

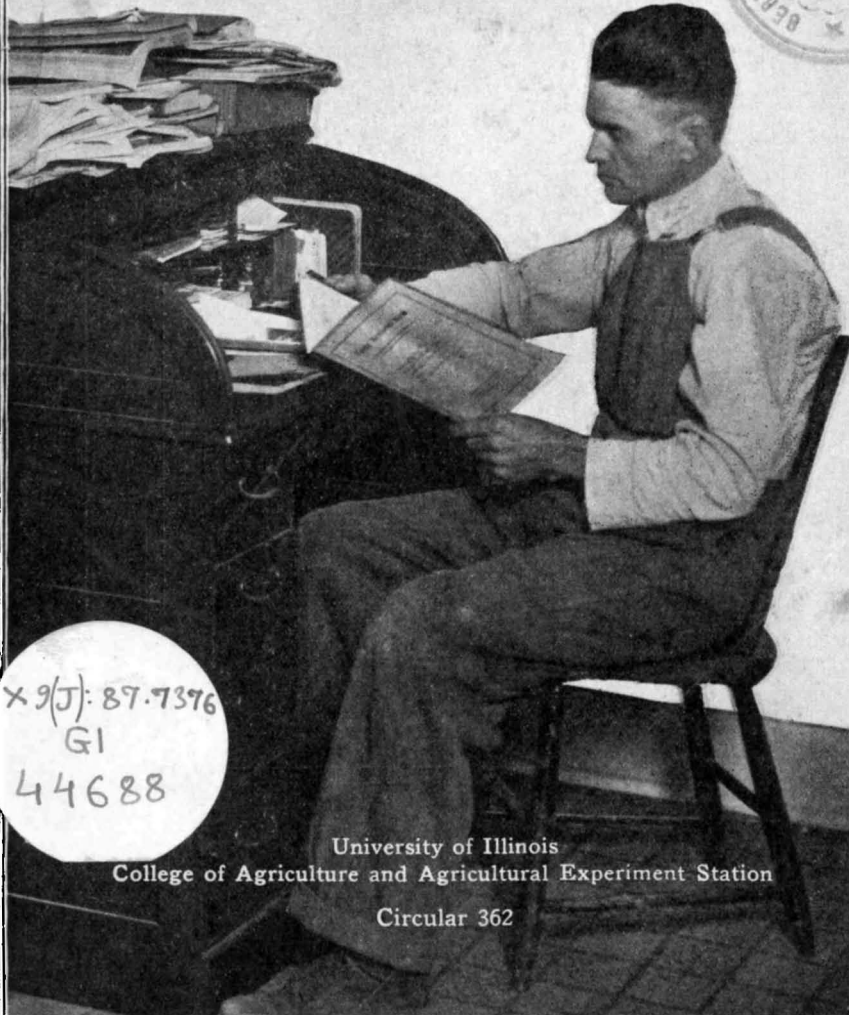
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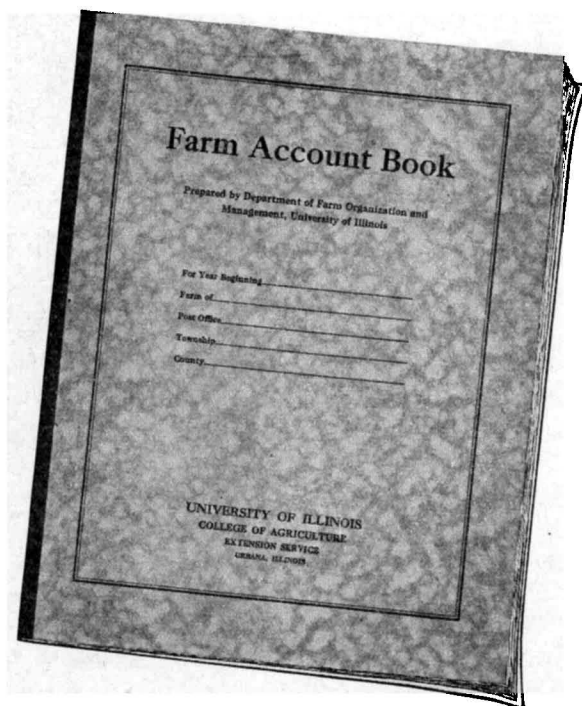
Farm Accounts That Count

By R. R. HUDELSON



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How the Illinois farm account book, shown above, is helping many farmers increase their earnings by \$600 to \$2,000 a year is explained in this circular. The book and its benefits are within reach of every farmer who will meet certain necessary conditions. Those interested can secure information from their county farm adviser or the Department of Farm Organization and Management, College of Agriculture, University of Illinois.

