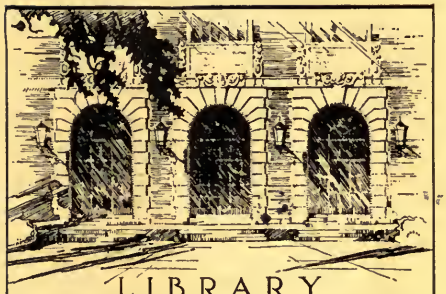

Factors Affecting Success of Farm Mortgage Loans

A Study of Lending Experience in Seven Counties in East-Central Illinois, 1917-1933

By
Joseph Ackerman
and
L. J. Norton

UNIVERSITY OF ILLINOIS
AGRICULTURAL EXPERIMENT STATION

Bulletin 468

CONTENTS

Urbana, Illinois August, 1940

Publications in the Bulletin series report the results of investigations made or sponsored by the Experiment Station

Factors Affecting Success of Farm Loans

A Study of Lending Experience in Seven Counties in East-Central Illinois, 1917-1933[1]

By Joseph Ackerman, formerly Associate in Farm Management, and L. J. Norton, Chief in Agricultural Marketing

THE SUCCESS of a long-term farm credit system depends in a large measure upon soundness of appraisals and loan policies —a fact that becomes particularly evident when prices are falling. From 1900 to 1920, when prices of farm products and of land were advancing, little thought was given to the science of appraising land or to the relationship between high loan ratio (ratio of amount loaned to appraised value of land) and foreclosure. Long-time credits were based principally on sale values; and the price of land, even tho it may have advanced ahead of earnings, continued to rise, with the result that when a lender had to acquire a farm he could usually sell it without loss. But in 1920 the price trend was reversed, and land values began a decline which continued until 1934. During these years lenders who had to acquire farms could often dispose of them only at a loss.

The seriousness of the situation is indicated by the figures on foreclosures. In Illinois the number of farms that changed ownership because of forced sales and related defaults increased from 17.1 per 1,000 in 1926 to 50.7 in 1933 (Table 1). With rising prices after 1933, forced changes in ownership declined to 24.5 per 1,000 in 1936 and voluntary sales and trades increased. In 1936 creditor agencies were selling farms acquired in the early thirties. Farmers in financial difficulties and with a small equity in their farms were transferring the properties to stronger financial hands.

As a result of these high percentages of acquirement, coupled with the frequent losses, lenders began to take more interest in scientific study of land valuation and loan policies.

In the investigation reported here an attempt was made to evaluate the influences of certain factors on lending experience in one section of Illinois. The study was made strictly from the standpoint of

[1]Based on a thesis submitted by Joseph Ackerman to the Graduate School of the University of Illinois, January, 1938, in partial fulfilment of the requirements for the degree of doctor of philosophy in economics.

TABLE 1.—ESTIMATED NUMBERS OF ILLINOIS FARMS THAT CHANGED OWNERSHIP DURING ELEVEN YEARS, 1926-1936[a]
(Number per 1,000 farms)

Year[b]	Forced sales and related defaults[c]	Voluntary sales and trades[d]	Total number changing ownership[e]
1926	17.1	22.3	51.1
1927	18.6	21.7	65.1
1928	21.0	20.0	64.2
1929	18.6	19.7	59.1
1930	21.1	18.8	63.2
1931	23.0	17.8	62.5
1932	34.5	15.3	72.1
1933	50.7	13.6	89.5
1934	38.2	13.2	74.5
1935	25.1	15.0	64.1
1936	24.5	22.5	70.7

[a]From a series of annual circulars on the *Farm Real Estate Situation*, Bureau of Agricultural Economics, U. S. Department of Agriculture, 1926-1936.
[b]Twelve-month period ending March 15.
[c]Includes forced sales caused by delinquent taxes, foreclosure of mortgages, bankruptcy, loss of title by default of contract, sale to avoid foreclosure, and surrender of title or other transfers to avoid foreclosure.
[d]Including contracts to purchase but not options.
[e]Includes voluntary sales, trades, forced sales and related defaults, inheritance and gifts, administrators' and executors' sales, other sales in settlement of estates, miscellaneous, and unclassified.

lenders, tho both the data and the conclusions drawn from them are likely to be of interest also to borrowers.

AREA STUDIED

The analysis of lending experience was confined to loans made in seven Illinois counties—Clark, Coles, Cumberland, Douglas, Edgar, Moultrie, and Shelby—during the period from March, 1917, to May, 1933. The location of this area and the types of farming most generally practiced in the different parts of it are shown in Fig. 1.

The area is characterized by wide variation in soil types. Accurate soil maps were available, and it was possible, therefore, to study the relations between loan experience and soil productivity. Such an analysis is of course highly desirable since the quality of the soil would be expected to influence the ability of borrowers to repay their loans.

DATA AVAILABLE

Information on loans and lending experience was gained from the following sources:

1. Applications and appraisal reports for 827 loans.
2. Survey of 66 borrowers and their farms.
3. Personal observation of 103 foreclosed farms, and interviews with persons acquainted with the borrowers.

4. Land-use records, for 1935, of 338 mortgaged farms, made available by the secretaries of county soil conservation committees.

5. Financial records for 92 owner-operated central Illinois farms for which debt information was available.

6. Conclusions reached by other investigators in this field.

All the loans studied were secured by recorded first mortgages on farm land.

Information relative to the farm, the borrower, and the history of the loan was transferred from application forms, appraisal reports, and other records in the files of the cooperating lending institutions to cards designed for use with Hollerith mechanical sorting and tabulating equipment.

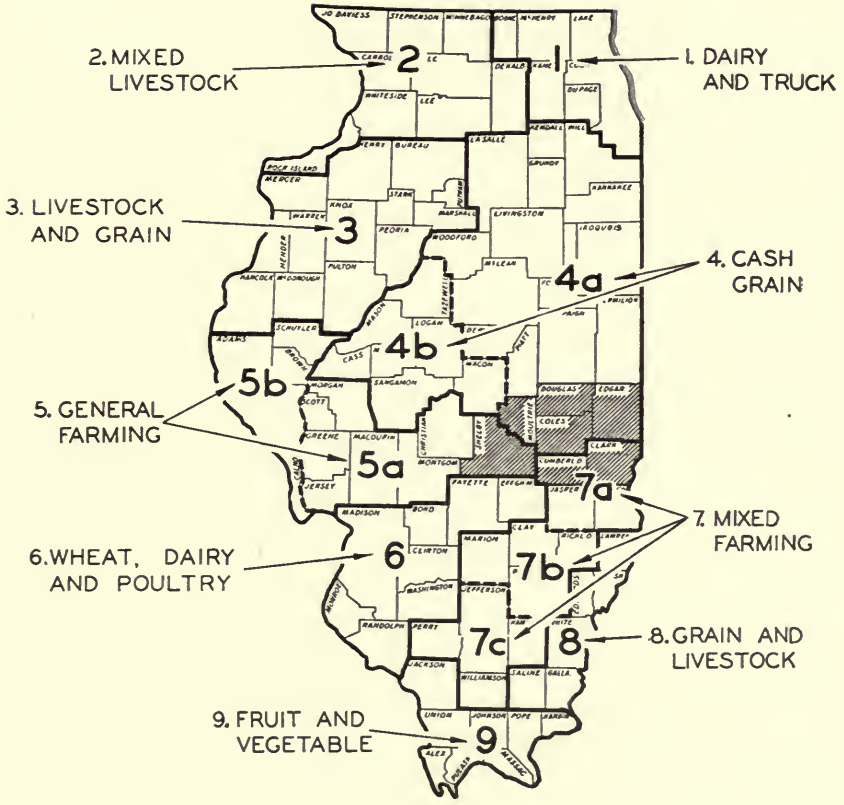

FIG. 1.—COUNTIES IN WHICH THE STUDY WAS MADE (SHADED AREA), AND THE NINE MAJOR FARMING-TYPE AREAS OF ILLINOIS

STATUS OF THE LOANS

The 827 loans were divided into five groups according to their status on April 1, 1936: current, extended, delinquent, foreclosed, and paid in full. *Current* loans were those on which all interest and principal payments were paid to date. *Extended* loans were those on which delinquencies had been taken care of by an extension. On *delinquent* loans the borrowers were in arrears on interest payments for one or more years. *Foreclosed* loans included both those for which title to the farm had already been acquired by the lending agencies either thru foreclosure or by voluntary action by the borrower, and those on which foreclosure action was pending. *Paid-in-full* loans were those which had been retired by the borrower.

Fourteen percent of the 827 loans had been paid in full, and 13 percent were foreclosed (Table 2). Only 52 percent were current, and 17 percent had been extended. The extended and delinquent loans could not be considered to be entirely successful, for the debt loads being carried were too heavy and the borrowers were therefore likely to become involved in financial difficulties. Some of the paid-in-full and current loans were probably so designated because the property had been shifted to stronger hands, but it was not possible to ascertain the number of such cases.

TABLE 2.—DATA ON 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO THEIR STATUS ON APRIL 1, 1936

Loan status[a]	Number of loans	Percent of total loans	Acres mortgaged		Appraised value per acre
			Total	Per farm	
Paid in full	115	13.9	10 083	88	$160
Current	433	52.4	42.903	99	132
Extended	140	16.9	13 731	98	146
Delinquent	31	3.7	5 094	164	194
Foreclosed	108	13.1	12 489	116	128
Total or average	827	100.0	84 300	102	$141

Loan status[a]	Amount loaned		Loan ratio in percent	Total loss	Loss per $1,000 loaned on *all 827 farms*
	Total	Per acre			
Paid in full	$ 557 150	$55	36	.....	.....
Current	2 105 650	49	38	.....	.....
Extended	839 900	61	41	.....	.....
Delinquent	348 200	68	36	.....	.....
Foreclosed	687 950	55	43	$180 065	.....
Total or average	$4 538 850	$54	38	$180 065	$39.67

[a]For definition of terms see text above.

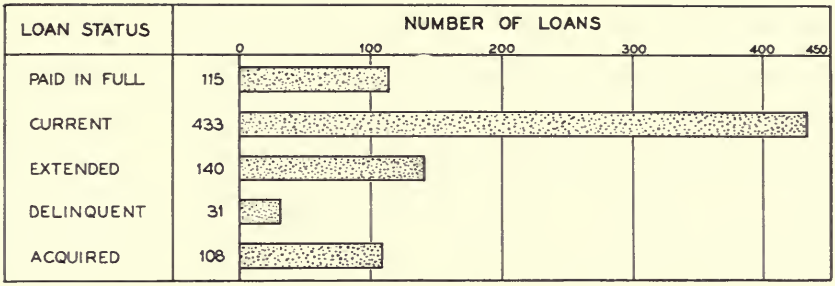

FIG. 2.—STATUS OF 827 ILLINOIS FARM LOANS ON APRIL 1, 1936

Thus of the 827 loans 34 percent were in such condition as to indicate difficulty: they were extended, delinquent, or foreclosed. Loss on the foreclosed loans amounted to $180,065 out of a total of $4,538,850 loaned on all farms, or to $39.67 per $1,000 loaned. Over a ten-year period such a loss ratio is equal to about .4 percent per annum.

The mortgaged tracts securing the loans in difficulty averaged larger than the tracts securing the successful loans. Many of the successful borrowers probably did not mortgage their entire farms. The average number of acres mortgaged per farm varied from 88 for loans paid in full to 164 for delinquent loans. The tracts mortgaged to secure the foreclosed loans averaged 116 acres, or 14 acres larger than the general average.

Undoubtedly the year when the loan was made influenced the appraised value per acre. Many of the unsuccessful loans were probably made early in the period studied. The loan ratio was 43 percent for the foreclosed loans and 36 percent for the loans that were paid in full, compared with an average of 38 percent for all the loans.

QUALITY OF SOIL AS A FACTOR IN SUCCESS OF A LOAN

Land appraisers commonly state that the soil is the most stable factor influencing land value and loan risk. Soil, topography, and other physical features are relatively permanent, and therefore can be systematically appraised. In the present investigation the productivity of the soils involved as security for the 827 loans studied was estimated in three ways: (1) by the use of soil ratings based on soil types; (2) on the basis of corn yields, as indicated in the applications for loans; and (3) on the basis of the appraised value of the land.

Descriptions and Groupings of the Soils

On the basis of productivity ratings, the soils of the mortgaged farms were classified as *good, intermediate,* or *inferior.* The rating for each farm was based on soil-type ratings established by the Department of Agronomy, University of Illinois. First the acreage of each soil type on each farm was determined from the soil maps, and was multiplied by the soil-productivity rating of that soil type. Then the sum of the products (acres × rating) was divided by the total number of acres in the farm to obtain the average rating for the farm.

Since the soil ratings of the mortgaged farms provided the most important basis for classifying the loans in this study, the characteristics of the three soil groups (good, intermediate, and inferior) are briefly described. Their general location and the location of the mortgaged farms are shown in Figs. 3 and 4. The locations of farms that had been acquired by the lenders or on which foreclosure was pending are shown in black, and the locations of farms with loans in force or paid in full on April 1, 1936, are shown in outline.

Good soils *(Productivity ratings 1, 2, and 3).* Soils of this group are characterized by dark surface and permeable noncalcareous subsoils. The major types are Drummer clay loam, Floyd silt loam, Catlin silt loam, Carrington silt loam, and Sidell silt loam. Drummer clay loam has a black clay loam surface; Floyd and Carrington silt loams have a dark brown silt loam surface; and Catlin and Sidell silt loams have a brown to a light brown silt loam surface.

These soils have no important differences in underdrainage that cannot be overcome by tiling, for tile draws readily in all of them. With the exception of Drummer clay loam, all are slightly acid, requiring an application of 1 to 3 tons of limestone per acre before sweet clover or alfalfa can be grown. All have an ample supply of nitrogen and phosphorus for the usual crops grown in the area.

With good management these soils produce excellent yields. Erosion is not a serious problem. The more rolling types, Sidell and Catlin silt loams, are subject to moderate sheet erosion, but this can be satisfactorily controlled by a good crop rotation.

Intermediate soils *(Productivity ratings 4, 5, 6, and 7).* The soils in the intermediate group are dissimilar in their characteristics but divide naturally into three subgroups.

Subgroup 1.—The first subgroup includes dark soils with slowly permeable subsoils. The more important types are Harrison silt loam, Edina silt and clay loams, and Shiloh silt and clay loams. These soils occur in a large area north of Tower Hill in Shelby county. The color of

the surface soils varies from a grayish brown to a grayish black. Natural drainage is poor, and tile draws very slowly. Erosion control presents no particular problems. These soils are somewhat more acid than those classified as good soils, and heavier applications of limestone (2 to 4 tons) are needed for alfalfa or sweet clover.

Yields of ordinary crops are satisfactory in general, and they can be materially raised by good soil management.

Subgroup II.—The second subgroup includes light-colored soils with permeable subsoils, for the most part Westville, Clinton, and Vance silt loams. These are the timber soils which are found in association with good soils in this area. The surface color and texture is brownish yellow-gray silt loam. The subsoil is a yellow silty clay or clay loam. Applications of about 3 tons of limestone are needed for alfalfa or sweet clovers. Since these soils are low in organic matter, crop yields are only fair unless applications of manure or of green manures are made at frequent intervals. Topography is rather rolling, and sheet erosion is likely to be a serious problem unless a good crop rotation is followed.

Subgroup III.—The third subgroup includes the dark alluvial or bottomland soils found along the Kaskaskia, Embarrass, and Little Wabash rivers. These soils need no applications of lime to grow clovers. In general the land is subject to overflow by high waters, but this hazard varies from farm to farm. If protected against overflow, these soils produce excellent crops without much special treatment.

Inferior soils *(Productivity ratings 8, 9, and 10).* The soils of this group divide into two subgroups: (I) those with low productivity caused by steep topography; and (II) those with low productivity due to a high degree of weathering, with the accompanying leaching of plant-food elements and the subsequent formation of an impervious claypan subsoil.

Subgroup I.—In the first subgroup is found principally Hickory gravelly loam and Hennepin gravelly loam. These soils are found only on topography too steep to permit cultivation. The low agricultural rating does not entirely reflect the best potential use of these soils, as they will produce fair timber and pasture. If they are overgrazed, erosion quickly destroys their value as pasture and impairs their ability to produce timber.

Subgroup II.—Soils of the second subgroup, principally claypan soils, are found on level land. Putnam, Oconee, Cisne, Hoyleton, Wynoose, and Bluford silt loams are the principal types. The surface soil varies from a brown-gray to a yellowish-gray silt loam. Permeability of the subsoil is very slow, and the level topography makes draining by open ditches difficult. Permeability is best where the slopes are greatest.

These soils are all very strongly acid, and require 3 to 5 tons of limestone per acre before sweet clover can be grown. Alfalfa can be grown only where the slope is sufficient to provide surface drainage. Satisfactory crop yields can be expected only after nitrogen, phosphorus, and potash have been added. Even with the best treatment, crop yields are but fair, for the claypan subsoil restricts development of the crops and causes them to be very sensitive to short rainless periods.

