, respectively) while the compliance ratio of feed acres in Group III was a little more than one-half (43) that of either of the two higher groups. This relationship is similar to that of the compliance of crop acres harvested and the same explanation would probably apply. There were no indicated relationships between crop acres harvested and feed yields except the lowest yield in total feeds was in Group III; this group made only 57 percent of the expected yield and harvested

^{4/} See Table 21 and related discussion.

Table 22

Actual Compared to Planned Average Acres of Feed Crops and Yield
in Total Digestible Nutrients $\frac{1}{2}$ with Ratio of Actual to
Planned, Classified on Actual Acres Harvested

		Total Feed	Grain	Roughage
Total 36 Farms:				
Average Acres	Actual	41.9	29.5	12.4
	Planned	54.4	42.8	11.6
	Ratio	77	69	108
Yield	Actual	611	366	824
	Planned	792	513	1,310
	Ratio	77	71	63
8 Farms with Highest Acres Harvested:				
Average Acres	Actual	67.4	48.7	18.7
	Planned	77.1	60.5	16.6
	Ratio	88	81	113
Yield	Actual	556	528	629
	Planned	764	648	1,186
	Ratio	73	81	53
19 Farms Comprising the Middle Group:				
Average Acres	Actual	40.6	27.2	13.4
	Planned	48.4	36.9	11.5
	Ratio	84	74	117
Yield	Actual	685	559	939
	Planned	790	671	1,174
	Ratio	87	83	80
9 Farms with Lowest Acres Harvested:				
Average Acres	Actual	22.1	17.3	4.8
	Planned	46.8	39.6	7.2
	Ratio	48	44	68
Yield	Actual	477	380	321
	Planned	835	619	2,021
	Ratio	57	61	41

$\frac{1}{2}$ Values of Total digestible nutrients taken from W. A. Henry and F. B. Morrison, Feeds and Feeding, Eighteenth Edition, 1923, Table III, pp. 728-743.

only 48 percent of planned feed acres. A portion of this deficiency was due to crop failures and the remainder was left idle (Tables 24 and 25). Group III planned, apparently, too few acres for roughage which might be explained by the unusually high planned yield in roughage (Table 22).

It might be mentioned here that Group III produced much less than half the feed planned (Table 22) and this same group had an actual feed expense of a little more than double that which was planned^{5/} (Figure 15).

The data in Table 23 represent a more detailed analysis of the acreage and yield of crops harvested^{6/} and compare actual to planned acreages and yields.

The most important feed crops from the point of view of acreage were corn, oats, grain sorghums, and other hay^{7/} with the average actual acreage of each of these crops decreasing as crops harvested decreased. There was a tendency for the degree of compliance with plans in acreage of these crops to decrease in the same manner (Table 23). Generally speaking, these same relationships were true in the case of yields of feed crops to crops harvested.

As was noted in the analysis of the distribution of farm receipts, cotton was the principal cash crop (Figure 14). The degree of compliance in cotton acres harvested and actual cotton yield had a tendency

^{5/} This feed produced as shown in Table 22 is without regard to crop rent.

^{6/} Table 23 does not include acres in truck or planted pasture which are included in acres harvested throughout this study.

^{7/} Composed largely of various grain sorghums harvested with grain on stalk.

Table 23
Acres and Yields of Crops, Actual Compared to Planned
on 36 Farms, Classified on Actual Acres Harvested

Crop	Average Acres Harvested:			Yield : Unit	Yield		
	: Actual	: Planned	: Ratio		: Actual	: Planned	: Ratio
Total 36 Farms:							
Cotton	5.7	6.1	93.9	Lbs.Lint	214	170	125.9
Corn	8.2	8.9	91.8	Bu.	17.8	18.6	95.7
Oats	10.3	12.8	80.7	Bu.	13.3	22.4	59.4
Wheat	3.1	4.4	69.7	Bu.	9.8	12.6	77.8
Grain Sorghum	6.0	12.0	49.9	Bu.	11.4	13.2	86.4
Barley	1.9	4.7	41.2	Bu.	13.2	22.1	59.7
Legume Hay	1.2	1.7	66.7	Tons	.9	1.4	64.3
Prairie Hay	3.6	4.8	73.6	Tons	.6	1.0	60.0
Other Hay <u>1/</u>	7.7	5.0	155.4	Tons	.9	1.5	60.0
8 Farms with Highest Actual Acres Harvested:							
Cotton	5.7	5.5	103.4	Lbs.Lint	218	193	113.0
Corn	11.7	11.4	102.8	Bu.	20.4	17.2	118.6
Oats	16.3	22.3	73.2	Bu.	15.1	23.0	65.7
Wheat	5.8	9.1	63.7	Bu.	12.7	12.4	102.4
Grain Sorghum	7.4	8.8	85.0	Bu.	7.5	13.9	54.0
Barley	7.5	9.0	83.3	Bu.	10.4	22.5	46.2
Legume Hay	—	1.3	—	Tons	—	1.5	—
Prairie Hay	8.1	11.2	72.2	Tons	.4	1.0	40.0
Other Hay <u>1/</u>	10.6	4.1	256.4	Tons	.8	1.7	47.1
Middle 19 Farms:							
Cotton	6.0	6.4	95.0	Lbs.Lint	217	161	134.8
Corn	7.5	8.4	88.8	Bu.	19.2	20.5	93.7
Oats	9.5	10.3	92.8	Bu.	13.1	21.8	60.1
Wheat	3.4	4.2	81.2	Bu.	7.7	12.9	59.7
Grain Sorghum	6.2	10.5	58.8	Bu.	13.5	13.3	101.5
Barley	.5	3.5	15.2	Bu.	30.0	20.5	146.3
Legume Hay	1.8	2.1	84.6	Tons	.9	1.2	75.0
Prairie Hay	2.5	3.6	69.6	Tons	.8	.9	88.9
Other Hay <u>1/</u>	9.2	5.8	158.2	Tons	.9	1.3	69.2
9 Farms with Lowest Actual Acres Harvested:							
Cotton	5.1	6.1	83.6	Lbs.Lint	200	170	117.6
Corn	6.3	7.6	83.8	Bu.	9.9	16.1	61.5
Oats	6.7	9.6	69.0	Bu.	10.4	22.5	46.2
Wheat	—	.8	—	Bu.	—	12.0	—
Grain Sorghum	4.3	18.0	23.8	Bu.	11.0	12.6	87.3
Barley	—	3.6	—	Bu.	—	24.2	—
Legume Hay	1.0	1.6	64.3	Tons	.7	1.7	41.2
Prairie Hay	1.7	1.7	100.0	Tons	.9	1.5	60.0
Other Hay <u>1/</u>	2.2	4.0	54.2	Tons	.8	2.2	36.4

1/ Composed largely of various sorghums harvested with grain on stalk.

to diminish as crop acres harvested decreased. However, Group II had the highest actual acreage in cotton and the highest ratio of actual to planned yield (Table 23). This situation was reflected by increased importance of cotton sales in the analysis of receipt sources of this middle group (Figure 14). Throughout this study the under-^{8/}estimation of cotton yields has been evident.