Farm Accounts That Count

R. R. HUDELSON, Associate Chief in Farm Organization and Management

FARM accounts have led many Illinois farmers to increase their earnings by \$600 to \$2,000 a year. This usually has required a few years of time, but accounts will earn profits for any farmer who will keep them and use them.

The best farmers in a community, for instance, each make \$1,500 to \$3,000 more a year than their least successful neighbors. Standard accounts, as kept in the Illinois farm-accounting service, show the reasons for the lower earnings on the less successful farms and for the higher earnings on the best managed farms. These reasons are a sure guide to higher efficiency and better earnings.

Perhaps the grandfathers of present-day farmers didn't need to keep systematic accounts. Since then, however, farming has become a business in the strictest sense of the word. The central Illinois farmer of today takes in more money in a year than the one of fifty or sixty years ago had invested in his entire business. The modern farmer borrows more capital than would have been thought possible a generation ago. He has more competition, he risks more money and credit, costs are higher, there is a wider choice of products to raise, there are more kinds of power and equipment to use, insect pests and diseases are worse, fertility of the land is lower, there are new markets available and new ways of getting goods to them, and there are more opportunities for making wrong decisions which may lead to money and credit losses. Studies on the same farms over a fifteen-year period show that the spread in earnings between the least successful and the most successful is becoming wider.

Under these conditions better methods of doing business have to be used. There is need especially for some way of making choices and decisions which will reduce losses and increase profits. The standard accounting service started in 1916 by the University of Illinois Department of Farm Organization and Management is designed to fill this need. In 1929 approximately 2,000 farmers completed their accounts and had them analyzed by the Department.

The purpose of this service is (1) to provide the farmer with a guide for the management of his business; (2) to arrive at some general conclusions about the factors causing differences in earnings from farm to farm; and (3) to measure the effect of changing seasonal and economic conditions on the level of farm earnings.

The Illinois standard accounting service includes: (1) furnishing an account book developed out of years of experience in this work; (2) helping the individual start his accounts; (3) checking the account for completeness and accuracy at the close of the year; (4) analyzing the account and setting it up in such a way as to emphasize the points of strength and weakness in the business; and (5) visiting the farmer to discuss briefly with him the final summary of his preceding year's business.

Simplicity Makes Illinois Book Popular

The Illinois farm-account book attempts to provide for the greatest amount of useful information with the least amount of time spent in account keeping. The fact that about 6,000 Illinois farm-account books are now distributed each year and more than 2,000 are kept in a supervised accounting service shows this book is useful.

One of the things which makes the Illinois book an especially valuable guide is the fact that the income and expense items are classified in order to make possible a careful analysis. Some books are easier to keep than the Illinois one because all the items of income and expense are entered in one place without classification. The time thus saved is very little, however, and the method does not help the farm operator learn the relative efficiency of different phases of his business. The Illinois book, like any other useful guide, also carries an inventory of farm property at the beginning and end of the year. Supplementary records as to the production of crops, livestock, and livestock products add much to the value of the record.

Another feature of the Illinois farm-account book is that it contains detailed instructions for closing and summarizing the year's accounts. With no previous experience or training practically anyone, by following these directions, can compute his earnings and analyze his investment, his income, and his expenses. He can also compute certain efficiency factors which, if compared with standards on average or successful farms in the same locality, will show which phases of the business need improvement most. It is improvement at these points of weakness which usually adds most to the net income.

A supply of farm account books is kept in each county adviser's office, and they are also available thru the Department of Farm Organization and Management, College of Agriculture, Urbana, Illinois.