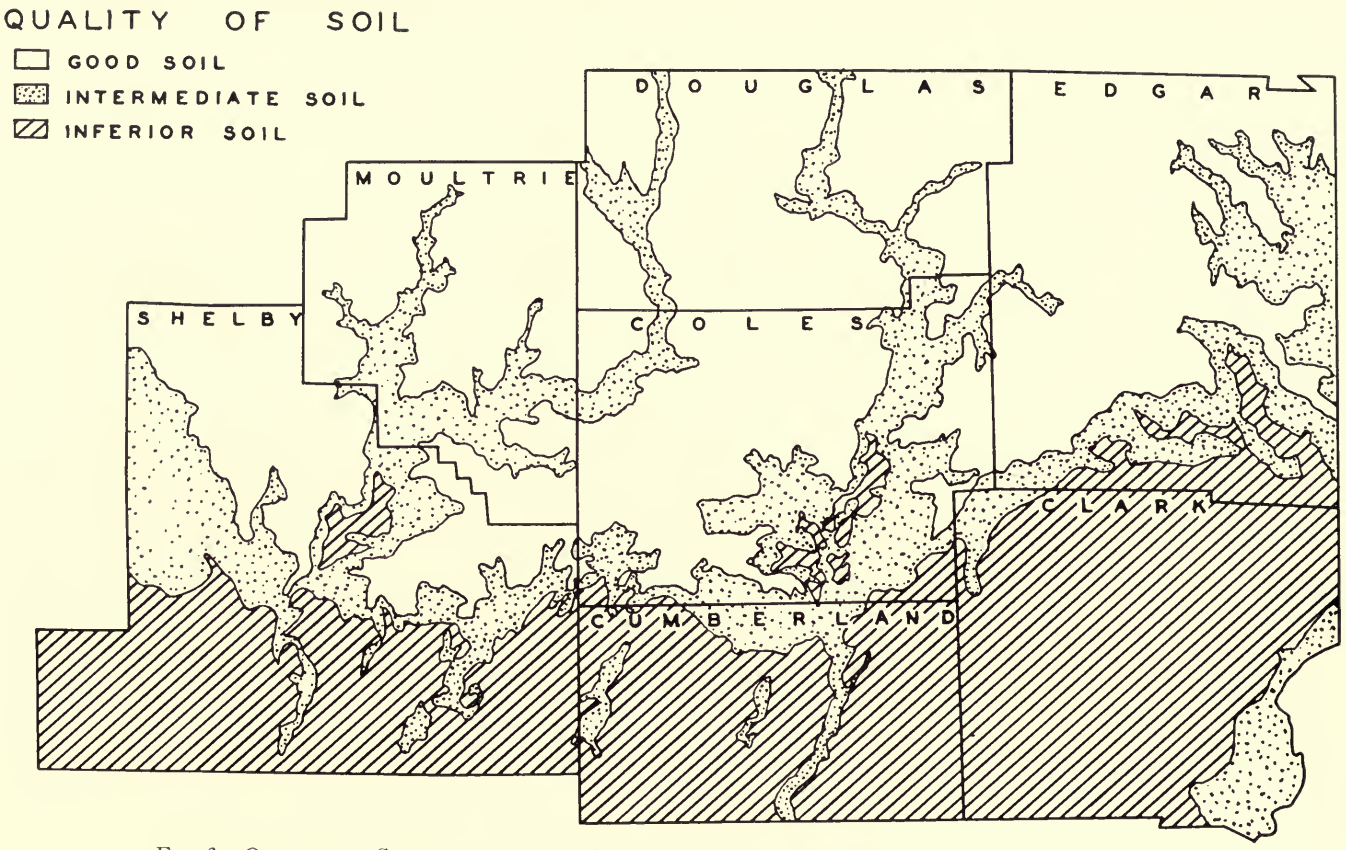

FIG. 3.—QUALITY OF SOILS IN THE AREA STUDIED, ACCORDING TO SOIL PRODUCTIVITY RATINGS BY THE DEPARTMENT OF AGRONOMY, UNIVERSITY OF ILLINOIS

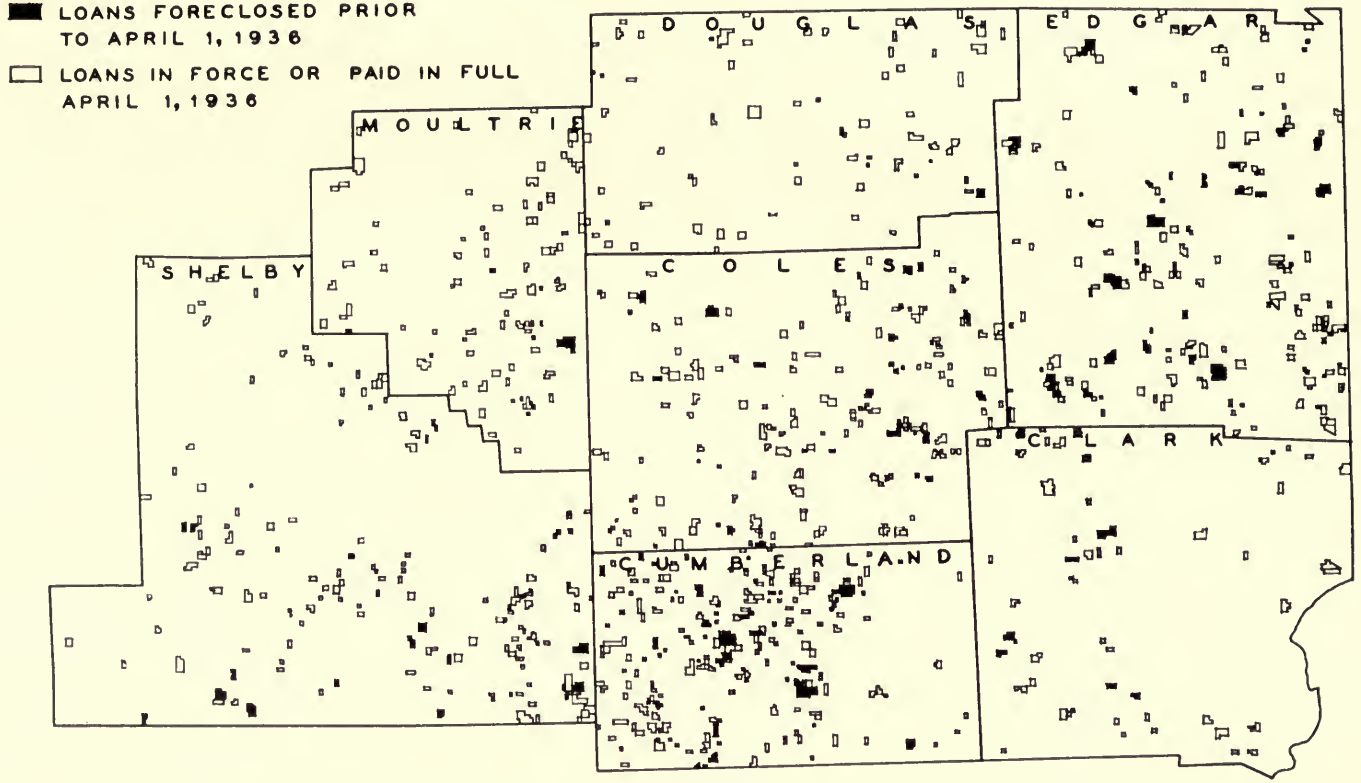

FIG. 4.—LOCATION OF THE FARMS MORTGAGED AS SECURITY FOR THE 827 LOANS

The runoff of surface water from these soils is usually high because of their very slow permeability. Erosion therefore is a serious problem even on 2- to 3-percent slopes, and the only method of controlling it is to keep a vegetative cover on the land most of the time.

Area Not Uniformly Desirable for Loans

Distribution of loans by counties. The counties in which farm lending experience was studied are not equally desirable as lending territory, and the 827 loans were not evenly divided among them (Table 3). Douglas is the only county not having large areas of inferior soils (Fig. 3), but only 7 percent of the 827 loans were located

TABLE 3.—DISTRIBUTION OF 827 FARM LOANS IN SEVEN ADJOINING EAST-CENTRAL ILLINOIS COUNTIES, MARCH, 1917, TO MAY, 1933

County	Number of loans	Percent of total loans	Amount loaned	Percent of total amount
Clark	46	5.6	$ 194 500	4.3
Coles	162	19.6	997 500	22.0
Cumberland	182	22.0	541 300	11.9
Douglas	59	7.1	583 300	12.9
Edgar	157	19.0	1 218 300	26.8
Moultrie	76	9.2	491 100	10.8
Shelby	145	17.5	512 850	11.3
Total	827	100.0	$4 538 850	100.0

there. Certain insurance companies had discouraged applications for loans in Clark and Cumberland counties, in the southern portion of Edgar and Shelby counties, and in the more broken areas of Coles and Moultrie counties. A representative of a large insurance company stated in an interview that his company made a large number of loans in Cumberland county prior to 1912, but since 1925 had gradually withdrawn its loans and in 1936 had no loans in force there.

On December 1, 1935, sixteen life-insurance companies had 1,404 farm loans outstanding in the seven-county area (Table 4). Of these, 376 were in Douglas county and only 7 were in Clark county and 55 in Cumberland county. The number of farms owned by these companies, amounting to 21 percent of the total number of farms in which they were interested as owners or mortgagees, indicated unfavorable lending experience in the area. In the counties having poorer soils a larger proportion of the loans had been foreclosed than in the counties having better soils.

Size of mortgaged tracts. The number of acres mortgaged per loan ranged from an average of 90 in Cumberland county to 126 in

TABLE 4.—MORTGAGES OUTSTANDING AND FARMS OWNED BY SIXTEEN LIFE-INSURANCE COMPANIES IN SEVEN ADJOINING EAST-CENTRAL ILLINOIS COUNTIES, DECEMBER 1, 1935[a]

County	Mortgages outstanding	Farms owned[b]	Total loans and farms owned	Percent of farms owned
Clark	7	5	12	41.7
Coles	271	57	328	17.4
Cumberland	55	22	77	28.6
Douglas	376	55	431	12.8
Edgar	164	34	198	17.2
Moultrie	192	51	243	21.0
Shelby	339	157	496	31.7
Total	1 404	381	1 785	21.3

[a]From annual reports of life-insurance companies filed with the State Department of Finance, Springfield, Illinois.

[b]"Owned farms," as used here, includes all farms owned, farms sold but title retained, and farms on which foreclosure was pending.

Douglas county and averaged 102 for the area (Table 5). The mortgaged tracts averaged smaller than the farms in the area. According to the 1935 U. S. Census, the average size of all farms in these counties ranged from 105 acres in Cumberland county to 169 acres in Douglas county and averaged 131 acres for the seven counties. This difference between average size of farms and of mortgaged tracts can be explained in part by the fact that some borrowers mortgaged only a portion of their acreage, but probably a more important explanation is the fact that a majority of the loans were on intermediate and inferior soils, where farms are usually smaller than on better soils.

It is worth while to point out the significance of this smaller size of farms. A large proportion of the farms located on poor soils in southern Illinois are small subsistence farms,[1] which consume much of their production and have very little cash income available for retirement of debts. Even tho some of the smaller farms are not subsistence farms, their small size means that the gross income must be small and that a larger proportion of the gross income must be used for expenses than on larger farms.

Appraised value per acre. Differences among counties were even more marked in appraised value per acre of the mortgaged land than in size of mortgaged tracts. The appraised value per acre was much lower in Cumberland, Clark, and Shelby counties than in the other four counties. According to the U. S. Census, the average value per acre of all farm land was $102 in Douglas and $32 in Cumberland county in 1935, and $339 in Douglas and $92 in Cumberland in 1920.

[1]Case, H. C. M., and Myers, K. H. Type-of-farming areas in Illinois. Ill. Agr. Exp. Sta. Bul. 403. 1934.

TABLE 5.—APPRAISED VALUE OF LAND, AND OTHER DATA ON 827 FARM LOANS IN SEVEN ADJOINING EAST-CENTRAL ILLINOIS COUNTIES; MARCH, 1917, TO MAY, 1933

County	Number of loans	Average acres mortgaged	Appraised value per acre	Amount loaned per acre	Loan ratio in percent
Clark	46	118	$ 90	$36	40
Coles	162	93	177	66	37
Cumberland	182	90	83	33	40
Douglas	59	126	213	79	37
Edgar	157	123	168	63	37
Moultrie	76	92	173	70	40
Shelby	145	95	96	37	39
Total or average	827	102	$141	$54	39

The average appraised value for 182 loans in Cumberland county was thus only $9 less than the 1920 Census average value of all land in the county. In other words, the farms on which loans were made in Cumberland county were appraised at figures close to the peak in value. In Douglas county the 59 farms on which loans were made were appraised at less than two-thirds of the 1920 Census value, suggesting that loans there were made after the readjustment in values was under way.

Ratio of loan to appraised value. The amount loaned per acre was largest in Douglas county and smallest in Cumberland county. The debt load, however, as indicated by the loan ratio (the ratio of debt to appraised value) was the greatest (40 percent) in Cumberland, Clark, and Moultrie counties, and was lowest (37 percent) in Douglas, Coles, and Edgar counties, which have the better soils. Undoubtedly the larger percentage of appraised value loaned in the counties having the lower-producing soils was an important reason for loan difficulties in such areas. The higher ratios in the poorer counties indicate pressure to obtain loans of a certain minimum size—probably to pay off creditors.

Loans Most Successful on Good Soils

Success as related to soil rating. The 827 loans included in this study were distributed as follows on the basis of the soil ratings of the mortgaged tracts: 275, or 33 percent were secured by farms on good soils; 325, or 39 percent, by farms on intermediate soils; and 227, or 28 percent, by farms on inferior soils (Table 6 and Fig. 5). Of the 108 foreclosed loans 23, or 21 percent, were on good soils; 38, or 35 percent, were on intermediate soils; and 47, or 44 percent, were on inferior soils.

Loans were more successfully carried when secured by good soils

TABLE 6.—DISTRIBUTION OF 827 ILLINOIS FARM LOANS ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND STATUS OF LOANS ON APRIL 1, 1936

Status of loan	Loans on good soils		Loans on intermediate soils		Loans on inferior soils	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Paid in full	38	13.8	42	12.9	35	15.4
Current	153	55.6	167	51.4	113	49.8
Extended	47	17.1	65	20.0	28	12.3
Delinquent	14	5.1	13	4.0	4	1.8
Foreclosed	23	8.4	38	11.7	47	20.7
Total	275	100.0	325	100.0	227	100.0

than when secured by poorer soils. Only 8 percent of the loans on good soils were foreclosed, compared with 12 percent of the 325 farms on intermediate soils, and 21 percent of the 227 farms on inferior soils. The total of the delinquent loans and the loans resulting in loss of farm by the owner was only 14 percent of the total loans on good soils, whereas on inferior soils it was 22 percent. Also, principal and

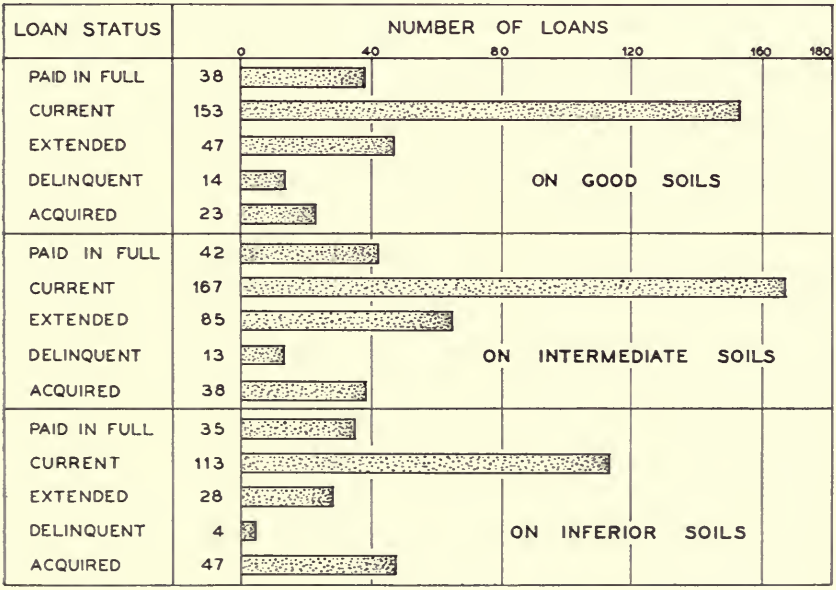

FIG. 5.—DISTRIBUTION OF 827 ILLINOIS FARM LOANS ACCORDING TO STATUS ON APRIL 1, 1936, AND PRODUCTIVITY OF MORTGAGED TRACTS

TABLE 7.—NET LOSS ON FORECLOSED LOANS PER $1,000 LOANED, LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT

Soil productivity	Number of loans	Total amount loaned	Number of loans foreclosed	Total loss on loans foreclosed	Net loss per $1,000 loaned
Good	275	$2 426 300	23	$ 39 070	$ 16.10
Intermediate	325	1 385 550	38	63 719	45.99
Inferior	227	727 000	47	77 276	106.29
All loans	827	$4 538 850	108	$180 065	$ 39.67

interest payments were extended on a larger proportion of the loans on good and intermediate soils than on loans on inferior soils. The paid-in-full loans were divided approximately equally among farms in the different soils classes: 15 percent were made on inferior soils, 14 percent on good soils, and 13 percent on intermediate soils. Of the loans on good soils 56 percent were current, whereas on inferior soils 50 percent were current.

The net losses on foreclosed loans on good soils were $16.10 for each $1,000 loaned on all farms on such soils; and on intermediate and inferior soils the losses were $45.99 and $106.29 respectively (Table 7). The loss incurred on one farm accounted very largely for the $16.10 net loss per $1,000 loaned on the good soils.

When the 827 loans were grouped according to the productivity of the land by which each was secured and the status of the loan on April 1, 1936, the average amounts loaned ranged from 35 to 44 percent of the appraised value of the land (Table 8). In each soil group the loan ratios were lowest for the paid-in-full loans and highest for the foreclosed loans. Also, the farms that had secured the paid-in-full loans had the highest appraised value per acre in each soil-productivity group except the good soils, and the farms securing the loans on which the current mortgage obligations had been fully met had the lowest appraised value per acre. The paid-in-full loans were probably on some of the better farms in each soil group. The amount loaned per acre was lowest for the farms keeping up with their current obligations and highest for the foreclosed farms.

Success as related to corn yields. Yield of corn should indicate soil productivity. For 668 of the 827 loans studied, the appraisers estimated the average yield per acre of corn on the mortgaged farms. Facts concerning these 668 loans grouped by the productivity rating of the soil and the corn yield per acre are summarized in Table 9.