Since Group III fell so far short of plans in feed acreage it was considered necessary to analyze the crop failures. The average acreage of failures by crops is shown in Table 24. It will be seen here that Group III had, by far, the highest average in crop failures. All of the failures in this group were in feed crops. This group had only an average acreage in all feed crops of 22.1 (Table 22); their crop failures were almost 75 percent of the feed crops harvested (Table 24).

Table 24
Average Acres of Crops Failed in the Actual Organization,
by Crops for 36 Farms, Classified on Actual Acres Harvested

Crops Failed	:Total: :Crops:	:Cot- :ton	: : :Corn:	: : :Oats:	: : :Wheat:	: Grain :Sorghum:	:Bar- :ley	: Sudan :Pasture
Total - 36 farms	5.89	.11	.14	.75	.86	2.83	.56	.64
8 Farms with highest acres harvested	5.14	-	-	2.75	1.75	-	.64	-
19 Farms comprising the middle group	1.84	.21	.26	-	.42	.42	.53	-
9 Farms with least acres harvested	15.11	-	-	.56	1.0	10.44	.56	2.55

The apparent indications here are that the excessive crop failures were due largely to time of planting or other management factors. However, it could be possible that the farms of Group III were on the less

^{8/} From the experience of the writer it is known that the base yields allotted these farms by the AAA Program greatly influenced the planned yields.

fertile soils. In addition to having the lowest feed yields, (Table 22) another indication of the low fertility of Group III is this group planned such a high proportion of cropland to grain sorghums (Tables 23 and 25). The high percentage of the crop failures in grain sorghums could have been due to weather and/or insect pests. The failure in grain sorghums alone might be a direct cause of some of the farms being in Group III. However, it is difficult to attribute the low percentage of cropland utilized to soil or weather when it is considered that, in addition to being in the group that had the least number of acres of cropland available per farm, Group III had by far the greatest percentage of crop failures and also the largest proportion of idle land (Table 25). In a case of this kind it would seem that the unpredictable human factors were quite prevalent, and much of the crop failure of Group III can be attributed to the human element.

In Table 25 there is a detailed analysis of the use of cropland.^{9/} When considering the percentage of total cropland that the various crops were of total cropland, it was still found that corn, oats, grain sorghums and other hay were the most important feed crops. It will be noted here that wheat was planned to be of much more importance than it was in actual operation. The same may be said of truck crops (Table 25).

It has been found in studying these farms, classified on actual acres harvested, that there was a close relationship of farm income, net worth increase and net family earnings to actual acres harvested and that increase in animal units was also related. The utilization

^{9/} All items in Table 25 were counted as crops harvested except acres failed and idle land.

Table 25
 Percentage Distribution of Use of Cropland for Actual and Planned Operations
 on 36 Farms, Classified on Actual Acres Harvested

:	:	8 Farms with	:	9 Farms with	:	:	:
:	:	Highest Actual	:	19 Farms Comprising	:	:	Lowest Actual
:	Total 36 Farms	Acres Harvested	:	the Middle Group	:	:	Acres Harvested
:	Actual : Planned	Actual : Planned	:	Actual : Planned	:	:	Actual : Planned

Percent of Total Cropland

Acres Failed	9.0	—	5.4	—	3.1	—	27.7	—
Acres in Truck	.8	1.6	.3	.8	1.2	1.8	.6	2.3
Plowable Pasture ^{1/}	2.6	3.0	4.2	7.3	2.7	1.3	—	.4
Idle Land	15.2	3.5	12.7	4.5	13.8	4.0	22.0	.6
Cotton	8.7	9.3	6.0	5.8	10.3	10.8	9.3	11.2
Corn	12.4	13.5	12.4	12.0	12.8	14.4	11.6	13.8
Oats	15.6	19.4	17.2	23.5	16.2	17.4	12.2	17.7
Wheat	4.7	6.8	6.2	9.7	5.8	7.1	—	1.4
Grain Sorghum	9.1	18.2	7.9	9.3	10.5	17.8	7.8	32.9
Barley	3.0	7.2	7.9	9.5	.9	5.9	—	6.5
Legume Hay	1.8	2.6	—	1.3	2.9	3.5	1.8	2.9
Prairie Hay	5.4	7.3	8.6	11.9	4.3	6.2	3.0	3.0
Other Hay	11.7	7.6	11.2	4.4	15.5	9.8	4.0	7.3

^{1/} Not permanent pasture.

of cropland available was lowest in Group III and this group had the least number of acres of cropland available. It was found that many unpredictable factors might enter in the utilization of cropland, however, in cotton and the feed crops, apparently considered most important by the operators, compliance with plans was relatively close. Therefore, the human factor is one of the more important factors to consider in planning.

After comparing actual to planned operations and considering the relationships of the compliance ratios of the various factors to actual crops harvested, it was considered necessary to analyze this situation with the farms classified on the basis of the ratio of actual to planned crop acres harvested. This analysis follows in the next section.

The Ratio of Actual to Planned Crop Acres Harvested

The farms were arrayed from highest to lowest compliance ratio in crops harvested. The individual farms were fairly evenly distributed from a high ratio of 110 to a low of 23. The high group or Group I was composed of 15 farms with a compliance ratio or ratio of actual to planned crops harvested of 90 or above; the middle group, or Group II, of 11 farms with a compliance ratio of 70 to 89 inclusive; and the low group, or Group III, of 10 farms had a ratio of 69 or below. The compliance ratios for Groups I, II, and III were 98, 79, and 51, respectively (Table 26).

In this classification, the actual crops harvested did not decrease consistently with the compliance ratio; likewise, when classified on actual acres harvested, the compliance ratio did not decrease consistently with actual acres harvested. However, on either

Table 26
 Comparing Actual to Planned in Various Farm Management Factors with Averages per Farm
 on 36 Farms, Classified on Ratio of Actual to Planned Crop Acres Harvested

; : Unit	: 15 Farms with the : Highest Ratio			: 11 Farms comprising : the Middle Group			: 10 Farms with the : Lowest Ratio			
	:Actual	:Planned:	:Average:	:Actual	:Planned:	:Average:	:Actual	:Planned:	:Average:	
Crops harvested	Acres	56	57	98	57	72	79	32	63	51
Farm income	Dollars	396	509	71	304	519	59	282	541	52
Net family earnings	Dollars	706	837	84	628	821	77	596	878	68
Net worth increase	Dollars	286	408	70	166	387	43	111	351	32
Animal increase	Animal Units	5.31	6.65	80	4.00	6.58	61	4.34	6.90	63
Cash family expenses	Dollars	187	189	99	199	176	113	216	205	106
Cash farm expenditures	Dollars	731	673	107	631	582	108	772	714	108
Cash paid on debts	Dollars	238	222	107	194	177	110	239	230	104
Cash farm receipts	Dollars	539	694	78	405	593	68	504	725	69
Ending cash on hand	Dollars	20	217	09	13	237	09	26	267	10
Ending farm inventory	Dollars	1,131	1,082	114	1,025	977	105	1,108	1,078	103
Cotton	Acres	4.8	4.7	102	6.4	6.8	95	6.3	7.4	85
Cotton yield	Lbs. Lint	230	168	137	193	176	110	217	163	133
Feed crops	Acres	48	50	96	49	61	81	25	54	47
Field yield	Digestible Nutrients	677	778	87	555	783	71	551	821	67
Portion cropland harvested	Percent	89			79			51		
Total cropland	Acres	63			72			63		
Land in farm	Acres	136			161			175		
Investment in productive livestock	Dollars	601			518			681		

classification, the low actual acres harvested and the low compliance ratio in acres harvested were together in the low group (Tables 21 and 25).