Farmers May Start Accounts in Two Ways

The farmer who wishes to keep accounts has a choice of two methods. He may get a book and, by following the instructions in

it, keep his accounts with no reference to the Extension Service of the College of Agriculture, University of Illinois. He may, on the other hand, enroll in the simple farm-account project with the local county farm adviser and the Extension Service and keep his accounts under a cooperative plan. If he chooses the latter method, he gets much more information of a useful type from his records with actually less time spent on them. He is furnished at the close of each year with a complete analysis and report of his own records and in addition his records are made up to show his relative efficiency. This is done by setting up his results alongside those for the average farm and those for the most successful and the least successful farms in the community. This provides a practical set of standards by which the individual farmer may measure his efficiency. It makes his own figures mean a great deal more than they can mean when considered alone. The analysis of the account at the close of the year is done at the College of Agriculture, where equipment and other facilities make it possible to do the work much faster and with greater accuracy than the individual can do it.

During the fifteen years that this work has been carried on, the policy has been to permit no one except the farm adviser and other representatives of the University who work on accounts to see individual records. Those who have been cooperators in the project, some of them for the entire fifteen years, have not, therefore, had any objectionable violation of their privacy. The only exception to the rule of privacy has been in those instances where the individual has shown his own record to others or where farm-management tours were conducted to farms for the purpose of studying the factors which brought success. In those cases the visits were made only with the full consent of the farmer visited and care was taken not to give out embarrassing details as to net earnings.

Those who enroll in the farm-accounting project are asked to fill in an inventory blank. This is a list of items of common farm property with blanks for numbers and values. Each cooperator also is asked to fill in on the back of the inventory his income and expense items from the beginning of the accounting year until the date set for a farm-account school. The individual then brings this record of inventory, income, and expense to the farm-account school in his county or community. At this meeting he, with others interested in starting farm accounts, is supplied with an account book and assisted in transferring the inventory, income, and expense items to this book.

Values of different kinds of farm property are discussed and re-

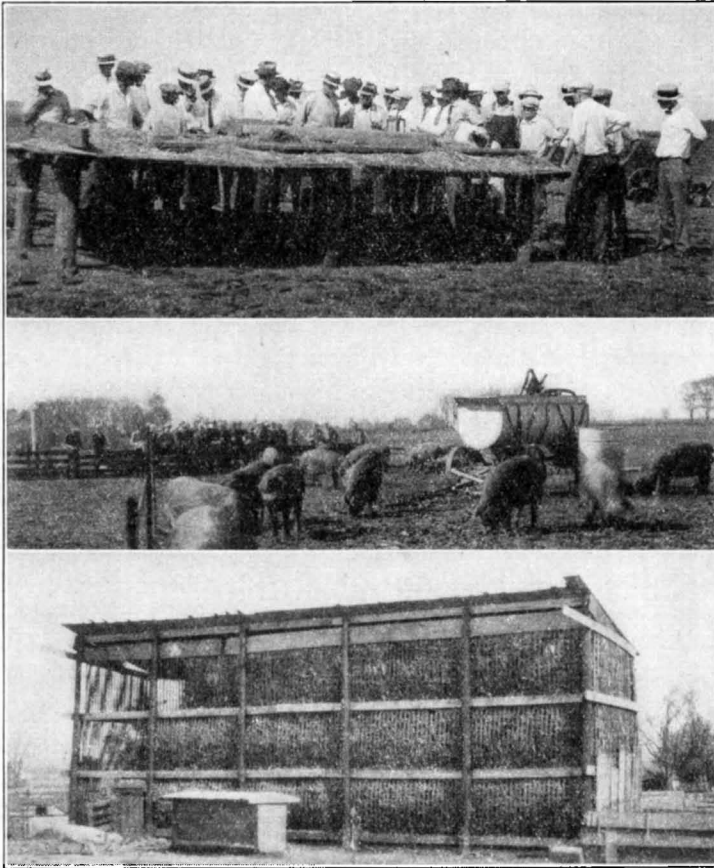


FIG. 1.—A FARM-MANAGEMENT TOUR

The group of farm-account keepers shown in the picture at the top are studying practices that have made hog production unusually profitable to one of their number. The middle and lower pictures show how feed, water, and shade are provided in the field by efficient methods.

visions may be made in individual inventories if any accounting co-operator finds that he is out of line with the ideas of the group or that he has overlooked certain factors affecting values. Time also is taken to become familiar with the account book and to learn from the experience of others practical ways of getting the record into the book. Instructions are given as to the service which will be supplied in the accounting project. Some idea also is given as to how

the accounting information has served to improve earnings on farms where accounts have been kept in previous years.