Within each soil group the appraised value per acre and the amount

TABLE 8.—DATA ON 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND STATUS OF LOANS ON APRIL 1, 1936

Loan status	Number of loans	Average acres mortgaged	Appraised value of land per acre	Amount loaned per acre	Loan ratio in percent
Loans on good soils					
Paid in full	38	91	$229	$79	35
Current	153	107	193	72	38
Extended	47	101	207	90	43
Delinquent	14	211	256	88	35
Foreclosed	23	134	214	92	44
Total or average	275	111	$207	$79	39
Loans on intermediate soils					
Paid in full	42	87	$144	$47	36
Current	167	94	107	39	37
Extended	65	99	125	50	40
Delinquent	13	132	113	43	38
Foreclosed	38	109	116	54	43
Total or average	325	97	$117	$44	38
Loans on inferior soils					
Paid in full	35	86	$102	$38	37
Current	113	95	75	29	38
Extended	28	92	85	35	41
Delinquent	4	108	89	34	38
Foreclosed	47	112	89	38	43
Total or average	227	97	$ 83	$33	39

loaned per acre varied directly with the estimated average corn yield per acre. It is evident, therefore, that the appraised value of the land was based to a considerable extent on the estimated yield of the corn crop.

On good soils the percentage of foreclosures was higher where estimated yields were more than 45 bushels per acre than where they were below that figure; on inferior soils the percentage was higher where the estimated yields were above 40 bushels; but on intermediate soils foreclosures were slightly heavier on farms with low estimated yields. Probably on the good and the inferior soils corn yields on some of the foreclosed farms were overestimated; on the intermediate soils the problem is confused by the variety of soils included.

To determine how the period when the loan was made was related to the estimates of corn yields, the loans were grouped as shown in Table 10. For each soil group the estimated corn yields averaged higher in 1921-1924 than in 1917-1920, and lower in each succeeding period after 1924. The estimates made during the later periods agreed

TABLE 9.—DATA ON 668 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND CORN YIELD PER ACRE

Corn yield per acre, bushels	Number of loans	Acres mortgaged per farm	Appraised value of land per acre	Amount loaned per acre	Percent of loans foreclosed
All loans					
25 or less	94	94	73	26	13.8
26–30	86	93	89	36	20.9
31–35	80	118	103	41	16.2
36–40	171	104	139	56	8.2
41–45	83	102	174	68	8.4
46–50	115	105	180	69	18.3
51 or more	39	96	200	78	10.3
Total or average	668	102	134	52	13.5
Loans on good soils					
25 or less	2	42	244	59	0
26–30	0	...	...	..	....
31–35	8	118	127	42	0
36–40	66	111	175	71	4.5
41–45	53	108	200	79	3.8
46–50	64	106	211	84	15.6
51 or more	21	91	245	96	14.3
Total or average	214	106	196	78	8.4
Loans on intermediate soils					
25 or less	20	86	82	31	15.0
26–30	45	92	91	36	15.6
31–35	54	127	102	41	16.7
36–40	84	97	119	47	9.5
41–45	25	85	125	44	12.0
46–50	42	99	150	51	14.3
51 or more	14	109	157	63	0
Total or average	284	101	115	44	12.7
Loans on inferior soils					
25 or less	72	97	68	24	13.9
26–30	41	94	86	35	26.8
31–35	18	90	97	38	22.2
36–40	21	110	99	38	14.3
41–45	5	147	120	52	80.0
46–50	9	118	99	40	55.6
51 or more	4	78	133	44	25.0
Total or average	170	99	85	33	22.4

more closely with the estimates made by the county AAA committeemen in 1935 than did the earlier estimates.

In each corn-yield group the foreclosed farms were valued higher than the other farms. This supports the view that overvaluation was a reason for a considerable part of the foreclosures.

Success as related to appraised value of land. Appraised value of land should correlate with soil productivity, even tho appraised value is influenced also by improvements, location, markets, roads,

TABLE 10.—YIELD OF CORN AND APPRAISED VALUE OF MORTGAGED TRACTS, 668 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF LAND AND PERIOD WHEN LOANS WERE MADE

Period when loan was made	Loans on good soils			Loans on intermediate soils			Loans on inferior soils		
	Number	Yield per acre	Value of land per acre	Number	Yield per acre	Value of land per acre	Number	Yield per acre	Value of land per acre
		bu.			*bu.*			*bu.*	
1917–1920	13	44.7	$236	48	36.3	$138	42	31.8	$102
1921–1924	19	49.7	235	58	40.5	113	52	33.5	98
1925–1928	97	46.2	209	146	39.5	116	53	29.1	74
1929–May, 1933	85	43.7	172	32	36.3	97	23	25.1	62
Total	214	....	$196	284	....	$115	170	....	$ 85

and other factors. The distribution of loans studied on the basis of soil-productivity ratings and appraised value per acre is shown in Table 11. In reviewing these data it should be kept in mind that the date when the loan was made influenced the appraised value, since the trend of land values was downward from 1919 to 1933.

Fifty-eight percent of the loans were on land appraised at less than $150 per acre. Of the farms on good soils, 61 percent were appraised at $200 or more per acre; of those on intermediate soils, 58 percent at between $100 and $200 per acre; and of those on inferior soils, 68 percent at less than $100 per acre.

Foreclosure percentages.—A somewhat higher percentage of loans on farms appraised below $150 an acre were foreclosed than of those appraised at higher figures (Table 11), chiefly because more of the foreclosed loans were on inferior soils, which were appraised lower on the average than the better soils. But on both good and inferior soils the foreclosure ratio was higher for farms appraised at the higher values, the dividing point for good soils being $200 and for inferior soils $100. On the other hand, on intermediate soils the foreclosure ratio was slightly higher when appraised values were below $150. This probably reflects the variety of conditions included in the intermediate group.

Net losses.—Net losses on foreclosed farms having low appraised values were higher in total than on those having higher appraised values, because more of the farms on inferior soils were foreclosed (Table 12). But when the loans are classified according to the productivity of the mortgaged tracts, the losses on farms having a high ap-

TABLE 11.—NUMBERS AND PERCENTAGES OF FORECLOSURES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY AND APPRAISED VALUE OF MORTGAGED TRACT

Appraised value per acre	Loans		Foreclosed loans	
	Number	Percent of group	Number	Percent of group
All loans				
Less than $50	18	2.2	0	0
$ 50– 99	249	30.1	40	16.1
100–149	208	25.2	34	16.3
150–199	155	18.7	14	9.0
200–249	134	16.2	16	14.8
250 or more	63	7.6	4	6.3
Total	827	100.0	108	13.1
Loans on good soils				
$ 50–199	108	39.3	7	6.5
200 or more	167	60.7	16	9.6
Total	275	100.0	23	8.4
Loans on intermediate soils				
Less than $150	233	71.7	28	12.0
$150 or more	92	28.3	10	10.9
Total	325	100.0	38	11.7
Loans on inferior soils				
Less than $100	154	67.8	27	17.5
$100 or more	73	32.2	20	27.4
Total	227	100.0	47	20.7

praised value are seen to have been higher than on the farms having a low appraised value, both in the good-soil group (except for one farm) and in the inferior-soil group. No consistent differences were evident in the intermediate-soil group.

TABLE 12.—NET LOSS PER $1,000 LOANED ON FARMS GROUPED ACCORDING TO PRODUCTIVITY AND APPRAISED VALUE OF MORTGAGED TRACT

Appraised value per acre	Loss on all loans	Loss on good soils	Loss on intermediate soils	Loss on inferior soils
Less than $50	.....	.....	.....	.....
$ 50– 99	$60.73	$210.37	$22.99	$ 91.97
100– 149	78.41	.....	77.09	126.56
150– 199	24.21	14.73	17.42	145.48
200– 249	20.30	15.28	63.81	.....
250 or more	18.88	19.77	.....	.....
Average	$39.67	$16.10	$45.99	$106.29

TIME WHEN LOANS WERE MADE AS A FACTOR IN THEIR SUCCESS

Periods When Loans Were Made

The number of loans was not adequate to warrant a study of lending experience by years. The analysis was therefore based on four periods of approximately four years each: 1917-1920; 1921-1924; 1925-1928; 1929 to May 1, 1933 (Tables 13 and 14). It will be remembered that land values rose to a peak in 1920, declined sharply to 1923, gradually to 1929, and again sharply to 1933 (Fig. 6). These trends in values reflected the prices of farm products.

Of 827 loans 18 percent were made in 1917-1920; 21 percent in 1921-1924; 42 percent in 1925-1928; and 19 percent in 1929 to May, 1933. Of the loans on inferior soils 63 percent were made before 1925, whereas 42 percent of those on intermediate and 16 percent of those on good soils were made before that date.

Before 1920 credit was readily available to farmers on good soils from individuals, banks, and insurance companies; less was available to farmers on inferior soils. Consequently the farmers on inferior soils turned to the federal land banks for credit. In the years that followed 1920, farmers on good soils began to experience more difficulty in meeting payments on their loans, and it became harder to

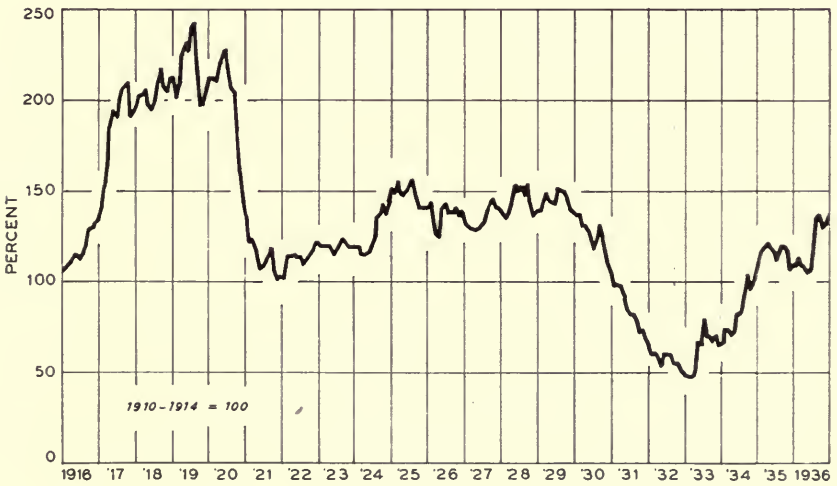

FIG. 6.—INDEX OF PRICES RECEIVED BY ILLINOIS FARMERS FOR FARM PRODUCTS, 1916-1936 (*U.S.D.A.*)

TABLE 13.—DATA ON 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND PERIOD WHEN LOAN WAS MADE

Period when loan was made	Number of loans	Percent of group	Average acres mortgaged	Appraised value of land per acre	Amount loaned per acre	Loans foreclosed	Percent of loans foreclosed	Loan ratio in percent	Loss per $1,000 loaned
All loans									
1917–1920	152	18.4	77	$132	$54	29	19.1	41	$77.40
1921–1924	170	20.6	90	119	44	30	17.6	39	85.54
1925–1928	351	42.4	107	151	57	44	12.5	39	31.54
1929–May, 1933	154	18.6	128	143	55	5	3.2	37	5.46
Total or average	827	100.0	102	$141	$54	108	13.2	39	$39.67
Loans on good soils									
1917–1920	17	6.2	75	$246	$105	3	17.6	44	$ 61.79
1921–1924	28	10.2	79	237	77	0	0	34	0
1925–1928	133	48.3	110	224	86	18	13.5	39	21.93
1929–May, 1933	97	35.3	129	178	69	2	2.1	38	3.74
Total or average	275	100.0	111	$207	$79	23	8.4	39	$16.10
Loans on intermediate soils									
1917–1920	69	21.2	76	$137	$54	14	20.3	40	$92.06
1921–1924	66	20.3	79	114	45	8	12.1	40	51.10
1925–1928	157	48.3	107	117	42	16	10.2	37	35.96
1929–May, 1933	33	10.2	132	96	36	0	0	36	0
Total or average	325	100.0	97	$117	$44	38	11.7	38	$45.99
Loans on inferior soils									
1917–1920	66	29.0	79	$ 99	$40	12	18.2	41	$ 67.44
1921–1924	76	33.5	102	88	35	22	28.9	39	169.97
1925–1928	61	26.9	102	74	30	10	16.4	40	80.10
1929–May, 1933	24	10.6	119	62	23	3	12.5	36	41.05
Total or average	227	100.0	97	$ 83	$33	47	20.7	39	$106.29

TABLE 14.—STATUS OF 827 ILLINOIS FARM LOANS ON APRIL 1, 1936, GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND PERIOD WHEN LOAN WAS MADE

Period when loan was made	Number of loans	Percent of loans in following status groups—				
		Paid in full	Current	Extended	Delinquent	Foreclosed
Loans on good soils						
1917–1920	17	41	18	23	0	18
1921–1924	28	43	46	7	4	0
1925–1928	133	9	50	20	7	14
1929–May, 1933	97	6	73	15	4	2
Loans on intermediate soils						
1917–1920	69	29	26	22	3	20
1921–1924	66	17	60	8	3	12
1925–1928	157	7	52	25	6	10
1929–May, 1933	33	3	82	15	0	0
Loans on inferior soils						
1917–1920	66	39	32	11	0	18
1921–1924	76	11	49	10	1	29
1925–1928	61	2	62	18	2	16
1929–May, 1933	24	0	71	8	8	13

secure renewals from lending agencies. After the Federal Farm Loan Act was amended in 1923, to increase the maximum loan from $10,000 to $25,000, many loans were transferred to the federal land banks to obtain the lower interest rate and the amortized method of payment under the land-bank loan.

Foreclosures Highest Among Early Loans

Of the 152 loans made during 1917-1920, about 19 percent were later foreclosed. Of the 154 loans made after 1929, only 3 percent were foreclosed. In each soil group the percentage of foreclosure was smaller for loans made after 1929 than for loans made before 1921. For loans made in 1917-1920 the record was as follows: out of 17 loans made on good soils, 18 per cent were foreclosed; of 69 loans made on intermediate soils, 20 percent were foreclosed; of 66 loans made on inferior soils, 18 percent were foreclosed. Of the loans made after 1929, only 2 percent of those made on good soils and 12 percent of those made on inferior soils terminated in foreclosure. During the first of these four-year periods land values were rising, and this condition led to mistakes in judgment in appraising the farms.

In each soil group the appraised value of the farm, the amount loaned per acre, and the loan ratio all averaged highest for loans made during the first period, 1917-1920 (Table 13). These facts largely explain the higher ratio of foreclosures on loans made in this period.

Mortgaged Tracts Larger Among Later Loans

The acreage mortgaged per farm averaged larger in the later years. Because of declining land valuations during these years, many borrowers were forced to mortgage their entire farms to secure the loans they desired, whereas during the earlier period, when land valuations were higher, fewer acres were required to secure a loan of a given size. Also, during the later years more loans were made in counties where farms were larger, and the trend in general was toward larger farms.

Appraised Value and Amount Loaned Highest Among Early Loans

In each soil group the appraised value and amount loaned averaged less from period to period, reflecting the downward trend in land value. The net loss on foreclosed farms per $1,000 loaned was $77.40 on all loans made in 1917-1920 and $5.46 on those made in 1929 to May, 1933. The net loss on foreclosed farms was greatest on those for which loans were made in 1921-1924, $85.54 per $1,000 loaned during that period. As was noted before (page 472), the greatest losses occurred on loans made on farms having inferior soils; and in those areas having inferior soils more of the loans were made before 1925.

Period When Foreclosures Were Made

Regardless of the period in which the loans were made, most of the foreclosures occurred in 1933-1935 (Table 15). Many borrowers undoubtedly became delinquent as a result of low prices in 1932 and 1933, and, furthermore, crops in the area studied were poor in 1933, 1934, and 1935.

The ability to pay debts depends of course upon income; and crop yields and prices of farm products are the principal factors causing year-to-year variations in farm incomes in a region like that studied in this investigation. Income varies not only from year to year, however, but also from area to area, depending on the quality of the soil. These variations are strikingly shown in data for the years 1925 to 1935, taken from accounts kept by farmers in cooperation with the Department of Agricultural Economics, University of Illinois. Because

TABLE 15.—NUMBER OF LOANS FORECLOSED IN DIFFERENT YEARS, AND PERIODS WHEN LOANS WERE MADE, 827 ILLINOIS FARM LOANS

Year in which foreclosed	Number of loans foreclosed when loans were made in—				
	1917–1920	1921–1924	1925–1928	1929–May 1933	Total
1926	1	..	..	..	1
1927	2	..	..	..	2
1928	0	..	..	..	0
1929	0	2	..	..	2
1930	2	2	1	..	5
1931	2	2	2	..	6
1932	3	4	1	..	8
1933	3	6	13	1	23
1934	10	6	5	2	23
1935	4	6	14	0	24
1936	2	2	8	2	14
Total foreclosed	29	30	44	5	108
Total loans	152	170	351	154	827

not enough records from the seven counties studied were available to furnish reliable averages, data from two farming-type areas (Fig. 2), similar in general to the area studied, were chosen. Area 4 is similar to the better parts of the seven-county area, and Area 7 to the poorer parts. Most of the account-keeping farms in Area 4 are on good soils, and those in Area 7 are on intermediate and inferior soils. The net income per acre, after deducting an allowance for operator and family labor, was larger each year in Area 4 than in Area 7 (Table 16).

If interest on capital other than land and buildings is deducted from these net incomes, the remainder is the income earned on land and buildings. If the difference is capitalized, the earning value of the real estate may be computed. Such computed values for the land and buildings based on a capitalization rate of 5 percent are given in Table 16.

In Area 4 the value of the land so computed fluctuated from $171 per acre in 1925 to $11 in 1932. In Area 7 it varied from $46 per acre in 1935 to minus $16 in both 1929 and 1931. During four of the ten years the average account-keeping farmer in Area 7 failed to earn enough to pay any interest on investment and presumably could make no payments on debts out of current earnings. Farmers in the latter area obviously have a low capacity to pay debts.