Actual farm income, net family earnings, and net worth increase became smaller as the compliance ratio of crop acres harvested decreased. This indicates a reasonably close relationship between success and the following of the farm plan in crops harvested (Table 26). The compliance with plans in farm income, net family earnings, net worth increase, cotton acres and feed acres was directly related to and decreased directly with the compliance ratio of crop acres harvested (Table 26). This indicates a relationship of compliance with planned crop acres harvested to following the plan in general.

Feed yields decreased directly with the compliance ratio of acres harvested. On the basis of yield and acreage Group III produced less than one-third of the planned feed production. There were no indicated relationships of compliance with plans in crop acres harvested to actual animal units increase, cash farm expenditures, cash farm receipts, cotton yield, ending farm inventory, or investment in productive livestock (Table 26). According to results obtained and considering the fact that Group III had the highest average investment in productive livestock, this group was probably over-invested in productive livestock from the standpoint of the human factors. Further indication of the relationship of the quality of the human factors to compliance with plans is in that the acres per farm increased as crop acres harvested ratio decreased. The differences in cotton yields and feed yields do not indicate that the difference in the productivity of

the farm could account for all the differences in income and earnings of the smaller farms (Table 26).

The percentage of total cropland actually harvested decreased about as sharply as the compliance ratio of crop acres harvested decreased (Table 26). This situation suggests a need for further analysis of crop failures by compliance groups.

Table 27
Average Acres of Crops Failed in the Actual Organization,
By Crops for 36 Farms, Classified on Ratio of Actual
to Planned Crop Acres Harvested

Crops Failed	:Total: :Crops:	:Cot-: :ton :	: : : Corn:	: : : Oats :	: : : Wheat:	: Grain : :Sorghum:	:Bar-: :ley :	:Sudan :Pasture
Total - 36 Farms	5.89	.11	.14	.75	.86	2.83	.56	.64
15 Farms with the highest ratio	.94	.27	.33	-	-	-	.34	-
11 Farms comprising the middle group	4.91	-	-	2.45	2.00	-	.46	-
10 Farms with the lowest ratio	14.40	-	-	-	.90	10.20	1.00	2.30

The results of the analysis of crop failures by crops, classified on the crops harvested compliance ratio, is very similar to the crop failure analysis when classified on actual crop acres harvested (Tables 24 and 27). The chief differences in these two analyses were that when classified on the compliance ratio of crops harvested, the acreage of all crops failed increased consistently as the crop acres harvested compliance ratio decreased and all the grain sorghum failures were in the low ratio group. This might indicate a closer relation between lack of compliance with plans in crop acres harvested and crop failures. As already discussed, it is quite difficult to forecast causes for failures in crops, whether the cause be from human or physical factors.

This study indicated a fairly close relationship of actual crop acres harvested and compliance with plans in this factor to success; the cause for failure to succeed and failures to comply with farm plans might be due to either human or physical factors both of which are rather difficult to foresee.

CHAPTER VII. SUMMARY AND CONCLUSIONS

This comparison of results from planned and actual operations included five analyses of the 36 farms. These were on the basis of net family earnings, farm income, net worth increase, increase in animal units, and crop acres harvested. Each analysis was composed of two sections. The first section divided the farms into three groups according to high, middle, and low actual achievement in the particular factor; the second section divided the farms into three groups according to high, middle, and low percentages that actual was of planned operations in the same factor. Averages per farm for both planned and actual operations in the above and in various other factors were observed. The changes in these averages from group to group were studied. The trends and relationships of these factors are summarized briefly in the following discussion.

The data in this study show that planning for the value of farm products to be used in the home was fairly accurate throughout and comparatively more accurate than in most items. The same may be said of planning for cash family living expenses. It was found that the planning for the family was more accurate than planning for the farm. The probable reason for this is these low income farm families planned their family needs on a minimum standard which was the same standard on which they had been living for several years. The changes brought about by the loan in the farm organization or volume of farm business did not mean that the requirements for family living per person would change as drastically as the input and output for the farm would be changed. Therefore, more guess work was involved in planning for the farm.

In general, cash to be paid out was estimated more accurately than cash receipts. The ability to estimate the amount that could be paid on the debts was fairly accurate throughout.

The planning for farm expenditures was almost as accurate as the planning for the family expenses and much more accurate than planning for cash farm receipts. However, it was found that a great portion of the farm expenditures was loan funds that were more or less fixed from the time the plan was made. This would make the planning, from the standpoint of total expenditures, appear quite accurate, while the proportionately smaller items of cash operating expenses--such as for feed and other farm expenses--very greatly either above or below the planned expenses. In this study, machinery expense, and other farm expenses were generally more than the expense planned for these items. Actual feed expense was in almost all cases more than had been planned.

This failure to accurately estimate necessary feed purchases was closely associated with lack of compliance with plans in feed production. This tendency included feed acreage and yields. This described discrepancy regarding the comparison of actual to planned feed purchases and feed production was persistently greater in the more unsuccessful groups. This situation with feed was closely related to the lack of compliance in the sale of other crops. The tendency was for the sale of other crops to be a greater proportion of total receipts and to be nearer the planned proportion of total receipts on the more successful farms. The reverse tendency was indicated for sale of other crops on the more unsuccessful farms. However, other crop sales were much less than planned throughout. Under-estimation of feed requirements and over-estimation of feed production were general.

The degree of error in planning for feed and other crop sales was closely related in the same manner to the degree of complying with plans in all harvested acres. This indicated more complete utilization of cropland on the more successful farms. This indication denotes differences in managerial ability with this ability being directly related to success. This indication regarding the ability of the operator is borne out further by the apparent differences in efficiency of utilization of feed in that the increase in feed expenses on the more unsuccessful farms is not associated with an increase in actual receipts from livestock and livestock products. The high percentage of land in crop failures on the more unsuccessful farms showed a relationship of the utilization of cropland to success; and also, denotes further the above indicated relationship of the ability of the operator to the success of his operations.

It has been pointed out already, in this study, that the data were lacking in detailed information on the disposition of feeds among the various classes of livestock, the quantities of various products sold, and the prices received on these products. Therefore, the amount of detail to be used in the analysis of the situation described above is limited. However, the conclusions arrived at in this study are indicated repeatedly in the several analyses.

Dairy products sales were nearer the planned percentage of total receipts than the sale of any other farm product. This was true despite the fact that the trend of the price index for butterfat was downward (Table 2). The trend of the price index for beef cattle was upward in 1939. The importance of beef cattle sales tended to predominate on the more successful farms and the amount of dairy sales and egg sales

became a greater percentage of total receipts on the more unsuccessful farms. These were the farms with the smaller incomes and, in most cases, the farms with the least receipts. However, there were no indicated consistent relationships between acres in farm, farm inventory, or investment in productive livestock to success as measured by the standards used in this study.