The foregoing figures are of course averages of earnings of individual farmers. Even in the poor years some farmers had fair earnings. Presumably it is such farmers who buy and pay for farms.

TABLE 16.—COMPUTED VALUE OF LAND AND BUILDINGS PER ACRE AND NET INCOME PER ACRE ON FARMS IN TWO AREAS COOPERATING IN THE UNIVERSITY OF ILLINOIS ACCOUNT-KEEPING PROJECT, 1925-1935

Year	Farming-Type Area 4			Farming-Type Area 7		
	Number of records	Net income per acre	Value of land and buildings per acre	Number of records	Net income per acre	Value of land and buildings per acre
1925	224	$10.70	$171	37	$2.90	$37
1926	284	8.06	122	0	....	..
1927	273	6.65	96	29	2.95	38
1928	262	9.14	146	90	.59	−15
1929	262	9.60	152	46	.34	−16
1930	381	7.19	103	66	1.52	3
1931	291	2.65	20	92	.31	−16
1932	185	1.90	11	69	.68	−6
1933	206	3.33	44	64	1.60	14
1934	314	6.67	109	43	1.72	19
1935	448	5.50	84	72	3.38	46
Averages						
1925–1930	281	8.56	132	45	1.66	9
1931–1935	289	4.01	54	68	1.54	11

LOAN RATIO AS A FACTOR IN SUCCESS OF A LOAN

The loan ratio (amount loaned, as a percentage of appraised value of land) was calculated for each loan studied. Altho the ratios varied from 8 to 75 percent, in most cases they were between 40 and 50 percent (Table 17). These limits reflect the loan policies of the lending agencies.

On inferior soils the loan ratios were 40 percent or more for nearly 60 percent of the loans, while on good soils only half the loans had loan ratios that high. This explains in part why larger losses were incurred on the poorer soils: debts were higher in relation to value of land.

In all soil groups, but especially on inferior soils, foreclosure ratios and losses were higher where the loan ratios were higher. The net loss on foreclosed farms per $1,000 loaned on all farms where loan ratios were 20 to 29 percent was only $3.47, but it was $57 where ratios were 40 percent or more. On inferior soils the loan ratios had to be less than 30 percent for lending to be successful under 1917-1933 conditions; when the loan ratios were over 40 percent, the foreclosure ratio was 30 percent.

TABLE 17.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND LOAN RATIO

Loan ratio, percent	Number of loans	Percent of total loans	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
Less than 20	26	3.2	0	0	$ 0
20–29	87	10.5	1	1.1	3.47
30–39	268	32.4	24	9.0	18.35
40 or more	446	53.9	83	18.6	57.00
Total	827	100.0	108	13.2	$39.67
Loans on good soils					
Less than 20	11	4.0	0	0	$ 0
20–29	27	9.8	0	0	0
30–39	97	35.3	9	9.3	7.95
40 or more	140	50.9	14	10.0	24.28
Total	275	100.0	23	8.4	$16.10
Loans on intermediate soils					
Less than 20	12	3.7	0	0	$ 0
20–29	35	10.8	1	2.9	9.69
30–39	104	32.0	8	7.7	15.75
40 or more	174	53.5	29	16.7	65.92
Total	325	100.0	38	11.7	$45.99
Loans on inferior soils					
Less than 20	3	1.3	0	0	$ 0
20–29	25	11.0	0	0	0
30–39	67	29.5	7	10.4	77.57
40 or more	132	58.2	40	30.3	127.75
Total	227	100.0	47	20.7	$106.29

TOPOGRAPHY AS A FACTOR IN SUCCESS OF A LOAN

Loans on Rough or Rolling Land Least Successful

Over three-fourths of the loans studied were on farms with level to undulating topography (Table 18). Practically all of the farms having good soils were level to undulating, while approximately one-fourth of those on intermediate or inferior soils had gently rolling to rough topography. On the intermediate and inferior soils, foreclosure percentages were highest on the gently rolling and rolling soils. More than one-third of the farms with inferior soils and rolling topography were acquired. The net loss per $1,000 loaned on all farms on the more rolling topography was larger than on level land, but on the inferior soils the loss was a little heavier on level than on the undulating land, probably because the level land is somewhat more difficult to drain.

TABLE 18.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY AND TOPOGRAPHY OF MORTGAGED TRACT

Topography	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Net loss per $1,000 loaned
All loans					
Level	404	48.9	42	10.4	$21.86
Undulating	250	30.2	32	12.8	50.61
Gently rolling	100	12.1	22	22.0	91.40
Rolling	62	7.5	12	19.4	102.35
Rough	1	.1	0	0	0
Unknown	10	1.2	0	0	0
Total	827	100.0	108	13.1	$39.67
Loans on good soils					
Level	213	77.5	20	9.4	$16.63
Undulating	48	17.5	3	6.3	17.98
Gently rolling	7	2.5	0	0	0
Rolling	5	1.8	0	0	0
Rough	0	0	0	0	0
Unknown	2	.7	0	0	0
Total	275	100.0	23	8.4	$16.10
Loans on intermediate soils					
Level	108	33.3	5	4.6	$12.01
Undulating	132	40.6	17	12.9	69.17
Gently Rolling	55	16.9	14	25.5	75.84
Rolling	28	8.6	2	7.1	16.83
Rough	0	0	0	0	0
Unknown	2	.6	0	0	0
Total	325	100.0	38	11.7	$45.99
Loans on inferior soils					
Level	83	36.6	17	20.5	$75.76
Undulating	70	30.8	12	17.1	67.69
Gently rolling	38	16.8	8	21.1	165.14
Rolling	29	12.8	10	34.5	215.75
Rough	1	.4	0	0	0
Unknown	6	2.6	0	0	0
Total	227	100.0	47	20.7	$106.29

Even tho rolling and rough land is usually of inferior productive capacity, loan ratios were higher on the rougher lands. The amount loaned on this land was obviously too high, for it was subject to destructive erosion if not properly farmed, thus hastening the day when it could no longer offer ample security for a loan.

No Satisfactory Information on Drainage

No satisfactory information was available concerning the drainage on these farms. The appraisers reported that 93 percent had satisfactory drainage. It is generally known, however, that drainage is

often unsatisfactory on soils having tight subsoils; and since many of these farms were on soils having tight or impervious subsoils, it is probable that there were more drainage difficulties than were reported by the appraisers. If the drainage condition had been properly described, it is probable that a closer relationship between foreclosure and drainage would be indicated, since crop yields are greatly influenced by drainage.

TRANSPORTATION FACILITIES AS A FACTOR IN SUCCESS OF A LOAN

Type of Road Not of Primary Importance

Farmers located on hard-surfaced roads passable thruout the year have an advantage over those located on frequently impassable dirt roads both in marketing and off-the-farm employment. Location on a hard-surfaced road, or near an all-weather road, is particularly important to farmers who are dependent on regular, daily outlets for such products as whole milk. Nevertheless, in the area studied there were few opportunities for outside employment, and factors other than roads were of primary importance in determining value of land.

About three-fourths of the 827 loans studied were made on farms located, at the time the loans were applied for, on oiled or dirt roads (Table 19). Of the farms on good soils one-third were located on gravel, rock, or hard-surfaced roads. More than 80 percent of the farms on inferior soils were on dirt roads. In many instances all-weather roads have been built since the loans were applied for, but the majority of the farms on the inferior soils were still located on unimproved roads at the time this study was made.

Of a total of 488 loans made on farms located on dirt roads, 17 percent were foreclosed. Of 47 loans on farms located on a hard road, only one was foreclosed. Among the farms on good soils and those on inferior soils, the percentage of farms on improved roads that were foreclosed was smaller than the percentage of those on other types of roads.

The net losses per $1,000 loaned on all farms located as follows were: On farms on dirt roads, $69.63; on farms on oiled roads, $4.08; on farms on gravel-rock roads, $27.43; on farms on hard-surfaced roads, $1.54; and on farms on all types together, $39.67. On farms on good and on intermediate soils the net losses were lowest where the farms were located on hard-surfaced roads and highest where they were on dirt roads. Among farms on inferior soils, the

TABLE 19.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND TYPE OF ROAD ON WHICH TRACT IS LOCATED

Type of road	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
Private	2	.2	0	0	$ 0
Dirt	488	59.0	85	17.4	69.63
Oiled dirt	113	13.7	6	5.3	4.08
Gravel and rock	157	19.0	16	10.2	27.43
Hard surface	47	5.7	1	2.1	1.54
Unknown	20	2.4	0	0	0
Total	827	100.0	108	13.1	$ 39.67
Loans on good soils					
Private	2	.7	0	0	$ 0
Dirt	94	34.2	11	11.7	30.82
Oiled dirt	80	29.1	5	6.2	2.19
Gravel and rock	65	23.6	7	10.8	23.62
Hard surface	26	9.5	0	0	0
Unknown	8	2.9	0	0	0
Total	275	100.0	23	8.4	$ 16.10
Loans on intermediate soils					
Dirt	207	63.7	30	14.5	$ 67.21
Oiled dirt	26	8.0	1	3.8	15.58
Gravel and rock	72	22.2	6	8.3	15.00
Hard surface	14	4.3	1	7.1	7.86
Unknown	6	1.8	0	0	0
Total	325	100.0	38	11.7	$ 45.99
Loans on inferior soils					
Dirt	187	82.4	44	23.5	$119.91
Oiled dirt	7	3.1	0	0	0
Gravel and rock	20	8.8	3	15.0	128.12
Hard surface	7	3.1	0	0	0
Unknown	6	2.6	0	0	0
Total	227	100.0	47	20.7	$106.29

losses were highest on those located on gravel and rock roads. This suggests that location value of farms on such soils was overestimated by the appraisers.

In a study of loan experience in New York, F. F. Hill[1] found that of the farms located within 2 miles of a market 2.1 percent of the loans on those on hard-surfaced roads and 3.5 percent of those on dirt roads were foreclosed. Of the loans on farms located six miles or more from market, 3.5 percent of those on hard-surfaced roads and 6.8 percent of those on dirt roads were foreclosed.

[1]Hill, F. F. An analysis of the loaning operations of the Federal Land Bank of Springfield from its organization in March, 1917, to May 31, 1933. N. Y. (Cornell) Agr. Exp. Sta. Bul. 549. p. 35.

Numerous studies have been made showing the relationship of type of roads to value of land. C. L. Stewart[1] summarized these as follows:

"It can be regarded as almost obvious that the effects which improved roads have on farm values in one section of the United States do not necessarily hold good for the other sections of the country. There is reason to suppose that these effects differ from one part of the state or farming-type area to another. There is some basis for believing that road distance and road type have not been critical factors in determining net rents and selling valuations in areas in which grain, hog, and beef cattle production predominate. There is basis for believing that road type and road distance are of critical importance in determining use of land and rents and valuations in areas producing regular market supplies of milk, eggs, and horticultural products."

Nearness to Shipping Point Had Some Advantage

More than one-fourth of the farms on which loans were made were less than 2 miles from a shipping point, approximately 40 percent were from 2 to 3.9 miles, and only about 10 percent were more than 6 miles (Table 20). In each soil group the distribution was approximately the same, altho somewhat more of the farms on inferior soils were farther from the shipping points. On good and on intermediate soils the percentage of farms foreclosed increased with distance from shipping point up to 6 miles, but on inferior soils there was no apparent relationship. So far as this difference is anything but accidental, it reflects prevalence of subsistence farming with little marketing done on the poorer soils.

The net loss per $1,000 loaned increased with distance from shipping point. It would have been desirable to sort the loans further on the basis of the type of road, if there had been a larger number of loans.

FARM ORGANIZATION AS A FACTOR IN SUCCESS OF A LOAN

Success as Related to Size of Mortgaged Tracts

Of the 827 loans studied 23 percent were made on tracts of less than 60 acres and slightly more than one-third on tracts of 60 to 99 acres, including, of course, the 80-acre tracts (Table 21). Only 78 loans were made on tracts larger than 180 acres. The fact that borrowers did not mortgage their entire farms to secure a loan influenced

[1]Stewart, C. L. Improved Roads and Land Values. Ill. Engin. Exp. Sta. Circ. 27. 1936.

TABLE 20.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND NUMBER OF MILES FROM MORTGAGED TRACT TO SHIPPING POINT

Distance to shipping point, miles	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
Less than 2	208	25.1	24	11.5	$ 29.86
2–3.9	340	41.1	44	12.9	34.88
4–5.9	190	23.0	30	15.8	62.40
6–7.9	66	8.0	7	10.6	32.91
8 or more	23	2.8	3	13.0	68.68
Total	827	100.0	108	13.1	$ 39.67
Loans on good soils					
Less than 2	79	28.7	6	7.6	$ 17.29
2–3.9	114	41.5	10	8.8	12.64
4–5.9	58	21.1	6	10.3	21.14
6–7.9	23	8.4	1	4.3	18.84
8 or more	1	.3	0	0	0
Total	275	100.0	23	8.4	$ 16.10
Loans on intermediate soils					
Less than 2	77	23.7	6	7.8	$ 22.01
2–3.9	134	41.2	16	11.9	32.64
4–5.9	72	22.2	13	18.1	104.74
6–7.9	29	8.9	3	10.3	39.44
8 or more	13	4.0	0	0	0
Total	325	100.0	38	11.7	$ 45.99
Loans on inferior soils					
Less than 2	52	22.9	12	23.1	$ 86.90
2–3.9	92	40.5	18	19.6	121.37
4–5.9	60	26.4	11	18.3	95.34
6–7.9	14	6.2	3	21.4	78.42
8 or more	9	4.0	3	33.3	197.88
Total	227	100.0	47	20.7	$106.29

this distribution. When additional land is purchased, the mortgage often applied only to the purchased tract. The acreage mortgaged per loan tended to be higher on good than on inferior soils.

The data did not permit a definite comparison between size of farm and success of loans because the tract mortgaged did not always include the entire farm. On good and on intermediate soils a larger proportion of the loans on small tracts were foreclosed than of the loans on medium-sized tracts, but the proportion was highest among loans on large tracts. Among the loans on inferior soils, however, the percentage foreclosed increased with the size of tract mortgaged.

The amounts loaned per acre were larger among the foreclosed loans, in almost all size classifications and at each level of soil pro-

TABLE 21.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND NUMBER OF ACRES MORTGAGED PER LOAN

Number of acres mortgaged per loan	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Less than 60	187	22.6	19	10.2
60– 99	303	36.7	37	12.2
100–139	154	18.6	23	14.9
140–179	105	12.7	14	13.3
180–219	38	4.6	4	10.5
220 or more	40	4.8	11	27.5
Total	827	100.0	108	13.1
Loans on good soils				
Less than 60	51	18.6	5	9.8
60– 99	94	34.2	6	6.4
100–139	52	18.9	2	3.8
140–179	45	16.3	3	6.7
180–219	18	6.5	2	11.1
220 or more	15	5.5	5	33.3
Total	275	100.0	23	8.4
Loans on intermediate soils				
Less than 60	89	27.4	8	9.0
60– 99	116	35.7	14	12.1
100–139	63	19.4	12	19.0
140–179	28	8.6	1	3.6
180–219	13	4.0	0	0
220 or more	16	4.9	3	18.8
Total	325	100.0	38	11.7
Loans on inferior soils				
Less than 60	47	20.7	6	12.8
60– 99	93	41.0	17	18.3
100–139	39	17.2	9	23.1
140–179	32	14.1	10	31.2
180–219	7	3.1	2	28.6
220 or more	9	3.9	3	33.3
Total	227	100.0	47	20.7

ductivity, than among the successful loans (Table 22). The difference was largest for the loans on good soils, with an average of $92 loaned per acre on tracts where the loans were foreclosed, and $78 per acre on tracts where the loans were successful. On intermediate soils, the loans on foreclosed farms averaged $11 more per acre than the successful loans; on the inferior soils the difference was only $6 per acre. In practically every size-group the loan ratios, and consequently the debt loads, were greater on the foreclosed farms than on the farms where loans were successful.

Among the loans on good soils, losses were heaviest on the smallest and the largest tracts. On foreclosed tracts of medium size, averaging

TABLE 22.—AMOUNTS LOANED PER ACRE, LOAN RATIOS, AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED BY STATUS OF LOANS ON APRIL 1, 1936, PRODUCTIVITY OF MORTGAGED TRACT, AND NUMBER OF ACRES MORTGAGED PER LOAN

Number of acres mortgaged per loan	Foreclosed loans			Loans in good standing			Loss per $1,000 loaned
	Number of loans	Average loan per acre	Loan ratio, percent	Number of loans	Average loan per acre	Loan ratio, percent	
Loans on good soils							
Less than 60	5	$76	46	46	$78	37	$51.71
60– 99	6	101	44	88	78	37	14 76
100–139	2	85	40	50	82	40	1.59
140–179	3	96	40	42	79	38	(2.81)[a]
180–219	2	104	42	16	75	37	53.08
220 or more	5	88	48	10	71	37	23.14
Total and average	23	$92	44	252	$78	38	$16.10
Loans on intermediate soils							
Less than 60	8	$55	40	81	$48	37	$26.80
60– 99	14	60	46	102	48	37	49.27
100–139	12	44	42	51	44	38	76.00
140–179	1	57	43	27	41	36	16.47
180–219	0	...	..	13	37	36	.....
220 or more	3	43	45	13	34	34	57.86
Total and average	38	$54	43	287	$43	37	$45.99
Loans on inferior soils							
Less than 60	6	$41	44	41	$33	38	$ 94.82
60– 99	17	37	44	76	31	38	71.86
100–139	9	39	44	30	33	38	104.23
140–179	10	39	41	22	30	41	157.10
180–219	2	42	42	5	33	41	166.98
220 or more	3	31	40	6	35	42	74.07
Total and average	47	$38	43	180	$32	39	$106.29

[a]Gain.

from 140 to 179 acres, there was an average gain of $2.81 per $1,000 loaned. Losses on inferior soils were heaviest on the larger tracts.

These results vary somewhat from those found in studies made elsewhere. In New York F. F. Hill found the number of foreclosures on small farms to be negligible.[1] Not one of 159 loans made on farms of less than 20 acres had been foreclosed as of May 31, 1929. At the same date only 2.2 percent of 3,467 loans made on farms of less than 100 acres, but 7.2 percent of 391 loans on farms of 300 acres or more, had been foreclosed. In southeast Alabama E. H. Mereness found that the percentage of loans foreclosed increased consistently as the number of acres in the farm increased.[2] And in Minnesota E. C. Johnson

[1]Hill, F. F. Previous citation, page 486.

[2]Mereness, E. H. Farm mortgage loan experience in Southeast Alabama. Ala. Agr. Exp. Sta. Bul. 242. p. 13.

found that the foreclosed farms were larger generally than those having loans in good standing.[1]

Small farms on all-weather roads have a relatively high value as home sites in certain regions, as in New York state, for example; and in such regions those farms are often paid for with income earned off the farm. Also, on many such farms an intensive system of farming is followed.

In the seven Illinois counties studied, the safer risks on good land were the middle-size tracts, and on inferior land the smaller tracts. In grain farming, farms must be large enough to provide a business of adequate size; but they can be too large for safety, particularly when prices are declining. As a general rule, larger farms earn greater net returns than smaller farms when prices of farm products are favorable, but in a period of depression, net earnings may be even less on the larger farms than on the smaller farms, with consequent greater impairment of debt-paying ability on the larger farms. The period studied was one of declining prices.

Type of Farming and Success of Loans

Success as related to percent of mortgaged acres in crops. Over 75 percent of the total acreage in most of the mortgaged tracts was in crops. Ninety-three percent of the farms on good soils had more than 80 percent of their land in crops, whereas only 70 to 75 percent of the farms on the poorer soils had so large a percentage in crops (Table 23). Some of the less productive soils are located on rough or rolling land, often too hilly and too eroded to be farmed to advantage. Also, much of the inferior soil in this area has an impervious subsoil and on these soils a relatively large acreage is in permanent pasture.

No very definite relationship was found between foreclosures and the percentage of total mortgaged acres in crops. On the inferior soils a larger proportion of the loans were foreclosed where 80 percent or more of the total mortgaged acreage was in crops, but the loss was greatest where 60 to 79 percent of the land was in crops.

In a study by W. G. Murray of corporate-owned land in Iowa, many of the farms were located along the edges of good soils.[2] These farms, having a high proportion of rough land, excessive erosion, and poor farm organization had been overvalued. In the seven counties in Illinois a majority of the farms owned by insurance companies and

[1] Johnson, E. C. Farm mortgage foreclosures in Minnesota. Minn. Agr. Exp. Sta. Bul. 293. 1932.

[2] Murray, W. G. Corporate owned land in Iowa. Iowa Agr. Exp. Sta. Bul. 307.

TABLE 23.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND PERCENTAGE OF MORTGAGED ACRES IN CROPS

Percent of total mortgaged acres in crops	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
20–39	9	1.1	1	11.1	$ 53.07
40–59	46	5.5	2	4.3	18.32
60–79	114	13.8	20	17.5	81.20
80 or more	654	79.1	85	13.0	35.16
Unknown	4	.5	0	0	0
Total	827	100.0	108	13.1	$ 39.67
Loans on good soils					
20–39	0	0	0	0	$ 0
40–59	4	1.5	0	0	0
60–79	14	5.1	1	7.1	20.35
80 or more	256	93.1	22	8.6	16.11
Unknown	1	.3	0	0	0
Total	275	100.0	23	8.4	$ 16.10
Loans on intermediate soils					
20–39	3	.9	1	33.3	$106.88
40–59	30	9.2	1	3.3	5.39
60–79	63	19.4	11	17.5	79.51
80 or more	229	70.5	25	10.9	38.65
Total	325	100.0	38	11.7	$ 45.99
Loans on inferior soils					
20–39	6	2.6	0	0	$ 0
40–59	12	5.3	1	8.3	61.64
60–79	37	16.3	8	21.6	159.98
80 or more	169	74.5	38	22.5	104.95
Unknown	3	1.3	0	0	0
Total	227	100.0	47	20.7	$106.29

banks were located on the rougher soils bordering good land.[1] Members of the county soil-conservation committees gave the opinion that the farms were lost because of overvaluation and failure of the operators to adapt their farm plans to variations in the productivity of the land and the size of the farm.

Success as related to principal crop grown. Tho not quite as important on the inferior soils as on the other soils, corn was the most important crop on approximately 70 percent of the farms studied, and was second on most of the others (Table 24). Little relationship therefore could be anticipated between the most important crop grown on mortgaged farms and the proportion of loans foreclosed. A slightly

[1]Unpublished data from soil-conservation work sheets from the various counties, Department of Agricultural Economics, University of Illinois.

TABLE 24.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND MOST IMPORTANT CROP GROWN AT TIME OF APPLICATION FOR LOAN

Most important crop	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Corn	593	71.7	79	13.3
Oats	31	3.7	1	3.2
Wheat	46	5.6	10	21.7
Soybeans	8	1.0	0	0
Unclassified	24	2.9	3	12.5
Unknown	125	15.1	15	12.0
Total	827	100.0	108	13.1
Loans on good soils				
Corn	196	71.3	17	8.7
Oats	8	2.9	0	0
Wheat	18	6.5	2	11.1
Soybeans	6	2.2	0	0
Unclassified	2	.7	0	0
Unknown	45	16.4	4	8.9
Total	275	100.0	23	8.4
Loans on intermediate soils				
Corn	249	76.6	31	12.4
Oats	16	4.9	0	0
Wheat	21	6.5	4	19.0
Soybeans	0	0	0	0
Unclassified	7	2.2	0	0
Unknown	32	9.8	3	9.4
Total	325	100.0	38	11.7
Loans on inferior soils				
Corn	148	65.2	31	20.9
Oats	7	3.1	1	14.3
Wheat	7	3.1	4	57.1
Soybeans	2	.9	0	0
Unclassified	15	6.6	3	20.0
Unknown	48	21.1	8	16.7
Total	227	100.0	47	20.7

higher percentage of the loans on farms on which wheat was the most important crop were foreclosed, however, than of loans on farms on which other crops were most important.

The crops grown may be of more influence on loan risk than these data indicate. In so far as the cropping system influences acre-yields, it is certainly one of the important factors accounting for the differences in profits among farms.

Success as related to number of dairy cows kept. On 63 percent of the farms, fewer than 6 dairy cows were kept at the time when loan was applied for (Table 25). Only 4 farms kept more than 26

TABLE 25.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND NUMBER OF DAIRY COWS ON FARM AT TIME OF APPLICATION FOR LOAN

Number of dairy cows	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Fewer than 6	521	63.0	78	15.0
6–10	159	19.2	18	11.3
11–15	49	5.9	4	8.2
16–20	19	2.3	1	5.3
21–25	8	1.0	1	12.5
26 or more	4	.5	0	0
Unknown	67	8.1	6	9.0
Total	827	100.0	108	13.1
Loans on good soils				
Fewer than 6	153	55.7	15	9.8
6–10	60	21.8	3	5.0
11–15	10	3.6	0	0
16–20	2	.7	0	0
21–25	4	1.5	1	25.0
26 or more	2	.7	0	0
Unknown	44	16.0	4	9.1
Total	275	100.0	23	8.4
Loans on intermediate soils				
Fewer than 6	225	69.2	30	13.3
6–10	50	15.4	6	12.0
11–15	24	7.4	1	4.2
16–20	12	3.7	1	8.3
21–25	2	.6	0	0
26 or more	1	.3	0	0
Unknown	11	3.4	0	0
Total	325	100.0	38	11.7
Loans on inferior soils				
Fewer than 6	143	63.0	33	23.1
6–10	49	21.6	9	18.4
11–15	15	6.6	3	20.0
16–20	5	2.2	0	0
21–25	2	.9	0	0
26 or more	1	.4	0	0
Unknown	12	5.3	2	16.7
Total	227	100.0	47	20.7

cows. A few more cows were kept on good soils than on poor soils. A slight tendency could be noted for the percentage of foreclosures to be lower where the number of dairy cows per farm was higher, but this relationship was probably accidental even tho borrowers who had the more cows may have had the greater ability to pay.

Some agricultural leaders in this section were of the opinion that more cows should be kept in the poorer soil regions. A banker in Cumberland county stated that farmers located on the poor soils need

dairy cows to utilize properly the roughage produced. He had experienced no loss in one entire community where dairying was the principal source of income. He had made no loans in this community previous to the introduction of dairy cattle because of the exceptionally high risks involved. In his estimation, the dairy industry had benefited these farmers even tho they were not selling whole milk.

Success as related to number of poultry kept. The income from poultry and its products represents only a small proportion of the total income on Illinois farms on good soils, but is more important on farms on inferior soils. In 1935, cash income from poultry and eggs was 6 percent of the gross cash income on 448 farms in Area 4 and over 16 percent on 72 farms in Area 7.[1]

On farms on good soils there were fewer hens than on farms on inferior soils (Table 26). On the smaller farms on inferior soils poultry are used to increase the size of the farming business. Approximately one-third of the farms on inferior soils had more than 225 hens each, whereas on good soils only 18 percent kept more than that number.

In all groups the percentage of foreclosures was less as the number of hens per farm increased. Adding poultry to the farm business increased the net income and thus directly increased the borrower's capacity to repay his indebtedness. In this area the added poultry may also have indicated good and thrifty management in other respects.

Foreclosure as Related to Value of Improvements

Earning power influences the kind of buildings a farm will support, and the type of farming determines the kind of buildings needed. The average value of buildings on a typical 240-acre grain farm in central Illinois is about $5,000, about 10 percent of the total farm capital; on a typical 240-acre beef cattle and hog farm in north-central Illinois, a comparable figure is about $10,400, or about one-fifth of the total investment; and on a 240-acre dairy farm in northern Illinois, building values average about $8,500, or about one-fourth the total capital.[2]

Within the area studied, the value of buildings needed for different types of farming does not vary as greatly as the above figures. A few of the farms studied were overequipped with buildings; in such cases, the buildings reduced rather than increased the value of the farm.

[1]Summary of annual farm business reports on 1,639 farms for 1935. Department of Agricultural Economics, University of Illinois.

[2]Unpublished data. Department of Agricultural Economics, University of Illinois.

TABLE 26.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND NUMBER OF HENS ON FARM AT TIME OF APPLICATION FOR LOAN

Number of hens	Number of loans	Percent of loans	Number foreclosed	Percent foreclosed
All loans				
Less than 25	59	7.1	13	22.0
25– 74	69	8.3	12	17.4
75–124	139	16.8	15	10.8
125–174	109	13.2	14	12.8
175–224	127	15.4	19	15.0
225 or more	202	24.4	23	11.4
Not listed	122	14.8	12	9.8
Total	827	100.0	108	13.2
Loans on good soils				
Less than 25	28	10.2	5	17.9
25– 74	24	8.7	2	8.3
75–124	47	17.1	4	8.5
125–174	34	12.4	1	2.9
175–224	22	8.0	2	9.1
225 or more	50	18.2	2	4.0
Not listed	70	25.4	7	10.0
Total	275	100.0	23	8.4
Loans on intermediate soils				
Less than 25	20	6.1	4	20.0
25– 74	31	9.5	5	16.1
75–124	59	18.2	5	8.5
125–174	47	14.5	8	17.0
175–224	61	18.8	7	11.5
225 or more	79	24.3	8	10.1
Not listed	28	8.6	1	3.6
Total	325	100.0	38	11.7
Loans on inferior soils				
Less than 25	11	4.8	4	36.4
25– 74	14	6.2	5	35.7
75–124	33	14.5	6	18.2
125–174	28	12.3	5	17.9
175–224	44	19.4	10	22.7
225 or more	73	32.2	13	17.8
Not listed	24	10.6	4	16.7
Total	227	100.0	47	20.7

Construction of essential buildings on bare land may increase the value of a farm more than their cost, and additional buildings may increase the value of the property, altho not by an amount equal to their cost. But a point is finally reached where added buildings actually reduce the value of the farm. In lending money the risk of foreclosure increases unless this relation between value of buildings and value of farm is taken into account. The point where diminishing returns begin for buildings varies with the size of farm, the productivity of the soil, and the system of farming.

TABLE 27.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND APPRAISED VALUE OF HOUSE

Appraised value of house	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
Less than $1,000	190	23.0	26	13.7	$ 38.74
1,000–1,999	262	31.7	35	13.4	50.67
2,000–2,999	136	16.4	15	11.0	41.05
3,000–3,999	58	7.0	4	6.9	27.04
4,000–4,999	18	2.2	1	5.6	15.17
5,000 or more	14	1.7	1	7.1	(6.49)[a]
Unknown	149	18.0	26	17.4	46.45
Total	827	100.0	108	13.1	$ 39.67
Loans on good soils					
Less than $1,000	36	13.1	4	11.1	$ 33.16
1,000–1,999	65	23.6	7	10.8	22.50
2,000–2,999	67	24.4	1	1.5	.15
3,000–3,999	30	10.9	1	3.3	24.38
4,000–4,999	12	4.4	1	8.3	18.83
5,000 or more	11	4.0	1	9.1	(7.23)[a]
Unknown	54	19.6	8	14.8	23.21
Total	275	100.0	23	8.4	$ 16.10
Loans on intermediate soils					
Less than $1,000	82	25.2	9	11.0	$ 13.59
1,000–1,999	121	37.2	13	10.7	51.55
2,000–2,999	44	13.6	7	15.9	86.56
3,000–3,999	21	6.5	1	4.8	18.69
4,000–4,999	3	.9	0	0	0
5,000 or more	3	.9	0	0	0
Unknown	51	15.7	8	15.7	62.14
Total	325	100.0	38	11.7	$45.99
Loans on inferior soils					
Less than $1,000	72	31.7	13	18.1	$ 89.75
1,000–1,999	76	33.5	15	19.7	102.10
2,000–2,999	25	11.0	7	28.0	143.51
3,000–3,999	7	3.1	2	28.6	78.77
4,000–4,999	3	1.3	0	0	0
5,000 or more	0	0	0	0	0
Unknown	44	19.4	10	22.7	126.59
Total	227	100.0	47	20.7	$106.29

[a]Gain.

Success as related to value of farm residence. In areas near large cities the residence appears to have more influence on farm value than other buildings. F. F. Hill[1] found that in the northeastern states the house is a more important loan factor than the barn. In this region the house may be used as a residence for persons working away from the farm or may have other values independent of the usual farm-home relationship.

[1]Hill, F. F. Previous citation, p. 486.

TABLE 28.—NUMBER OF LOANS FORECLOSED AND NET LOSSES AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND APPRAISED VALUE OF ALL BUILDINGS

Appraised value of all buildings	Number of loans	Percent of total	Number foreclosed	Percent foreclosed	Loss per $1,000 loaned
All loans					
Less than $2,000	266	32.2	34	12.8	$ 56 77
2,000–3,999	266	32.2	38	14.3	41.55
4,000–5,999	122	14.7	12	9.8	29.30
6,000–7,999	41	5.0	3	7.3	13.30
8,000–9,999	14	1.7	2	14.3	14.16
10,000 or more	12	1.4	1	8.3	37.13
Unknown	106	12.8	18	17.0	69.40
Total	827	100.0	108	13.1	$ 39.67
Loans on good soils					
Less than $2,000	45	16.4	5	11.1	$ 29.10
2,000–3,999	75	27.3	6	8.0	4.86
4,000–5,999	73	26.5	4	5.5	12.80
6,000–7,999	31	11.3	1	3 2	0
8,000–9,999	10	3.6	2	20.0	16.03
10,000 or more	9	3.3	1	11.1	40.32
Unknown	32	11.6	4	12.5	56.07
Total	275	100.0	23	8.4	$ 16.10
Loans on intermediate soils					
Less than $2,000	120	36.9	12	10.0	$ 54.69
2,000–3,999	123	37.9	18	14.6	56.44
4,000–5,999	34	10.5	2	5.9	15.20
6,000–7,999	5	1.5	0	0	0
8,000–9,999	2	.6	0	0	0
10,000 or more	3	.9	0	0	0
Unknown	38	11.7	6	15.8	60.38
Total	325	100.0	38	11.7	$ 45.99
Loans on inferior soils					
Less than $2,000	101	44.5	17	16.8	$ 94.75
2,000–3,999	68	30.0	14	20.6	81.45
4,000–5,999	15	6.6	6	40.0	189.55
6,000–7,999	5	2.2	2	40.0	146.38
8,000–9,999	2	.9	0	0	0
10,000 or more	0	0	0	0	0
Unknown	36	15.8	8	22.2	118.19
Total	227	100.0	47	20.7	$106.29

The houses on the farms studied here were valued more highly on the farms on good than on those on inferior soils (Table 27). The house was valued at less than $2,000 on 37 percent of the farms on good soils, on 62 percent of the farms on intermediate soils, and on 65 percent of the farms on inferior soils.

On good soils most of the foreclosed farms had houses valued under $2,000. This low valuation probably indicates that something was wrong with either the land or the operator. On intermediate soils

the losses were heaviest on the foreclosed farms having houses valued between $1,000 and $2,999. Probably most of these farms also were lost primarily because of factors other than value of residence. On inferior soils the percentage of farms foreclosed and amount of loss increased as the appraised value of the house increased up to $3,000, and very few houses were valued above this figure. Earnings on many of the farms with inferior soils were not sufficient to support an expensive house unless nonfarm income was received.

Success as related to value of all buildings. No significant relationship was indicated between the appraised value of all buildings and foreclosure (Table 28). On the inferior soils losses were heavier where building values exceeded $4,000.