There was too much rigidity in planning. This was shown in that the value of the planned farm inventory, inventory in animal units, and investment in productive livestock tended to be too near the same, regardless of acres in farm, percentage of land in cropland, indicated productivity of the farm or the indicated ability and experience of the operator. Further evidence of rigidity in planning was that the planned distribution of sources of receipts tended to be the same for the more successful groups as for the more unsuccessful. These indications and the discussion which follows show that success might be attributable to the ability of the operator to efficiently handle the organization provided by the plan rather than to any inherent value of the plan itself so far as the organization was concerned. Therefore, planning might be strongly influenced by the typical organization of the area and still fail to properly take care of the differences in the specific conditions which exist on the individual farms.

The more unsuccessful farms planned their farm income, net worth increase, net family earnings, and animal unit production to be about as much per farm as was planned for these same items by the more successful farms, while the more successful farms tended to be much higher in each of these items. The above four items and crop acres harvested were used throughout the study as measures of success and as measures of

compliance with farm plans. These items tended to confirm the value of each other as measures of success and as measures of compliance with farm plans in that the study of one measure tended to show results that were similar to the results of either of the other measures. In all sections of the study, the most unsuccessful farms were the farthest from complying with plans. These consistent tendencies showed the degree of compliance with plans to be directly related to the successful operation of the farm.

The farms farthest from compliance with plans tended to be the farms for which the planned operations in the more important factors were higher than was planned for the same operations by the high compliance farms. This would reflect the inability of the low compliance farm operators to plan their operations properly. The results show that the farm operators who were more unsuccessful and farthest from complying with plans did not have a properly proportioned farm organization. Proper organization in this case would also mean the type of organization which the particular farmer was capable of operating.

Difficulty was encountered in estimating colt sales, hog sales, and other crop sales. The reasons for these failures were fairly well explained by results of the study. The failure to foresee the reactions of the operator with his particular problems of management was prevalent throughout the study. The indications are that these problems of management included the ability of the operator to get the work done at the proper time which in most cases meant the operator had to do this work himself. Therefore, information from records in the area concerning time requirements for the various farm operations, the number in the family to be available for work on the farm, and the condition of health

and energy of the operator and his family are important types of information to consider at the time the farm plans are made.

This study showed that there were many factors that made planning difficult and many mistakes were made in farm planning. In order to be a more reliable basis for farm organization changes, farm plans should show a greater degree of accuracy than was shown in this study.

The results showed that a greater degree of accuracy in farm planning could be attained by a more detailed analysis of complete farm records in an area, by making available up-to-date information on cycle trends in prices and other economic information applicable to the area, and by gaining more information on the past experience and the ability of the particular operator. With the information listed above and more time for the supervision of planning, the supervisors of farm planning would be better guides to farm planning. The supervisors, then would be able more thoroughly to impress the farmers with the value of following the farm plan, thereby increase their success as farm operators.

This study does not attempt to give specific information as to the value of farm planning as compared to no planning. A study for that purpose would require data on the operations of the farms before planning was used and that the farms studied be managed by the same operator both before and after planning. However, since this study has shown that the quality or degree of accuracy of farm planning is directly related to the relative success, any sincere effort at planning would be a step in the right direction.

APPENDIX

Table 1
 Distribution of Cash Farm Receipts as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Net Family Earnings

SOURCES OF RECEIPTS:	: 10 Farms with the Highest Net Family Earnings					: 14 Farms Comprising the Middle Group					: 12 Farms with the Lowest Net Family Earnings				
	Actual		Planned		Ratio	Actual		Planned		Ratio	Actual		Planned		Ratio
	Average	Percent	Average	Percent		Average	Percent	Average	Percent		Average	Percent	Average	Percent	
	Receipts: of Total:		Receipts: of Total:			Receipts: of Total:		Receipts: of Total:			Receipts: of Total:		Receipts: of Total:		
	(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)
Total Farm Receipts	528	100.0	758	100.0	70	492	100.0	600	100.0	82	451	100.0	683	100.0	66
Total Livestock and Livestock Products	344	65.1	560	73.9	61	306	62.1	422	70.4	72	287	63.5	473	69.3	60
Cattle	147	27.9	182	24.0	81	95	19.4	106	17.7	90	85	18.9	83	12.1	103
Dairy	115	21.7	158	20.8	73	129	26.1	136	22.6	90	111	24.5	170	25.0	65
Hogs	53	10.0	139	18.4	38	39	7.8	69	11.6	56	56	12.4	117	17.1	48
Colts and Work Stock	1	.2	14	1.8	06	7	1.5	40	6.6	18	4	.9	10	1.5	59
Poultry	4	.8	29	3.9	15	9	1.8	21	3.5	44	7	1.5	35	5.1	19
Eggs	24	4.5	38	5.0	62	27	5.5	50	8.4	54	24	5.3	58	8.5	41
Total Crops	107	20.1	148	19.5	72	97	19.7	114	19.0	85	108	24.1	141	20.6	77
Cotton	85	16.0	75	9.9	112	88	17.8	58	9.7	150	99	22.2	71	10.4	141
Other Crops	21	4.1	73	9.6	30	9	1.9	56	9.3	16	9	1.9	70	10.2	13
Total Other Sources	78	14.8	50	6.6	157	89	18.2	64	10.6	140	56	12.4	69	10.1	80
Operators Labor	43	8.2	12	1.6	361	57	11.6	24	3.9	242	23	5.1	28	4.1	82
Other Farm	11	2.1	4	.5	320	18	3.7	13	2.2	138	7	1.6	1	.2	518
AAA Payments	24	4.5	34	4.5	69	14	2.9	27	4.5	52	26	5.7	40	5.8	64

Table 2
 Distribution of Farm Expenditures as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Net Family Earnings

EXPENSE ITEMS	Actual		Planned		Ratio
	Average	Percent	Average	Percent	
	Expense	of Total	Expense	of Total	
	(Dollars)		(Dollars)		
10 Farms with Highest Net Family Earnings:					
Total Farm	709	100.0	699	100.0	101
Livestock	467	66.0	476	68.1	98
Machinery	79	11.2	45	6.5	174
Seed and Fertilizer	19	2.5	17	2.4	113
Feed	42	6.0	42	6.0	100
Labor	27	3.8	26	3.7	104
Other Farm	75	10.5	93	13.3	80
14 Farms Comprising the Middle Group:					
Total Farm	755	100.0	671	100.0	112
Livestock	503	66.7	501	74.7	100
Machinery	54	7.1	42	6.2	129
Seed and Fertilizer	17	2.2	19	2.8	88
Feed	76	10.1	32	4.8	235
Labor	20	2.7	33	5.0	59
Other Farm	85	11.2	44	6.5	194
12 Farms with Lowest Net Family Earnings:					
Total Farm	664	100.0	604	100.0	110
Livestock	435	65.6	398	65.8	110
Machinery	58	8.8	47	7.8	123
Seed and Fertilizer	15	2.3	18	3.0	84
Feed	67	10.1	40	6.7	165
Labor	36	5.3	46	7.6	78
Other Farm	53	7.9	55	9.1	95