Some systems of farming, particularly livestock farming, require a relatively high investment in buildings. On inferior soils farms usually are not able to support a large building investment unless livestock is emphasized. Depletion of the fertility of the less productive soils on these farms indicates that more livestock should be kept if the farming is to be made more profitable. Building requirements depend upon the amount and kind of livestock kept, which in turn depends on the amounts and kinds of feed produced.

PERSONAL QUALITIES OF THE BORROWER AS A FACTOR IN SUCCESS OF A LOAN

Certain qualities of the borrowers themselves would of course be expected to have an important bearing on their success in meeting their obligations. Accordingly the appraisal records were examined and information was obtained on the farming experience of the borrowers, their age, and the methods by which they obtained their farms. No direct information was available on such qualities as honesty and industriousness, which would also affect the manner in which obligations would be handled.

Length of Farming Experience and Loan Risk

Of the 827 loans about half were made to farmers who had farmed the same land for seven years or more, and over one-fourth to farmers with two to six years experience on the mortgaged farm (Table 29). About one-sixth of the loans were made to borrowers who had farmed in the locality for more than two years but for less than two years on the mortgaged land. In only one instance had the borrower farmed in the area for less than two years. The percentage

TABLE 29.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND EXPERIENCE OF BORROWER AT TIME OF APPLICATION FOR LOAN

Farming experience of borrower	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Same land 7 or more years	395	47.8	52	13.2
Same land 2–6 years	227	27.4	29	12.8
In locality 2 or more years	146	17.7	21	14.4
Other locality 2 or more years	1	.1	0	0
Unknown	58	7.0	6	10.3
Total	827	100.0	108	13.1
Loans on good soils				
Same land 7 or more years	138	50.2	13	9.4
Same land 2–6 years	63	22.9	5	7.9
In locality 2 or more years	33	12.0	1	3.0
Other locality 2 or more years	0	0	0	0
Unknown	41	14.9	4	9.8
Total	275	100.0	23	8.4
Loans on intermediate soils				
Same land 7 or more years	168	51.7	20	11.9
Same land 2–6 years	94	28.9	14	14.9
In locality 2 or more years	57	17.5	4	7.0
Other locality 2 or more years	0	0	0	0
Unknown	6	1.9	0	0
Total	325	100.0	38	11.7
Loans on inferior soils				
Same land 7 or more years	89	39.2	19	21.3
Same land 2–6 years	70	30.8	10	14.3
In locality 2 or more years	56	24.7	16	28.6
Other locality 2 or more years	1	.4	0	0
Unknown	11	4.9	2	18.2
Total	227	100.0	47	20.7

of borrowers who had farmed the mortgaged land for seven or more years was about one-fourth larger on good soils than on inferior soils. No significant relationships between experience and loan risk were indicated.

F. F. Hill found that the highest percentage of farm foreclosures in New York was among borrowers from parts of the United States other than the Northeast.[1] He concluded that there was a tendency for persons from the West and Midwest to buy low-priced farms of a size similar to those in the region from which they came, and to underestimate the importance of location on a hard-surfaced road. In the northeastern states many farms poorly located with regard to markets

[1]Hill, F. F. Previous citation, p. 486.

and on land of low agricultural value have been abandoned because experienced farmers have found it impossible to make a living on them. Hill inferred that such farms are poor security for a mortgage loan regardless of the farming experience of the borrower, and that the high percentage of foreclosures among borrowers from other parts of the United States was not due to lack of experience in operating farms but to errors in choice of farms.

In the Illinois area studied very few people in recent years have moved in for the purpose of farming.

No Data on Education of Borrowers

No data were available concerning the education of borrowers in this study. In studies made in New York,[1, 2] and Missouri[3] higher education was associated with higher earnings among farmers. On the other hand, Hammer in his study of the Master Farmers of America found no significant differences in net incomes when the groups were selected on the basis of the amount of school training acquired.[4] Wilcox found no apparent relationship between earnings and education.[5]

Age of Borrower Proved Relatively Unimportant

The majority of the 827 loans were made to borrowers between 40 and 60 years old (Table 30). Borrowers less than 30 years old obtained only 7 percent of the loans and those over 60 years only 16 percent. A larger percentage was made to borrowers under 40 years old on intermediate and inferior soils than on good soils. Only 14 percent of the loans made on good soils were made to borrowers less than 40 years old, and 21 percent to borrowers over 60 years old. The higher proportion of older men reflects the larger capital requirements on good land.

The age of the borrower at the time the loan was made was a relatively unimportant factor affecting lending experience. On good soils, the greatest difficulty was encountered with borrowers less than

[1]Warren, G. F., Livermore, K. C., and others. An agricultural survey of Tompkins county, New York. N. Y. (Cornell) Agr. Exp. Sta. Bul. 295.

[2]Warren, S. M. The relation between education and profits in northern Livingston county, New York. N. Y. Agr. Col. (Cornell) Farm Econ. No. 65.

[3]Johnson, O. R., and Foard, W. S. Land tenure. Missouri Agr. Exp. Sta. Bul. 121.

[4]Hammer, O. S. The Master Farmers of America. Iowa Univ. Studies in Education. Vol. 6, No. 2, 1930.

[5]Wilcox, W. W., and others. Relation of variations in the human factor to financial returns in farming. Minn. Agr. Exp. Sta. Bul. 288.

TABLE 30.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND AGE OF BORROWER AT TIME OF APPLICATION FOR LOAN

Age of borrower, years	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Under 30	56	6.8	10	17.9
30–39	148	17.9	14	9.5
40–49	220	26.5	30	13.6
50–59	224	27.1	27	12.1
60–69	108	13.1	15	13.9
70 or more	28	3.4	6	21.4
Unknown	43	5.2	6	14.0
Total	827	100.0	108	13.1
Loans on good soils				
Under 30	8	2.9	2	25.0
30–39	31	11.3	0	0
40–49	74	26.9	4	5.4
50–59	81	29.4	8	9.9
60–69	47	17.1	4	8.5
70 or more	11	4.0	1	9.1
Unknown	23	8.4	4	17.4
Total	275	100.0	23	8.4
Loans on intermediate soils				
Under 30	25	7.7	3	12.0
30–39	65	20.0	5	7.7
40–49	90	27.7	14	15.6
50–59	86	26.5	7	8.1
60–69	39	12.0	6	15.4
70 or more	12	3.7	2	16.7
Unknown	8	2.4	1	12.5
Total	325	100.0	38	11.7
Loans on inferior soils				
Under 30	23	10.1	5	21.7
30–39	52	22.9	9	17.3
40–49	56	24.7	12	21.4
50–59	57	25.1	12	21.1
60–69	22	9.7	5	22.7
70 or more	5	2.2	3	60.0
Unknown	12	5.3	1	8.3
Total	227	100.0	47	20.7

30 years old, tho only a few loans were involved. On intermediate soils the greatest difficulty was with borrowers over 60 years old. On inferior soils there were no significant differences among the groups. The percentage of foreclosed farms was highest among the few borrowers more than 70 years old.

These findings are in general agreement with other studies of the relation between earnings and age. F. F. Hill, in the analysis of lending operations of the Federal Land Bank of Springfield, found the age of

the borrower at the time the loan was made to be a relatively unimportant factor in causing foreclosures. The percentage of foreclosures among loans made to persons less than 30 years old was somewhat higher than among those made to older persons, but at the same time a higher percentage of loans made to the younger men were secured by farms appraised at less than $60 per acre.[1] In a study of human factors in relation to farm earnings in Minnesota it was found that the age period of 34 to 45 years was apparently the peak of the farmer's earning power.[2] This age agrees closely with the average age at which men in other occupations reach their greatest earning power.[3] H. G. Russell found similar results in a study of the influence of certain personal qualifications of the farm operator on farm earnings in Illinois.[4]

Foreclosure Lowest Among Farms Purchased for Cash

Tho the method by which he obtains his farm is not exactly a personal quality of a borrower, it is often closely related to personal quality. The purchase of a farm for cash or largely for cash is often an indication of ambition, industriousness, and thrift. The acquirement of a farm by inheritance, on the other hand, is not an indication of any of these qualities. Instead, inheritance of property often leads to unthriftiness and extravagance.

These relations between method of obtaining the farm and personal quality do not of course always hold true, but by and large they indicate a definite tendency. Wilcox found, for example, that farmers who inherited some or all of their holdings had lower labor earnings than those who had accumulated all of their property from earnings.[2] And O. S. Hammer found that more than half of the Master Farmers of America had inherited little, if any, property, and that those who had inherited the most had the lowest earnings of the group.[5]

In the present study about one-fourth of the 827 farms were obtained by purchase involving cash; 39 percent by deals which combined cash and trading other property; 14 percent by inheritance; and 17 percent partly by purchase and partly by inheritance or gift or

[1]Hill, F. F. Previous citation, p. 486.

[2]Wilcox, W. W., and others. Previous citation, p. 501.

[3]Dublin, L. I., and Lotha, L. J. The money value of a man. The Ronald Press, New York, 1930.

[4]Russell, H. G. The influence of certain personal qualifications for the farm operator on farm earnings. Master's thesis, Univ. of Ill. 1930.

[5]Hammer, O. S. Previous citation, p. 501.

purchase for a nominal consideration (Table 31). Less than 1 percent were obtained thru purchase without any cash down payment. The method of obtaining the farm was not given for 56 of the loans.

The farms obtained by inheritance were better than those obtained by cash or trade. Good farms have evidently tended to remain within the family. On the good soils 35 percent of the farms involved inheritance, on the intermediate soils 30 percent, and on the inferior soils 18 percent.[1] It is significant that more of the farms with inferior soils (74 percent) were obtained by cash or cash-and-trade deals than of the farms on good soils (50 percent).

Of the 197 loans on the farms purchased for cash, only 10.7 percent were foreclosed. One of the 4 loans made on farms purchased with no cash payment was foreclosed.

Similar findings were obtained in a study of farm-real-estate sales experience by the Federal Land Bank of St. Louis. Purchases were most successful where 25 percent or more of the purchase price of the farm was paid in cash.[2] Where less than 25 percent of the purchase price was given as a down payment, the proportion of purchasers who were unable to continue to meet payments was higher. The trend of prices of farm products is an important factor, however, in all such matters of meeting farm indebtedness, because the required payment takes a smaller proportion of the total farm income on an advancing market than on a declining market.

In the cash-purchase or part-cash-payment groups, a larger percentage of the loans on soils of low productivity were foreclosed than on good soils; but this merely reflects the generally higher foreclosure ratio on poor soils. As to the foreclosures of inherited farms, however, the proportions among the soil groups were reversed. Fourteen percent of the loans on inherited farms on good soils and 12 percent of those on intermediate soils were foreclosed, but only 7 percent of those on inferior soils were foreclosed.

---

[1]In the analysis of farming operations of the Federal Land Bank of Springfield (previously cited, page 486), it was found that, if it were assumed that the appraised value per acre provided a rough index of the quality of the farms, the farms acquired by inheritance were somewhat better than the farms acquired by purchase, trade, or a family deal. The conclusions were reached that in New York good farms tended to remain within the family, and that undoubtedly the larger percentage of the borrowers who acquired farms by inheritance were experienced farmers.

[2]Real estate sales, Farm Credit Administration of St. Louis, Statistical Dept. July, 1935.

TABLE 31.—NUMBER OF LOANS FORECLOSED AMONG 827 ILLINOIS FARM LOANS GROUPED ACCORDING TO PRODUCTIVITY OF MORTGAGED TRACT AND METHOD BY WHICH FARM WAS OBTAINED BY BORROWER

Method by which borrower obtained farm	Number of loans	Percent of total	Number foreclosed	Percent foreclosed
All loans				
Cash purchase	197	23.8	21	10.7
Trade and cash	319	38.6	46	14.4
Inheritance or gift	115	13.9	14	12.2
Purchase and inheritance	119	14.4	20	16.8
Purchase and gift or purchase and nominal fee	17	2.1	3	17.6
Purchase, no cash payment	4	.5	1	25.0
Unknown	56	6.8	3	5.4
Total	827	100.0	108	13.1
Loans on good soils				
Cash purchase	61	22.2	5	8.2
Trade and cash	76	27.6	5	6.6
Inheritance or gift	58	21.0	8	13.8
Purchase and inheritance	37	13.5	3	8.1
Purchase and gift or purchase and nominal fee	5	1.8	1	20.0
Purchase, no cash payment	1	.4	1	100.0
Unknown	37	13.5	..	....
Total	275	100.0	23	8.4
Loans on intermediate soils				
Cash purchase	75	23.1	6	8.0
Trade and cash	137	42.1	15	10.9
Inheritance or gift	43	13.2	5	11.6
Purchase and inheritance	55	16.9	11	20.0
Purchase and gift or purchase and nominal fee	7	2.2	1	14.3
Purchase, no cash payment	1	.3	0	0
Unknown	7	2.2	0	0
Total	325	100.0	38	11.7
Loans on inferior soils				
Cash purchase	61	26.9	10	16.4
Trade and cash	106	46.7	26	24.5
Inheritance or gift	14	6.1	1	7.1
Purchase and inheritance	27	11.9	6	22.2
Purchase and gift or purchase and nominal fee	5	2.2	1	20.0
Purchase, no cash payment	2	.9	0	0
Unknown	12	5.3	3	25.0
Total	227	100.0	47	20.7

CAUSES OF FORECLOSURE AS REVEALED BY PERSONAL INTERVIEWS

In the preceding sections the influence of various factors on the success of loans has been discussed. Obviously many of these relationships are interrelated, but the tools of analysis used would not permit isolation of the net effect of any one factor.

In view of the relationships brought out, however, it appears that

the unfavorable ratio between prices of farm products and of cost items was a basic factor contributing to losses by lenders and, of course, by borrowers. Hence losses on loans made early in the period when prices were high were greater than on those made later. Also, it appears evident that loans on the poorer soils, on the more rolling lands, and in amounts too high in relation to values broke down more commonly than other loans. In other words, loans made under the circumstances of declining prices broke down more frequently when these other conditions obtained. Most of the other relationships noted are either accidental or cannot be isolated by methods used in the study.

These basic factors underlie foreclosures, but the human element is also a factor. Different people will deal with a given set of conditions (for example, soils and price trends) in different fashions and with different results. An ordinary observer is prone to give exclusive attention to these human aspects of this problem, ignoring the basic physical and economic differences. In practice, it is a combination of bad fundamental conditions and individuals too weak to master these circumstances that causes loans to break down. At times the pressure of circumstances becomes so great that few individuals are able to cope with the situation.

In order to appraise this human side of the problem the following analysis was made of a group of the farms included in the study. Visits were made during the summer of 1936 to 103 farms that had been acquired by the lenders. The occupant was asked to furnish whatever background information he could concerning the farm and the original borrower, and three men living in the neighborhood and acquainted with the borrower were asked to express their opinion as to the cause of failure. In most cases the opinions of the three were similar regarding the borrower, but if there were differences, additional persons were interviewed. From these interviews it was possible to ascertain the opinion of local people as to the most important causes of failure for each loan. Frequently several reasons were given, but only the most important reason in each case was listed. These are shown in the following tabulation.

MAIN CAUSE OF FAILURE OF LOAN IN OPINION OF LOCAL PEOPLE

Capital factors	*Number of farms*
Too much indebtedness on farm	11
Too much indebtedness other than farm	9
Speculative loss, chiefly cattle feeding	7
Total	27

Personal factors	
Poor management	20
Personal extravagance	9
Laziness	6
Indifference	2
Abandonment	2
Erosion permitted	2
Joint borrowers unable to agree	2
Moved from farm and entered other business	2
Overequipped with machinery	1
Farm too small for family maintenance	1
Total	47
Accidental factors	
Land purchased by traders	6
Death of wife	5
Death of borrower	9
Health failure	6
Crop failures	3
Total	29

Capital Factors

Too much debt and speculative losses were considered by the persons interviewed to be the main cause of failure of 26 percent of this group of foreclosed loans.

Too much indebtedness on farm.—Main reason for the failure of 11 loans, made mostly during the period of inflation in land values, and largely on farms with lower grades of soil.

Too much other indebtedness.—Too much indebtedness in addition to that secured by the mortgaged land, was given as the cause of 9 failures. The total load was more than the farm could carry. It was not possible to ascertain why this additional debt was incurred.

Speculative losses.—Advanced as the reason for 7 failures. Many men in this area lost heavily from the disastrous decline of cattle prices following 1920.

Personal Factors

The personal characteristics of the farm operator and his family have been given little attention in either farm management studies or studies of lending experience. It has generally been assumed that the human factor is measured by various objective results—crop yields, for example. But the persons interviewed here believed that 47 of the 103 loan failures were caused primarily by personal factors.

Poor management.—Cited as cause for 20 foreclosures.

Personal extravagance.—Mentioned as the primary cause of 9 failures.

Laziness.—Mentioned as the chief cause of failure by 6 borrowers. When the survey was made three of these six men were still living on

the farms they had lost. The weedy fields and the unkempt farmsteads were evidence that the operators were not especially enterprising.

Indifference.—Mentioned as the cause of 2 foreclosures. Tho indifference might be closely associated with laziness, the cause of the indifference in both these cases was attributed to lack of harmony within the family. In each of the two cases mentioned, the wife was divorced and the children at home were unwilling to make any sacrifices in order to keep the farm.

Abandonment.—Two farms which were purchased for a reason other than farming were deserted when the purpose was served.

Erosion permitted.—On 2 farms the important reason for failure was stated to be that the farms had become so badly eroded that they were no longer productive. Persons acquainted with the history of these two farms stated that they were as productive as any in the region twenty-five years before, with no gullies on the land. In 1935 these farms were not suitable for crop production, but were so badly cut up with ditches and gullies that even use for permanent pasture or timberland was questionable.

Joint borrowers unable to agree.—Mentioned as the cause of 2 failures. Neither party was willing to assume full responsibility; therefore bad management followed.

Moved from farm; entered other business.—Two borrowers moved to nearby towns and used most of the funds borrowed to establish themselves in business ventures which failed.

Overequipped with machinery.—Mentioned as the cause of 1 failure. The operator purchased almost every new type of equipment on the market. The majority of the foreclosed farms had no excess of machinery, for it was often impossible to replace wornout machinery because of lack of capital.

Cost of family maintenance too much for farm.—Mentioned as the cause of 1 failure.

Accidental Factors

The reasons given for foreclosure on 29 of the 103 farms were classified as accidental factors over which neither borrower nor lender had control.

Land purchased by traders.—Reported as being responsible for 6 foreclosures. The original borrowers sold out and the farms became involved in a number of trades. In each instance the trader had no intention of living on the farm, and often made no attempt to secure a good tenant. Two of these farms had not been farmed for a year prior to foreclosure. Probably some more basic factor, such as low productivity, also was involved.

Death.—Responsible for 14 foreclosures—5 where the wife died, and 9 where the husband died. The widowers became discouraged after the death of their wives. All of the widows gave up the attempt to farm after their husbands' deaths. On these farms no children old enough to accept responsibility were at home.

Lending agencies might properly require borrowers to carry sufficient

life insurance to reduce the debt load to a safe amount. Some lending companies have already adopted this policy.

Failure of health.—Poor health was given as the reason for failure on 6 farms. Expenses attributed to sickness were mentioned among reasons for failure on 23 of the 103 farms visited.

Crop failures.—Mentioned as a cause of failure on only 3 farms, even tho drouth and insect damage have frequently been severe in this area.

INFLUENCE OF DEBT BURDENS ON USE OF LAND AND ON FARM ORGANIZATION

Closely related to successful lending on farm lands is the question of maintaining the basic security in a productive condition. On many foreclosed properties evidences of deterioration of buildings and depletion of soil fertility are readily noted. Yields usually are low, and neighboring farmers usually state that the soil has been seriously depleted by intensive cropping.

How indebtedness affects land use, or how land use affects lending experience has not been given much attention in studies of lending experience. In this study, therefore, an analysis was made of land-use data on 338 farms for which information on mortgage debts and cropping systems was available, and another analysis was made of the effect of indebtedness on farm organization on 92 farms not included among those reported on thus far.

Land Use at Different Levels of Soil Productivity

Crop histories for 338 of the farms in the seven counties were obtained from the files of the 1936 soil conservation committees thru the cooperation of the local secretaries. Only those records were used where the areas mortgaged were the same as the areas farmed. The 338 farms were classified on the basis of their soil-productivity ratings[1] (Table 32).

Of the 338 farms, the 28 percent located on good soils averaged 112 acres, the 43 percent on intermediate soils 103 acres, and the 29 percent on inferior soils 105 acres. The exclusion of farms on which the number of acres mortgaged differed from the number operated caused the group to average smaller per farm than the average of the farms in the area. This difference was greater on good soils than on intermediate or inferior soils because relatively fewer of the borrowers on good soils had to mortgage the entire farm.

Some noticeable differences in land use were found among the

[1]As outlined on pages 464 to 468.

TABLE 32.—HOW LAND WAS USED IN 1935 ON 338 OF THE 827 FARMS STUDIED

Item	Good soils	Intermediate soils	Inferior soils
Number of farms	95	144	99
Number of acres mortgaged	112	103	105
Estimated value per acre	$ 206	$ 115	$ 87
Size of loan	$9 215	$4 611	$3 711
Loan per acre	82	45	35
Loan ratio, percent	39.5	38.3	39.9
Percent of total land in hay and pasture	20.4	42.0	37.3
Percent of total land in crops	85.6	65.8	73.4
Percent of cropland in—			
Corn	39.0	33.6	26.6
Wheat	9.1	3.7	5.3
Oats	15.6	5.9	7.1
Soybeans	18.6	17.4	16.3
Broomcorn	3.4	5.5	5.5
Other crops	1.5	2.8	2.6
Soil-depleting crops	87.2	68.9	63.4
Hay	6.8	16.9	16.6
Idle land	.4	4.1	9.5
Rotation pasture	5.6	10.1	10.5
Estimated corn yield, bushels per acre	39.1	29.9	24.5

farms in the different productivity groupings. On the good soils 86 percent of the land was in crops, on the intermediate soils 66 percent, and on the inferior soils 73 percent. On most of the farms the operators planted as large acreages of crops as the topography of their land permitted. Some of the intermediate soils have a rolling topography, and erosion makes it necessary to keep the steeper land in permanent pasture, with the result that the percentage of land in crops is necessarily lower than on less-rolling land. Farms on the inferior soils were flatter and not so well drained and had more idle land and pasture than the farms on the good soils.

The proportion of total land in hay and pasture averaged 20 percent on good soils, 42 percent on intermediate soils, and 37 percent on inferior soils. Thirty-nine percent of the cropland on good soils was in corn, compared with 34 percent on intermediate soils and 27 percent on inferior soils. A smaller proportion of the cropland also was in oats or wheat on the intermediate and inferior soils than on the good soils. The percentage of cropland in soybeans was approximately the same in the three soil groups. Soybeans are grown on the inferior soils because a fair stand may be secured even tho they are seeded toward the last of May or the first of June. More broomcorn was grown on intermediate and inferior soils than on the good soils. In the opinion of many operators, the inferior soils produced relatively better yields of broomcorn than of field corn. Broomcorn is a sorghum, and

sorghums are generally adapted to more difficult conditions than field corn and can usually be planted at a later date.

The proportion of cropland in soil-depleting crops, as defined pursuant to the Soil Conservation Act, was 87 percent on good soils; 69 percent on intermediate soils, and 63 percent on inferior soils. Each farm in the AAA program was appraised by a local committee and the normal yield of corn estimated for any land that had been in corn in at least one of the preceding five years. Since corn occupies a dominant place in the cropping program in this area, this appraisal amounted to an estimate of the productivity of the cropland on each farm, based on the best evidence that the local committees could obtain regarding the performance of the land over a period of years.

The simple averages of estimated corn yields were 39 bushels an acre on the good soils, 30 bushels on the intermediate soils, and 24 bushels on the inferior soils.

More Extractive Farming Where Loans Were Unsuccessful

According to the data on use of land on these farms in 1935, the borrowers in financial difficulty were following an extractive system of farming (Table 33). The farms on which loans were unsuccessful (delinquent or foreclosed) were larger in size and had larger loans per farm and per acre and higher loan ratios than farms with successful loans. On good and on inferior soils, appraised value per acre was higher on the farms with unsuccessful loans than on those with successful loans; but on the intermediate soils, it was approximately the same on farms with successful and those with unsuccessful loans.

Percent of land in crops.—In each soil group delinquent and foreclosed farms had a larger percentage of their total land in crops than farms with successful loans. For example, on good soils the farms in financial difficulties had 91.8 percent of their land in crops, whereas those having no loan difficulties had only 84.8 percent of their land in crops. The percent of the land in hay and pasture varied in the opposite direction. On the good soils 22 percent of the total acreage of farms with loans in good standing was in hay and pasture; on the delinquent or foreclosed farms only 13 percent was in hay and pasture. On the inferior soils the percentages in hay and pasture were higher but the relationships were similar.

Farmers having heavy cash payments to meet may be forced to use a large percentage of their land for cash crops. Many of the borrowers interviewed indicated that they hoped to pay their debts by having a large percentage of land in cash crops in years when yields and prices

TABLE 33.—APPRAISED VALUE, AMOUNT OF LOAN, AND 1935 LAND USE, 338 ILLINOIS FARMS GROUPED ACCORDING TO SOIL PRODUCTIVITY AND SUCCESS OF LOAN[a]

Item	Farms on good soils		Farms on intermediate soils		Farms on inferior soils	
	Loan successful	Loan delinquent or foreclosed	Loan successful	Loan delinquent or foreclosed	Loan successful	Loan delinquent or foreclosed
Number of loans	84	11	112	32	66	33
Average acres mortgaged	112	116	100	116	99	118
Loan ratio, percent	39.0	43.3	37.3	42.0	38.1	43.4
Loan per farm	$8 968	$11 100	$4 344	$5 547	$3 250	$4 632
Loan per acre	80	96	43	48	33	39
Appraised value per acre	203	227	115	112	83	92
Percent of total land in hay and pasture	21.5	12.7	45.2	35.4	40	32.9
Percent of total land in crops	84.8	91.8	65.5	66.7	71.9	75.9
Percent of cropland in—						
Corn	38.7	40.8	33.1	35.0	24.2	30.2
Wheat	9.0	10.2	3.7	3.7	7.0	2.6
Oats	15.0	19.7	6.0	5.5	6.8	7.7
Soybeans	18.4	20.0	18.1	15.5	14.3	18.5
Broomcorn	3.8	.6	3.7	10.7	6.3	4.2
Other crops	1.5	1.2	2.7	2.2	2.2	3.3
Total depleting crops	86.4	92.5	67.3	73.6	60.8	67.5
Hay	6.7	6.7	18.2	13.0	18.0	14.3
Idle land	.5	0	3.0	7.6	8.5	11.2
Rotation pasture	6.4	.8	11.5	5.8	12.7	6.9
Average corn yield, bushels	39.2	38.9	30.1	29.3	24.6	24.6

[a]Loan status as of April 1, 1936.

were good. A high proportion of land in cash crops may not be particularly harmful to the soil for a limited period, but the tendency is to continue the practice until the soil is depleted and crop yields are lowered.

Percent of cropland in soil-depleting crops.—In each soil group the delinquent and foreclosed farms had a larger percent of cropland in corn than did those on which loans were successful. This difference was greatest in the inferior-soil group, where for every 100 acres the farms with unsuccessful loans had an average of 6 acres more in corn than did the farms with successful loans. For both good and intermediate soils this difference was only 2 acres per 100.

On good soils the percentages of the cropland in soil-depleting crops were 86 and 92, respectively, for farms with successful loans and those with unsuccessful loans. Similar percentages were 67 and 74 for farms on intermediate soils, and 61 and 68 for farms on inferior soils.

Percent of land in hay and pasture.—In each soil group the farms with successful loans had a larger percentage of land in hay and pasture than the farms with unsuccessful loans. It is logical to

assume that more hay and pasture indicated more livestock. Farmers in financial difficulty are often forced to sell feed crops and livestock to meet interest and principal payments, and therefore accumulation of livestock is difficult. Such selling may relieve the immediate pressure, but ultimately it will decrease the borrower's capacity to pay.

Percentage of idle cropland.—The large percentage of idle cropland on farms with unsuccessful loans on intermediate and inferior soils indicated inefficient operation.

Loan Ratio and Percent of Land in Soil-Depleting Crops

Of the farms on good soils and on which loans were successful, those having loans of more than $90 per acre had an average of 88 percent of their total area in crops, whereas those having loans of $30 to $49 per acre had an average of 79 percent of their area in crops (Table 34). In all soil groups, crop acreage tended to comprise a larger percentage of the total farm area as loan per acre was higher. This relationship was not so marked on farms with unsuccessful loans, for the owners of those farms were inclined to devote as large a propor-

TABLE 34.—PERCENT OF FARM LAND IN CROPS DURING 1935 ON 338 ILLINOIS FARMS GROUPED BY SOIL PRODUCTIVITY, LOAN PER ACRE, AND SUCCESS OF LOAN[a]

Loan per acre	Successful loans			Delinquent and foreclosed loans		
	Number	Percent of land in crops	Appraised value of land per acre	Number	Percent of land in crops	Appraised value of land per acre
On good soils						
$90 or more	34	87.5	$234	7	92.1	$248
70–89	26	83.6	200	4	91.2	189
50–69	13	84.5	174	0	....	....
30–49	11	78.7	159	0	....	....
On intermediate soils						
$70–89	15	81.9	$196	5	87.1	$212
50–69	20	69.4	145	9	58.7	129
30–49	48	65.8	107	15	66.4	94
10–29	29	54.2	67	3	67.5	64
On inferior soils						
$50–69	10	79.1	$134	6	82.7	$140
30–49	18	72.9	99	18	74.4	94
10–29	38	68.6	55	9	74.8	62

[a]Status of loan on April 1, 1936.

tion of their land to harvested crops as the contour of the land would permit. These latter farms thus offer an extreme example of the principle being discussed.

Within each soil group the appraised value per acre paralleled the amount loaned per acre. Possibly the larger loans were made on the better-quality soils, and the year when the loans were made must also be considered (page 479). To the extent to which the larger loans

TABLE 35.—PERCENT OF LAND IN ALL CROPS AND PERCENT IN SOIL-DEPLETING CROPS DURING 1935, ON 338 FARMS GROUPED BY SOIL PRODUCTIVITY, LOAN RATIO, AND SUCCESS OF LOAN[a]

Loan ratio, percent	Successful loans				Delinquent and foreclosed loans			
	Number	Appraised value of land per acre	Percent of land in crops	Percent of cropland in soil-depleting crops	Number	Appraised value of land per acre	Percent of land in crops	Percent of cropland in soil-depleting crops
On good soils								
45–50	24	$199	85.3	85.3	6	$200	90.1	98.0
39–44	26	201	85.2	89.9	5	256	93.5	86.8
33–38	20	206	84.5	86.2	0	...	....	....
27–32	14	217	82.5	79.7	0	...	....	....
On intermediate soils								
45–50	23	$110	68.2	68.1	10	$111	68.7	73.6
39–44	30	127	66.5	63.6	12	118	61.6	79.1
33–38	29	99	61.6	65.8	6	117	69.9	67.9
27–32	29	125	65.0	72.1	3	90	78.0	52.3
On inferior soils								
45–50	14	$ 81	70.0	63.0	12	$ 84	82.9	64.7
39–44	20	89	60.7	81.9	18	96	82.9	73.1
33–38	17	77	77.9	49.7	3	86	82.2	56.8
27–32	14	79	71.8	58.7	0	...	....	....

[a]Status of loan on April 1, 1936.

were made on the better soils, a positive correlation between percent of land in crops and amount loaned per acre would be expected. That these variations in quality of soil largely explain the tendency for the percent of land in crops to increase with amount of loan per acre, as shown in Table 34, is indicated by comparisons based on loan ratios shown in Table 35. The loan ratio is a good indicator of the debt burden of a borrower, as it represents the loan as a percentage of the appraised value of the land when the loan was made. There was not

much tendency for the percent of land in crops to increase as the loan ratio increased. For successful loans on good soils the proportion of total land in crops averaged 82 percent where the loan ratios were 27 to 32 percent and 85 percent where the loan ratios were 45 to 50 percent.

For reasons already noted (page 511), the percent of land in crops was less on farms where loans were successful than on farms where they were delinquent or foreclosed. These comparisons are based on total acreage in crops, including both soil-depleting and grass crops. Where topography is reasonably level, a high proportion of land in crops indicates little waste land.

A more important point is the way in which this cropland is used—whether too high a proportion of it is in soil-depleting crops. No clear-cut relationship between loan ratios and percent of land in soil-depleting crops was indicated by these data (Table 35). On the inferior soils the farms with successful loans and debt ratios over 38 percent had a larger percentage of land in soil-depleting crops, and there was a slight indication that this was also true on good soils. In general, farms having unsuccessful loans had higher percentages of land in soil-depleting crops than those where loans were successful, particularly when debt ratios were high.

Effect of Indebtedness on Farm Organization

The amount of available capital is an important factor in the success of a farm. In an effort to discover how debts influence farm earnings and organization, data were collected from Illinois farmers who kept farm accounts in cooperation with the Department of Agricultural Economics, University of Illinois, during 1935. When the farm financial summaries were returned, the farmers were asked to list their liabilities. On the basis of this information and the assets shown in the farm accounts, a financial statement was set up for each operator and the ratio of debts to assets was calculated. From these statements it was evident that a farming business burdened by a high debt ratio can be organized so that it can earn a good return on invested capital without following a soil-depleting system of farming.

Ninety-two records were available for owner-operated farms in central Illinois. When grouped by debt ratios, they were distributed as follows: no debts, 20; debts equal to 1 to 24.9 percent of the property, 30; debts equal to 25 to 49.9 percent of the property, 27; and debts equal to 50 percent or more of the property, 15.

The indebtedness of the farms averaged as follows:

	Indebtedness when loan ratios were—			
	No debts	*1–24.9 percent*	*25–49.9 percent*	*50 percent or more*
Long-term debts.....	0	$3 450	$9 228	$17 527
Short-term debts.....	0	1 668	1 078	1 066
Total indebtedness.....	0	5 118	10 306	18 593

Averages of various factors for these groups of farms are shown in Tables 36 and 37.

Farms with heavier debts earned higher rates. The farms with light debts averaged 243 acres in size and had an average investment of $45,000, compared with 189 acres and $30,000 for farms with heavy debts. On these farms with light debts, cattle, hogs, and grain were the three principal sources of income; while on the farms with heavy debts, grain, hogs, and dairy sales were most important. Apparently at this period the farmers who had heavy debts avoided cattle feeding, which requires heavy capital investments. Expenses varied approximately in proportion to acreages. Larger acreages, larger-scale operation, and more beef cattle on the farms with the lighter debts were the principal differences between the groups.

Both gross and net receipts per acre were higher on the more heavily indebted farms, but the total investment, as set up in the accounts, was less (Table 36). Hence these farms having the heavy debts earned a higher rate on the capital invested than the farms with lighter debts, even tho the farms with lighter debts were larger and had the larger cash incomes. The fact that lower rates were earned by the farms with the lighter debts indicates that the capital investment (assuming accurate property valuations) was not being used as efficiently on these farms as on the farms carrying the heavier debts.

Cropping systems about the same. There were no significant differences in the cropping systems of these two groups of farms. On the more highly valued farms with low debts, corn yields were higher, as would be expected. These higher yields may have been caused in part by the fact that more livestock was kept on these farms, as judged by the larger amounts of feed fed per acre to productive livestock. On the farms with higher debts, returns from feed were higher, reflecting, in part, more dairy cattle on such farms. On the smaller high-debt farms, labor costs per acre were higher but power and machinery costs were lower.