Table 3
Distribution of Cash Farm Receipts as Percentage of Total
with Ratio of Actual to Planned, Classified
on Actual Farm Income

SOURCES OF RECEIPTS:	7 Farms with the Highest Farm Income					17 Farms Comprising the Middle Group					12 Farms with the Lowest Farm Income				
	Actual		Planned		Ratio	Actual		Planned		Ratio	Actual		Planned		Ratio
	Average	Percent	Average	Percent		Average	Percent	Average	Percent		Average	Percent	Average	Percent	
	Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:	
	(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		
Total Farm Receipts	600	100.0	703	100.0	86	522	100.0	682	100.0	76	375	100.0	638	100.0	59
Total Livestock and Livestock Products	329	54.8	451	64.1	73	335	64.2	488	71.6	69	263	70.0	477	74.9	55
Cattle	161	26.8	131	18.6	123	119	22.9	128	18.8	93	56	14.9	100	15.7	56
Dairy	92	15.4	106	15.1	87	119	22.8	150	22.0	80	133	35.6	187	29.2	72
Hogs	63	10.6	132	18.8	48	49	9.4	98	14.4	50	38	10.2	97	15.3	39
Colts and Work Stock	0	0	13	1.8	0	9	1.7	33	4.8	27	1	.2	14	2.2	5
Poultry	8	1.1	27	3.8	25	8	1.5	25	3.7	32	6	1.5	32	5.1	17
Eggs	5	.9	42	6.0	12	31	5.9	54	7.9	57	29	7.6	47	7.4	61
Total Crops	178	29.6	182	25.9	98	110	21.1	130	19.0	85	50	13.5	107	16.7	47
Cotton	143	23.9	76	10.8	188	98	18.8	60	8.7	165	50	13.4	73	11.4	68
Other Crops	35	5.7	106	15.1	32	12	2.3	70	10.3	17	—	.1	34	5.3	1
Total Other Sources	93	15.6	70	10.0	133	77	14.7	64	9.4	120	62	16.5	54	8.4	116
Operators Labor	58	9.7	23	3.2	254	37	7.0	20	3.0	180	40	10.7	24	3.7	169
Other Farm	13	2.2	5	.7	264	15	2.9	9	1.3	171	9	2.3	4	.7	205
AAA Payments	22	3.7	42	6.1	52	25	4.8	35	5.1	72	13	3.5	26	4.0	52

Table 4
 Distribution of Farm Expenditures as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Farm Income

EXPENSE ITEMS	Actual		Planned		Ratio
	Average Expense (Dollars)	Percent of Total	Average Expense (Dollars)	Percent of Total	
7 Farms with the Highest Farm Income:					
Total Farm	830	100.0	752	100.0	110
Livestock	582	70.2	574	76.3	102
Machinery	84	10.1	40	5.4	208
Seed and Fertilizer	24	2.9	21	2.8	116
Feed	48	5.8	45	6.0	105
Labor	34	4.0	31	4.1	109
Other Farm	58	7.0	41	5.4	142
17 Farms Comprising the Middle Group:					
Total Farm	723	100.0	685	100.0	106
Livestock	484	66.9	474	69.2	102
Machinery	41	5.7	37	5.4	112
Seed and Fertilizer	13	1.8	15	2.2	88
Feed	68	9.3	35	5.1	193
Labor	27	3.8	48	7.0	57
Other Farm	90	12.5	76	11.1	118
12 Farms with the Lowest Farm Income:					
Total Farm	626	100.0	562	100.0	112
Livestock	387	61.8	373	66.4	104
Machinery	79	12.7	58	10.3	137
Seed and Fertilizer	18	2.8	21	3.7	85
Feed	67	10.7	37	6.6	180
Labor	23	3.7	21	3.7	110
Other Farm	52	8.3	52	9.3	100

Table 5
Distribution of Cash Farm Receipts as Percentage of Total
with Ratio of Actual to Planned, Classified
on Actual Net Worth Increase

SOURCES OF RECEIPTS:	: 12 Farms with the Highest Net Worth Increase					: 12 Farms Comprising the Middle Group					: 12 Farms with Lowest Net Worth Increase				
	Actual		Planned		Ratio	Actual		Planned		Ratio	Actual		Planned		Ratio
	Average	Percent	Average	Percent		Average	Percent	Average	Percent		Average	Percent	Average	Percent	
	Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:	
	(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		
Total Farm Receipts	523	100.0	692	100.0	76	497	100.0	670	100.0	74	445	100.0	652	100.0	68
Total Livestock and Livestock Products	328	62.8	465	67.1	71	336	67.6	520	77.6	65	266	59.6	448	68.6	59
Cattle	147	28.1	142	20.5	104	113	22.8	135	20.1	84	59	13.2	82	12.5	72
Dairy	90	17.2	130	18.7	69	132	26.4	167	24.9	79	135	30.3	163	25.0	82
Hogs	56	10.9	96	13.8	59	51	10.2	117	17.5	43	37	8.4	101	15.5	37
Colts and Work Stock	9	1.7	16	2.3	55	4	.7	38	5.6	09	1	.2	14	2.2	05
Poultry	10	1.9	24	3.5	40	3	.7	22	3.3	16	8	1.7	38	5.8	21
Eggs	16	3.0	57	8.3	28	33	6.7	41	6.2	80	26	5.8	50	7.6	52
Total Crops	120	22.9	151	21.9	95	91	18.3	109	16.4	76	99	22.3	135	20.8	66
Cotton	92	17.5	52	7.5	176	83	16.6	60	9.0	137	99	22.2	89	13.7	110
All Other Crops	28	5.4	99	14.4	29	8	1.7	49	7.4	17	--	.1	46	7.1	01
Total Other Sources	75	14.3	76	11.0	99	70	14.1	41	6.0	173	81	18.1	69	10.6	117
Operators Labor	43	8.3	32	4.6	134	37	7.5	5	.6	808	46	10.3	29	4.5	157
Other Farm	17	3.2	9	1.3	194	13	2.5	8	1.2	160	8	1.8	3	.5	271
AAA Payments	15	2.8	35	5.1	41	20	4.1	28	4.2	73	27	6.0	37	5.6	73

Table 6
 Distribution of Farm Expenditures as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Net Worth Increase

EXPENSE ITEMS	Actual		Planned		Ratio
	Average	Percent	Average	Percent	
	: Expense	: of Total:	: Expense	: of Total:	
	(Dollars)		(Dollars)		
12 Farms with the Highest Net Worth Increase:					
Total Farm	768	100.0	720	100.0	107
Livestock	516	67.2	518	72.0	100
Machinery	70	9.1	37	5.2	136
Seed and Fertilizer	15	2.0	17	2.4	88
Feed	65	8.4	52	7.2	125
Labor	39	5.1	41	5.6	97
Other Farm	63	8.2	55	7.6	115
12 Farms Comprising the Middle Group:					
Total Farm	718	100.0	683	100.0	105
Livestock	486	67.7	474	69.4	103
Machinery	40	5.7	35	5.2	116
Seed and Fertilizer	13	2.5	19	2.8	91
Feed	58	8.0	31	4.6	183
Labor	19	2.6	38	5.6	50
Other Farm	97	13.5	85	12.4	114
12 Farms with the Lowest Net Worth Increase:					
Total Farm	648	100.0	567	100.0	114
Livestock	409	63.2	387	68.2	106
Machinery	77	11.8	61	10.8	126
Seed and Fertilizer	17	2.7	17	3.0	100
Feed	68	10.4	30	5.3	228
Labor	23	3.6	28	4.9	83
Other Farm	54	8.3	44	7.8	121