These differences in 1935 between the farms having heavy debts and those having lighter debts may be summarized as follows: The

TABLE 36.—INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS IN 1935 ON 92 CENTRAL ILLINOIS FARMS HAVING DIFFERENT DEBT RATIOS[a]

Item	Farms with no debt	Farms having debt ratios of—		
		1 to 24.9 percent	25 to 49.9 percent	Over 50 percent
Number of farms	20	30	27	15
Capital investments				
Land	$20 231	$32 150	$26 552	$21 584
Farm improvements	4 487	5 623	5 765	3 664
Horses	385	529	590	422
Cattle	1 171	1 156	749	948
Hogs	270	455	214	264
Sheep	64	29	9	13
Poultry	124	102	97	104
Bees	0	15	51	5
Machinery and equipment	1 449	1 910	1 555	1 443
Feed, grain and supplies	2 547	2 824	2 236	1 761
Total capital investment	$30 728	$44 793	$37 818	$30 208
Receipts and net increases				
Horses	$ 28	$ 105	$ 98	$ 111
Cattle	1 042	1 594	455	525
Hogs (including AAA payments)	1 481	1 471	702	892
Sheep	123	59	11	116
Poultry	140	120	109	162
Egg sales	318	168	184	158
Dairy sales	486	369	798	650
Bees	0	5	9	2
Feed and grains (including AAA payments)	153	1 124	1 595	1 447
Labor off farm	78	57	80	107
Miscellaneous receipts	439	286	194	131
Total receipts and net increases	$ 4 288	$ 5 358	$ 4 235	$ 4 301
Expenses and net decreases				
Farm improvements	$ 226	$ 266	$ 268	$ 161
Machinery and equipment	481	466	414	336
Livestock expense	59	41	44	30
Crop expense	192	217	185	196
Hired labor	449	369	287	264
Taxes	214	259	233	202
Miscellaneous expenses	81	43	37	34
Total expenses and net decreases	$ 1 702	$ 1 661	$ 1 468	$ 1 223
Receipts less expenses	$ 2 586	$ 3 697	$ 2 767	$ 3 078
Total unpaid labor	706	641	806	644
Operator's labor	502	484	517	519
Family labor	204	157	289	125
Net income from investment and management	1 880	3 056	1 961	2 434
Rate earned on investment, percent	6.12	6.82	5.19	8.06
Return to capital and operator's labor and management	$ 2 382	$ 3 540	$ 2 478	$ 2 953
Labor and management wage	846	1 300	587	1 443

[a]Ratio of debt to estimated value of property.

farms with higher debts had on the average smaller acreages, lower total investments, smaller sales of hogs, slightly poorer corn yields, higher returns from feed fed, more expense for labor, and less expense for machinery. Fewer cattle were fed on these farms, more dairying was done, and less grain was fed. Cropping systems of the two groups were similar.

The probable reasons for these differences were the following: In that period the farmers that were in debt kept down the size of their

TABLE 37.—FACTORS AFFECTING THE FARM BUSINESS ON 92 CENTRAL ILLINOIS FARMS HAVING DIFFERENT DEBT RATIOS, 1935

Item	No debts	Debt ratio		
		1 to 24.9 percent	25 to 49.9 percent	Over 50 percent
Number of farms	20	30	27	15
Size of farm, acres	231.1	242.7	211.2	188.5
Percent of land tillable	78.8	88.4	89.8	95.2
Gross receipts per acre	$ 18.55	$ 22.07	$ 20.05	$ 22.82
Total expenses per acre	10.42	9.48	10.77	9.91
Net receipts per acre	8.13	12.5	9.28	12.91
Value of land per acre	$ 88	$ 132	$ 126	$ 114
Value of improvements per acre	19	23	27	19
Total investment per acre	133	185	179	160
Percent of tillable land in—				
Corn	28.3	36.8	34.2	35.5
Oats	14.2	20.4	24.2	21.1
Wheat	3.1	.3	1.6	2.1
Soybeans for grain	15.8	11.1	8.2	15.2
Other cultivated crops	4.9	4.6	5.3	3.0
Legume hay and pasture	18.8	20.3	20.0	18.0
Non-legume hay and pasture	14.8	4.1	5.5	5.2
Crop yields				
Corn, bushels per acre	52.4	61.8	59.2	58.8
Oats, bushels per acre	40.6	33.2	34.8	39.1
Wheat, bushels per acre	20.0	19.8	19.5	18.7
Soybeans, bushels per acre	19.7	24.9	24.6	18.4
Productive livestock				
Value of feed fed, total	$2 215	$2 601	$1 349	$1 433
Value of feed fed per acre	9.58	10.72	6.39	7.60
Returns per $100 feed fed	162	146	169	175
Receipts per acre	15.53	15.59	10.78	13.29
Returns per $100 invested in—				
Cattle	130	170	168	124
Poultry	369	282	304	308
Pigs weaned per litter	6.3	6.4	5.7	5.7
Income per litter farrowed	$ 154	$ 156	$ 125	$ 99
Dairy sales per dairy cow	71	61	85	84
Man labor cost per $100 gross income	$ 26	$ 18	$ 25	$ 20
Man labor cost per crop acre	7.55	5.39	6.38	5.70
Machinery cost per crop acre	3.25	2.55	2.59	2.20
Power and machinery cost per crop acre	4.58	3.64	3.42	2.83
Number of work horses	4	4.9	5.2	4.4
Value of feed fed to horses	$ 224	$ 303	$ 252	$ 206
Cash balance	$2 092	$2 472	$1 933	$1 779
Net cash after interest payment	2 092	2 256	1 359	1 045

operations; avoided cattle feeding, which required added large-scale borrowing; emphasized dairying, which utilized more labor and furnished more regular income than cattle feeding; used more labor; and spent less on machinery.

Farms clear of debt. The debt-free farms represented about the same average investment as the high-debt farms, altho more acres of cheaper land, with a smaller proportion of it tillable, were included in

the debt-free group. Farmers on the debt-free farms fed more cattle and hogs, gave less attention to dairying, sold but little grain after allowing for feed purchases, fed much grain to livestock and obtained good returns from it, and had relatively high expenses, low labor efficiency, low net receipts per acre (in part, because of poorer land), relatively less land in corn and oats and more in nonlegume hay and pasture, and somewhat lower crop yields. This group probably included more older men who owned cheaper land, emphasized livestock, and were not forced to economize on labor and equipment.

SUMMARY

For the purpose of discovering what factors determine the success or failure of mortgage loans on farm real estate, a study was made of the history of 827 first-mortgage loans made between 1917 and 1933 in seven adjoining counties in east-central Illinois. The study covered a period of declining prices, from 1920 to 1933, that lowered farm incomes and severely tested lending policies. On April 1, 1936, 14 percent of the loans had been paid in full; on 52 percent all interest and principal payments had been paid to date; on 17 percent time extensions had been granted; 4 percent were delinquent; and 13 percent had been foreclosed or the farms voluntarily turned over to the lender by the borrower.

For each of the 827 first-mortgage loans studied, information concerning the farm and the borrower, and other facts concerning the history of the loan, were obtained from records in the files of the lending institutions, and recorded on cards designed for use with Hollerith mechanical sorting and tabulating equipment. The soils of each farm were ascertained by means of a soil map, and an average productivity rating for each farm was calculated by multiplying by the appropriate soil-productivity rating. On the basis of these ratings the loans were divided into three major groups—those secured by farms on good soils, those secured by farms on intermediate soils, and those secured by farms on inferior soils—and the analyses of all other factors influencing the course of these loans were made separately for each of these groupings.

Other sources of information, in addition to the files of the lending companies, also were used. Opinions concerning reasons for foreclosures of 103 of the loans were obtained by personal visits to the farms foreclosed and by interviews with several individuals acquainted with each borrower. Data concerning land use in 1935 on 338 of the

827 farms were obtained from the secretaries of the county soil-conservation committees.

Analysis of Experience With 827 Farm Loans

Soil productivity. Thirty-three percent of the loans were made on farms having good soils, 39 percent on farms having intermediate soils, and 28 percent on farms having inferior soils. Of the 108 acquired farms, 21 percent had good soils, 35 percent had intermediate soils, and 44 percent had inferior soils.

The net loss on 108 foreclosed farms was $39.67 per $1,000 loaned on all 827 farms. On farms on good soils, the loss per $1,000 loaned on farms on these soils averaged $16.10; on farms on intermediate soils, $45.99; on farms on inferior soils, $106.29.

The amount loaned averaged 36 percent of the appraised value of the farm in the case of loans that had been paid in full, and 43 percent in the case of loans that had been foreclosed. In each soil group, those loans that were delinquent or had been foreclosed were secured by a larger acreage, as an average, than were the other loans.

Yield of corn per acre. On most of the foreclosed farms on good soils the estimated yield of corn was more than 45 bushels an acre, and on most of the foreclosed farms on intermediate and inferior soils it was less than 35 bushels an acre. In each soil group the farms having the highest estimated yields were appraised at the highest value. But even where corn yields were high, the borrowers had difficulty in paying off their loans when the loan ratio also was high. On many of the foreclosed farms crop yields had declined, with the result that the meeting of payments on interest and principal had become more difficult than when the loans were first made.

Appraised value per acre. In each soil group the higher the appraised value per acre, the higher was the percentage of foreclosures and the greater were the net losses on foreclosed farms. The net loss on farms appraised at $50 to $99 per acre was $92 per $1,000 loaned and on farms appraised at $150 to $199 per acre it was $145.

Time when loan was made. Because land values rose during the early years covered by this study and declined during the later years, the appraised values per acre, the amounts loaned per acre, and the loan ratios all were higher for the loans made during the earlier years. For each soil group the percentage of foreclosure was higher and the losses heavier on the loans made before 1925. Most of the foreclosures occurred from 1932 to 1935.

Loan ratio. For the majority of the loans the amount loaned was 40 to 50 percent of the appraised value of the mortgaged tract. Within each soil group a smaller percentage of the loans on farms having low loan ratios were foreclosed than of those on farms having high loan ratios. The net loss on foreclosed farms per $1,000 loaned on all farms was $3 where loan ratios were from 20 to 29 percent, and $57 where loan ratios were over 40 percent.

Topography. More than three-fourths of all the farms had level to undulating topography. The percentage of foreclosures was higher among the farms with rolling topography, however, than among those on level land. For the loans on inferior soils the net loss per $1,000 loaned was $76 where the loan was secured by level land and $216 where it was secured by rolling land. Rolling and rough lands were overvalued.

Drainage. Descriptions of drainage conditions on the mortgaged farms were not sufficiently accurate to permit a study of drainage in relation to loan experience.

Type of road and miles to shipping point. Loans were slightly more successful on farms located on good roads or near shipping points than on those located on poorer roads or more distant from shipping points.

Acres mortgaged per farm. About 60 percent of the 827 loans were secured by tracts of less than 100 acres each, with 80-acre tracts most common. On good soils the mortgaged tracts were somewhat larger than on inferior soils. On good soils the farms of medium size proved better risks than either the smaller or the larger farms. On inferior soils the smaller farms made the best showing.

Percentage of total acres in crops. The percentage of foreclosures tended to be higher where a high proportion of land was in crops.

Most important crop. No definite relation between principal crop grown and success of loans was indicated. On most of the farms the principal crop was corn.

Number of dairy cows. Dairying was not an important enterprise on many of these farms. The percentage of foreclosures was lower on farms having more than six dairy cows than on farms having fewer dairy cows, tho this relationship probably was not significant.

Number of poultry. Foreclosure percentages were lower among the farms where more hens were kept, particularly on the inferior soils. Whether this reflected greater income from poultry, or more industry

and thrift on farms where more poultry was kept, could not be determined from the available data.

Appraised value of house and other buildings. The value of the residence did not significantly affect the success of the loans.

Farming experience of borrower. The number of years the borrower had farmed in the area seemed not to be correlated to any marked extent with the success of the loan. About half the borrowers, at the time their respective loans were made, had farmed the mortgaged land seven or more years.

Age of borrower. Borrowers whose farms were on good soils averaged older than those whose farms were on intermediate or inferior soils. Of the borrowers on good soils, those between 30 and 50 years of age carried their loans most successfully, whereas on intermediate and inferior soils the older borrowers were the least successful.

How farms had been obtained by borrowers. Only 14 percent of the farms were obtained by inheritance, but those so obtained were generally more valuable than those acquired by cash or trade. Loans made on purchased farms were more successful than those on farms inherited or acquired by gift.

Local Opinions Regarding Reasons for Foreclosure

In a special study of 103 farms that had been acquired by the lenders, individuals acquainted with each situation were interviewed regarding the reasons why the borrower failed. Tho the comments of these acquaintances probably overemphasized personal factors, they nevertheless give a good indication of the importance of the personal characteristics of a borrower in the successful paying out of a loan.

Personal. Some personal factor was given as the most important reason for the failure of 47 of the 103 borrowers. In order of importance these personal factors were: (1) poor management; (2) personal extravagance; (3) laziness; (4) indifference; (5) abandonment of premises; (6) failure to control erosion; (7) inability of joint borrowers to agree; (8) too much equipment; and (9) families too large for their farms.

Accidental. Some accidental factor was reported as the most important reason for the failure of 29 of the 103 borrowers. Death and ill health of the borrower or other members of the family are things that cannot be foreseen, yet they may have a very depressing influence on the ability of a family to pay its debts.

Capital. Capital factors were reported to be the important cause of the difficulty in which 27 of the 103 borrowers became involved. The capital factors listed were: (1) too heavy indebtedness; (2) speculative and personal losses on farms or outside business, and (3) low incomes.

Land Use and Debts

Information pertaining to land use in 1935 on 338 farms with known loan history was obtained from the secretaries of the county soil-conservation committees; and data on the effects of debt load on farm earnings and farm organization were obtained from farm accounts kept by 92 farmers in central Illinois in cooperation with the Department of Agricultural Economics, University of Illinois. The most important indications as to the relation between debts and land use or farm organization were the following:

1. On delinquent and foreclosed farms in all three soil groups the percentage of land in crops was higher than on farms on which the loans were successful.

2. In each soil group, the amount of cropland in soil-depleting crops was approximately 6 acres more per hundred on farms where loans were delinquent or foreclosed than on farms where loans were successful. Corn was the principal soil-depleting crop.

3. On farms where loans were successful, the proportion of land in rotation pasture was higher than on those where loans were delinquent or foreclosed.

4. Where loans were successful, no definite relationship was indicated between loan ratio and percentage of cropland in soil-depleting crops.

5. Within each soil group there was a slight tendency for the farms with successful loans and high loan ratios to have a high percentage of total land in crops. The tendency was less marked where loans were delinquent or foreclosed. In general, the percentage of total land in crops was higher on farms where loans were delinquent or foreclosed than on farms where loans were successful.

CONCLUSIONS

Lending policies. From the foregoing study of the experiences of agencies making farm loans during the period 1917-1933, a period when lending policies were severely tested because of declining prices of farm products and land, the following conclusions on loan risks may be drawn.

1. The higher the loan in relation to the appraised value of the land, the greater the likelihood of foreclosure.

2. Losses to lenders are likely to be heavier on poor soils than on good soils.

3. Under conditions like those in east-central Illinois, loans on rolling land are more hazardous than those on more level land, because of the greater difficulty of controlling erosion on the rolling land.

4. Difficulties with loans are particularly likely to develop in border areas between good and poor land.

The way for lenders to avoid, or at least to reduce, these hazards is obvious: they should avoid lending too much in relation to the value of the land, particularly on the poorer and more rolling lands.

The question may be raised, if such policies are followed by lenders, how are borrowers in such areas of poor soils or rolling lands to be financed? The answer is that the more conservatively the farmers in such areas use borrowed funds, the better off both they and the communities will be. Land values in such areas should be kept free from the inflating influence of liberal credits. Such lands simply will not carry heavy debt burdens.

Protection to loans made. From the lending experience studied here, particularly the experience with those loans which had to be foreclosed, the conclusion is obvious that lending agencies should give close attention to the borrower and his family when he begins to have trouble in meeting his loan obligations.

These agencies should be on the lookout for both the source of the difficulty and the effect of it on the basic security for the loan. If the trouble is caused by personal or family problems,—poor farming, extravagance, ill health, and the like,—good advice or appropriate help from the lender at the right time will sometimes save loans that otherwise would go on to foreclosure. Moreover, borrowers who find difficulty in meeting principal and interest payments tend to adopt extractive methods of farming, to the detriment of the land. It is to the interest of lenders that they watch such situations closely and encourage the borrowers to follow sound farming practices as far as possible, for lenders cannot afford to let the land, which is the basic security for a farm loan, become seriously depleted. Farms having high debt ratios are the ones to watch particularly closely, for trouble with loans on such farms is more common than with loans on other farms.

Other related conclusions. Certain other conclusions not strictly based on the data studied are suggested by some aspects of it:

1. A requirement by lending agencies that borrowers (especially those with high loan ratios) must carry adequate life insurance, would be a valuable protection both to lenders and to borrowers. The amount of insurance required should ordinarily not be enough to cover the entire indebtedness but should be adequate to reduce the debt to a point where, in case of the death of the operator, the land could carry the remaining load with little difficulty.

2. As a protection against the difficulties that are experienced with farm loans when farm incomes are low, creditor agencies might profitably encourage a system of variable principal payments adjusted to the fluctuations in farm income. The terms of the loan could call for higher principal payments when farm incomes are higher, and lower principal payments when farm incomes are lower.

3. Further studies of lending experiences are needed, particularly studies of the influence of the personal characteristics of borrowers on the success of loans, and of the effects of indebtedness on farm organization and land use.

LIST OF TABLES AND CHARTS

TABLES—(concluded)

CHARTS