Table 7
Distribution of Cash Farm Receipts as Percentage of Total
with Ratio of Actual to Planned, Classified
on Actual Increase in Animal Units

SOURCES OF RECEIPTS:	8 Farms with Highest Animal Unit Increase					15 Farms Comprising the Middle Group					13 Farms with Lowest Animal Unit Increase				
	Actual		Planned		Ratio	Actual		Planned		Ratio	Actual		Planned		Ratio
	Average : Receipts:	Percent : of Total:	Average : Receipts:	Percent : of Total:		Average : Receipts:	Percent : of Total:	Average : Receipts:	Percent : of Total:		Average : Receipts:	Percent : of Total:	Average : Receipts:	Percent : of Total:	
	(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)
Total Farm Receipts	620	100.0	753	100.0	82	474	100.0	709	100.0	67	424	100.0	578	100.0	73
Total Livestock and Livestock Products	482	77.7	578	76.7	83	312	65.9	512	72.2	61	202	47.5	376	65.0	54
Cattle	238	38.3	172	22.8	138	97	20.6	123	17.4	79	36	8.5	83	14.3	44
Dairy	114	18.5	191	25.4	60	126	26.5	160	22.5	79	114	26.7	123	21.3	92
Hogs	83	13.3	106	14.0	78	56	11.7	127	18.0	44	19	4.4	78	13.5	24
Colts and Work Stock	5	.8	34	4.6	14	8	1.7	23	3.2	35	--	--	15	2.7	--
Poultry	13	2.1	25	3.3	51	6	1.3	33	4.6	19	4	1.0	24	4.1	19
Eggs	29	4.7	50	6.6	59	19	4.1	46	6.5	41	29	6.9	53	9.1	55
Total Crops	90	14.6	146	19.4	62	83	17.4	133	18.8	62	135	31.9	123	21.3	110
Cotton	48	7.8	49	6.5	99	80	16.8	71	10.0	112	130	30.6	74	12.8	175
Other Crops	42	6.8	97	12.9	43	3	.6	62	8.8	01	5	1.3	49	8.5	11
Total Other Sources	48	7.7	29	3.9	163	79	16.7	64	9.0	124	87	20.6	79	13.7	110
Operators Labor	22	3.5	--	--		37	7.8	22	3.1	165	60	14.3	35	6.1	173
Other Farm	11	1.8	10	1.4	104	22	4.6	9	1.3	241	3	.7	1	.2	241
AAA Payments	15	2.4	19	2.5	81	20	4.3	33	4.6	63	24	5.6	43	7.4	55

Table 3
 Distribution of Farm Expenditures as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Increase in Animal Units

EXPENSE ITEMS	Actual		Planned		Ratio
	Average : Expense : (Dollars)	Percent : of Total:	Average : Expense : (Dollars)	Percent : of Total:	
8 Farms with the Highest Increase in Animal Units:					
Total Farm	1,019	100.0	941	100.0	108
Livestock	712	69.9	702	74.6	101
Machinery	80	7.8	46	4.8	174
Seed and Fertilizer	23	2.2	13	1.4	170
Feed	68	6.7	41	4.4	167
Labor	40	3.9	35	3.8	112
Other Farm	96	9.5	104	11.0	93
15 Farms Comprising the Middle Group:					
Total Farm	640	100.0	606	100.0	106
Livestock	412	64.5	415	68.4	99
Machinery	54	8.4	40	6.6	134
Seed and Fertilizer	10	1.6	18	2.9	59
Feed	66	10.4	38	6.3	172
Labor	23	3.5	33	5.5	68
Other Farm	75	11.6	62	10.3	120
13 Farms with the Lowest Increase in Animal Units:					
Total Farm	606	100.0	540	100.0	112
Livestock	390	64.4	363	67.1	108
Machinery	62	10.2	49	9.1	126
Seed and Fertilizer	20	3.4	21	4.0	96
Feed	58	9.5	35	6.5	163
Labor	24	4.0	38	7.0	64
Other Farm	52	8.5	34	6.3	152

Table 9
Distribution of Cash Farm Receipts as Percentage of Total
with Ratio of Actual to Planned, Classified
on Actual Acres Harvested

SOURCES OF RECEIPTS:	8 Farms with Highest Acres Harvested					19 Farms Comprising the Middle Group					9 Farms with Lowest Acres Harvested				
	Actual		Planned		Ratio	Actual		Planned		Ratio	Actual		Planned		Ratio
	Average	Percent	Average	Percent		Average	Percent	Average	Percent		Average	Percent	Average	Percent	
	Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:		Receipts:	of Total:	Receipts:	of Total:	
	(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		(Dollars)		
Total Farm Receipts	562	100.0	719	100.0	78	463	100.0	662	100.0	70	476	100.0	651	100.0	73
Total Livestock and Livestock Products	346	61.5	470	65.4	74	297	64.1	491	74.2	60	306	64.2	456	70.1	67
Cattle	187	33.2	157	21.8	119	79	17.1	118	17.8	67	93	19.4	90	13.8	103
Dairy	100	17.8	114	15.9	87	117	25.2	164	24.8	71	141	29.5	165	25.4	85
Hogs	39	7.0	106	14.7	37	53	11.4	110	16.6	48	47	9.8	93	14.3	50
Colts and Work Stock	6	1.0	19	2.6	31	4	.8	17	2.6	22	4	.9	38	5.8	12
Poultry	4	.7	26	3.7	15	10	2.3	25	3.8	41	2	.5	35	5.4	07
Eggs	10	1.8	48	6.7	21	34	7.3	57	8.6	60	19	4.1	35	5.4	55
Total Crops	119	21.2	171	23.8	70	106	23.0	119	18.0	89	85	17.5	126	19.3	66
Cotton	89	15.8	51	7.1	174	98	21.3	73	11.1	134	76	16.1	69	10.6	111
Other Crops	30	5.4	120	16.7	25	8	1.7	46	6.9	17	7	1.4	57	8.7	12
Total Other Sources	97	17.3	78	10.8	126	60	12.9	52	7.8	116	87	18.3	69	10.6	127
Operators Labor	60	10.6	40	5.6	149	30	6.3	12	1.8	242	53	11.1	27	4.1	197
Other Farm	18	3.3	0	.0	736	5	1.1	6	.8	92	23	4.9	14	2.2	162
AAA Payments	19	3.4	38	5.2	52	25	5.5	34	5.2	75	11	2.3	28	4.3	40

Table 10
 Distribution of Farm Expenditures as Percentage of Total
 with Ratio of Actual to Planned, Classified
 on Actual Acres Harvested

EXPENSE ITEMS	Actual		Planned		Ratio
	Average	Percent	Average	Percent	
	Expense	of Total	Expense	of Total	
	(Dollars)		(Dollars)		
8 Farms with the Highest Acres Harvested:					
Total Farm	824	100.0	809	100.0	102
Livestock	557	67.6	578	71.5	96
Machinery	87	10.5	44	5.4	197
Seed and Fertilizer	15	1.9	26	3.2	59
Feed	77	9.4	51	6.3	152
Labor	33	4.0	57	7.1	58
Other Farm	55	6.6	53	6.5	103
15 Farms Comprising the Middle Group:					
Total Farm	597	100.0	539	100.0	111
Livestock	385	64.4	357	66.2	108
Machinery	51	8.4	42	7.9	120
Seed and Fertilizer	17	2.9	14	2.5	126
Feed	50	8.4	36	6.7	139
Labor	25	4.3	31	5.7	83
Other Farm	69	11.6	59	11.0	116
9 Farms with the Lowest Acres Harvested:					
Total Farm	853	100.0	770	100.0	111
Livestock	576	67.5	571	74.2	101
Machinery	65	7.6	49	6.4	131
Seed and Fertilizer	17	2.0	20	2.6	84
Feed	80	9.4	30	4.0	264
Labor	25	2.9	27	3.4	94
Other Farm	90	10.6	73	9.4	124

Table 11

Oklahoma Yields for Listed Crops
for 10-Year Period, 1930-1939

Year	Crop: ^{1/} Wheat (Bushels)	Corn (Bushels)	Oats (Bushels)	Barley (Bushels)	All Hay (Tons)	Cotton (Lbs. Lint)
1930	9.5	10.5	22.5	14.5	.98	104
1931	17.0	15.0	26.0	21.0	1.03	179
1932	12.0	20.0	18.0	13.0	1.15	167
1933	10.2	7.0	18.5	9.0	.99	212
1934	10.5	5.8	16.5	16.0	.81	58
1935	10.0	14.0	25.0	16.5	1.26	117
1936	8.0	6.5	16.0	10.0	.77	62
1937	14.2	18.0	20.5	17.5	1.05	156
1938	11.0	20.0	21.0	19.0	1.28	163
1939	14.0	14.5	17.0	16.0	1.12	141

SOURCE: Crop Yields and Weather, Louis W. Bean, U. S. D. A., and U. S. Dept. of Commerce, Misc. Publication Number 471, February 1942.

^{1/} Winter wheat.

Table 12
Cash Farm Receipts by Items and Percentage Each is of
Total in Groups According to Ratio of Actual
to Planned Net Family Earnings

	11 Farms Having the Highest Ratio		15 Farms Comprising Middle Group		10 Farms Having the Lowest Ratio							
	Actual	Planned	Actual	Planned	Actual	Planned						
	Average: Re- : ceipts: : :Total:	Per-: cent: : of : : :Total:	Average: Re- : ceipts: : :Total:	Per-: cent: : of : : :Total:	Average: Re- : ceipts: : :Total:	Per-: cent: : of : : :Total:						
	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)						
Total receipts	423	100.0	602	100.0	522	100.0	681	100.0	510	100.0	734	100.0
Total livestock and livestock products	255	60.4	429	71.4	330	63.1	477	70.1	341	66.7	530	72.1
Dairy	107	25.3	123	20.5	128	24.4	157	23.1	118	23.1	181	24.6
Cattle	59	13.9	101	16.8	123	23.6	141	20.7	134	26.2	108	14.6
Hogs	40	9.5	100	16.6	51	9.8	99	14.6	53	10.4	118	16.1
Colts and workstock	6	1.5	22	3.7	3	.6	18	2.6	4	.8	30	4.1
Poultry	11	2.6	26	4.3	4	.7	21	3.1	8	1.5	40	5.5
Eggs	32	7.6	57	9.5	21	4.0	41	6.0	24	4.7	53	7.2
Total crops	81	19.3	121	20.0	128	24.6	131	19.3	89	17.6	147	20.1
Cotton	75	17.8	63	10.4	107	20.6	65	9.5	83	16.3	76	10.4
Other crops	6	1.5	58	9.6	21	4.0	66	9.8	6	1.3	71	9.7
Total other sources	87	20.3	52	8.6	64	12.3	73	10.6	80	15.7	57	7.8
Operators' labor	55	12.9	14	2.4	28	5.3	25	3.6	50	9.7	26	3.5
Other farm income	12	2.8	10	1.6	15	3.0	5	.8	9	1.9	5	.7
AAA payments	20	4.6	28	4.6	21	4.0	42	6.2	21	4.1	26	3.6

TYPE OF LOAN

- W Std. Corp.
P Coop. FSA
P Subs. RP

FARM AND HOME MANAGEMENT PLAN

RP Only	Project No. _____
	Unit No. _____

Part I.—PERSONAL DATA

We Mr. Mrs. Miss _____ (Applicant's name), _____ (Known as), _____ (Spouse)

_____ (D. No.) _____ (Box No.) _____ (Post office) _____ (County) _____ (State) submit the
 wing information regarding our present conditions and future plans. The farm on which this Farm
 agement Plan is to be put into operation is known as _____ (Name of farm or owner) which is situated _____ miles
 _____ from _____ (Name nearest shipping point) and _____ miles _____ from _____ (Nearest school)
 _____ (Number) _____ (Direction) _____ (Number) _____ (Direction) _____ (Number) _____ (Direction) _____ (Number) _____ (Direction)
 It is located in section _____; township _____; range _____
 are owner renter of _____ acres. We have a written lease, copy attached, for _____ year(s) with without }
 wal clause. It provides for _____ shares and/or \$_____ annual cash rental payments, due

 umber in household _____ Age of members: Father _____; mother _____; other men and boys _____, _____,
 _____; other women and girls _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Part II.—REPORT OF OUR LAST YEAR'S BUSINESS

Beginning _____ (Month) _____ (Day) _____ (Year) Ending _____ (Month) _____ (Day) _____ (Year)
 will will not } operate the same farm this coming year.

Table A—OUR CROP PRODUCTION AND SALES					Table B—LIVESTOCK AND PRODUCE SALES			
CROP	WE PRODUCED			WE SOLD		ITEM	WE SOLD	
	Acres	Per acre	Total	Our share	Quantity		Value	Quantity	Value
						Dairy products		\$
						Cattle		
						Hogs		
						Sheep		
						Poultry		
						Eggs		
Subtotal					TOTAL			\$

Table D—OUR FARM AND HOME EXPENDITURES			Table C—OUR OTHER INCOME	
land in pasture	Cash farm operating expenses	\$	FSA grant	\$
land fallowed	Cash family operating expenses		Misc. employment	
land idle	Capital goods purchased		A. A. A. payment	
total cropland	Paid on FSA and/or corp. loans			
permanent pasture	Paid on all other debts			
lands not pastured	TOTAL	\$	TOTAL	\$
instead, roads, etc.				
total acres				

TOTAL VALUE OF OUR SHARE OF ALL CROPS SOLD (Table A) _____ \$
 TOTAL CASH INCOME, ALL SOURCES (Summation tables A, B, C) _____ \$
 TOTAL MONEY SPENT FOR FARM AND HOME (Table D) _____ \$
 NET CASH SURPLUS _____ \$

Additional information about our last year's business:
 Pounds of milk (or butterfat) produced per cow. (Average number of cows _____) _____
 Number of eggs produced per hen. (Average number of hens _____) _____
 Number of pigs raised per litter. (Number of litters _____) _____
 Percent of income from crops _____ %
 Percent of income from livestock _____ %

Part IV.—FINANCIAL STATEMENT

As of _____, 19____

Table I—ASSETS (what we own)				Table J—LIABILITIES (what we owe)				
Items	Number or quantity	Value	Subtotals	Type of debt— To whom owed	Present debt	Adjusted to	To be paid by FSA loan	To be paid with own funds this year
Improvements		\$	\$	Real-estate mortgages:				
Machinery and equipment:					\$	\$	\$	\$
				Interest:				
Stock:				Personal-property liens:				
Work								
Dairy cattle								
Head of cattle								
Pigs								
Sheep								
Poultry								
				Crop liens:				
				Past due taxes:				
				Past due cash rent:				
				Other debts:				
Planting crops:								
Miscellaneous farm supplies								
TOTAL FARM PROPERTY								
Household goods				Judgments:				
on hand								
on hand								
Accounts receivable								
Value life insurance								
CASH TOTAL	x x x	x x x x x	\$	GRAND TOTAL	\$	\$	\$	\$

What we own \$ _____ minus what we owe \$ _____ gives our NET WORTH \$ _____

Does any relative, or others, claim any interest in any assets listed? _____ If so, give full particulars

I am endorser on notes, \$ _____; guarantor on obligations, \$ _____; bondsman for \$ _____

FARM AND HOME MANAGEMENT PLAN

Part VI.—HOME SECTION

Application No. _____

OUR PLAN FOR FOOD (Table I)

Case No. _____

R FAMILY OULD USE	THESE FOOD GROUPS	WE PLAN TO USE	WE PLAN TO PRODUCE		WE PLAN TO BUY		OUR FARM NEEDS TO PROVIDE
			Quantity	Value	Quantity	Value	
{ qt. gal. bf. lb.}	Whole milk.....			\$.....		\$.....	cows
	Cheese.....						
	Butter.....						
	TOTAL.....						
lb.	Table fats and oils.....						hogs
	Lard, fat pork, bacon.....						
	TOTAL.....						
lb.	Lean pork.....						birds
	Beef and veal.....						
	Mutton and lamb.....						
	Fish and game.....						
	Poultry.....						
	TOTAL.....						
doz.	Eggs.....						
lb.	Dried beans, peas, and nuts.....						acres in garden
lb.	Tomatoes.....						
	Citrus.....						
lb.	Leafy, green, and yellow veg.....						
lb.	Other vegetables.....						
lb.	Fruit.....						acres in orchard
lb.	Potatoes—White.....						acres
	Sweet.....						acres
	TOTAL.....						
lb.	Flour.....						
	Cereal.....						
	TOTAL.....						
lb.	Sugar.....						
	Sirup, sorghum, etc.....						
	TOTAL.....						
	Food accessories.....						
	Cod-liver oil.....						

Total value of FOOD we plan To PRODUCE at _____ prices \$..... To BUY \$.....

Total value of FUEL we plan to provide from farm..... Value of Food we have on hand:
Stored, \$..... Canned, \$.....

Total value of FOOD and FUEL from the farm \$..... TOTAL, \$.....

Quarts of canned food on hand: Date.....	Quarts of food we plan to can this year:	We have these containers on hand:		We need to buy these containers:	
Vegetables.....	Vegetables.....	.....	.....	.....	.....
Tomatoes.....	Tomatoes.....	.....	.....	.....	.....
Fruit.....	Fruit.....	.....	.....	.....	.....
Meats.....	Meats.....	.....	.....	.....	.....

FARM PRODUCTS USED BY FAMILY			MONEY RECEIVED AND PAID OUT				NAME			
ITEM	Am't.	Value	RECEIVED (Farm Income)		PAID OUT (Farm Expense)		Last Name	First Name	Initial	
			ITEM	Am't.	Value	ITEM	Value			
Whole Milk	Qts.		Eggs	1		Mach. & Equip	2	Address _____		
Butterfat	Lbs.		Poultry	2		Livestock	3	Landlord's Name _____		
Cream	Pts.		Dairy	3		Seed & Fertilized	4	Value of Farm _____ Est. Exp. (Lld) _____		
Eggs	Doz.		Feed	4		Feed Purchased	5	NET WORTH STATEMENT: What We Own		
Fish	Lbs.		Workstock	5		Labor Hired	6	ITEM	Beginning	Ending
Poultry	Lbs.		Cattle	6		Other Farm Expen.	7	Cash On Hand		
Other Meats	Lbs.		Hogs	7		TOTAL FARM EXPENSE		Savings		
Lard, Bacon	Lbs.		Sheep	8		FAMILY LIVING EXPENSES		Farm Inventory		
Fuel			Cotton	9		Food Purchased	2	Household Inventory		
Honey, Syrup	Gal.		Machinery	10		Household Opr.	3	Life Ins. (Cash Val.)		
Sorghum	Gal.		Opr. Labor	11		Clothing	4	Notes, Accts. Due Fam.		
Flour	Lbs.		Other Farm	12		House, Furniture	5	Investments		
Cereals	Lbs.		A. A. A. Pay	13		Medical Care	6	Other Property		
Nuts	Lbs.		TOTAL FARM RECEIPTS			Personal	7			
Veg. & Fruits			Borrowed	14		Ed., Recreation	8			
used fresh	Lbs.		Other Sources	15		TOTAL LIVING EXP.				
Stored V&F	Bu.		Cash at Beginning			Paid on Debts	8			
Canned "	Qts.		*Cash to Acct. For			*Total Paid Out				
Dried "	Lbs.									
TOTAL			CASH ON HAND			*Subtract smaller number From larger for cash O.H.				
HOUSEHOLD INVENTORY	Beginning of Year		End Of Year		Increase		TOTAL AMOUNT OWNED			
ITEM	Number	Value	Number	Value	Number	Value	What We Owe			
Bedding, Furniture							F.S.A. Loans			
Churn							Other Mortgages &			
Refrigerator ()							Liens on Real Estate			
Pressure Cooker ()							Machinery & Equipment			
Canning Supplies							Livestock			
Other Supplies							Crops			
Clothing							Past Due Interest			
Personal Belongings							Past Due Taxes			
Stored Meat () ()							Past Due Cash Rent			
Stored Veg. () ()							Notes & Accts. Owed			
Stored Frt. () ()							Other Debts			
Canned Meat () ()							TOTAL AMOUNT OWED			
Canned Veg. () ()							NET WORTH			
Canned Frt. () ()							Place smaller under larger and subtract			
Other Food										
Fuel										
TOTAL	X X X X		X X X X		X X X X		INCREASE IN NET WTH.	X X X X		
Subtract smaller total							DECREASE IN NET WTH.		X X X X	
CHANGE IN INVENTORY	DECREASE		INCREASE							

EXHIBIT B

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