As a rule these meetings last for about three hours, most of the time being spent by the farmer working on his own record. While farmers can start accounts at home alone, long experience has shown that a much higher percentage of books is completed when the individual joins in one of these meetings. Undoubtedly time is saved thruout the year, too, because the individual becomes familiar with the account book so that he does not have to spend so much time in reading instructions as he goes along.

Easy to Keep Tab on Items for Accounts

Since the farm operator spends little time at a desk and has no place in his daily routine for making records, some scheme is recommended to avoid loss of items that should be recorded. More and more farmers are finding it convenient and safe to pay nearly all farm-business expenses by check. If the purpose for which the item is paid is indicated on the check, it then becomes a complete record of the transaction. If canceled checks are secured from the bank once each month or at some other convenient interval and entered in the account book, few expense items will be lost. A similar record of most items of income can be secured by depositing all or nearly all receipts and entering on a duplicate deposit slip the source of each item of income.

At best there will be some small items of income and expense which cannot conveniently be passed thru the bank. For these items some handy plan should be devised. The account book may be hung at some convenient point that is visited daily by the individual who keeps the account. Some cooperators have reported using a wall calendar with spaces for accounts, others a desk calendar with memorandum blanks, and still others notebooks, in spite of the difficulty of losing them or sweating them thru in the summer time. It is true, of course, that few transactions are made on days spent entirely in the field and notebooks usually can be carried in the automobile or in clothes worn to town if a change is made before going. If notebooks are used, the items should be transferred to the account book at frequent intervals to avoid loss of an important part of the record should the notebook be lost.

Besides the income and expense entries, certain records of production should be made at times during the year. The numbers of

colts, calves, and lambs born and the number of pigs weaned should be recorded. The acreage in each field, the yield of each harvested crop, and important field treatments, such as the application of lime and phosphate, should be entered. These production records require little time, and they help greatly in interpreting the year's financial results.

Closing Inventory Gives Valuable Facts

At the close of the year another inventory is taken and entered in the account book. This inventory shows the changes in quantities and values of property since the beginning of the year. It is especially needed for livestock and crops but is also useful in spreading the cost of improvements and equipment over the period of their usefulness. The value of the land is not changed between the beginning and closing inventories of a given year, since changes in land values would confuse the record of earnings.

The inventory method of figuring income is permitted under the national income tax law and is called reporting the income on the "accrual basis." It has the advantage of crediting each year's output to the year in which it was produced. It thus avoids causing the unjust payment of income tax due to the sale of livestock or crops produced in preceding years. When the production of two or more years is sold in one year, the income of that year may be large enough so that the individual will have to pay income tax if the cash method of reporting income is used. The inventory method also is a much more accurate method of figuring annual income than the so-called method of receipts and disbursements, since accounts commonly show wide variations in numbers of livestock and quantities of crops on hand from one year's end to another.

Even among cooperators in the Illinois farm-account project there is a need for more care and accuracy in taking inventories. Careful counts should be made of all livestock, and measurements should be taken to compute quantities of grain and hay on hand. Rules for computing quantities of grain, hay, and silage are printed on the inside back cover of the Illinois farm-account book. Inventories are commonly taken during the winter months when time on the farm is not so valuable but that some of it can be used for this important task. The inventory for the close of one year serves as the beginning inventory for the next year and should be copied without change into the next year's book.

If this method is followed, any small error in inventory will be

taken care of automatically when the property is sold. If property is inventoried too low at the close of the year, the year's earnings will be too low by the amount of the error, but if the property is sold during the next year, that year's earnings will be correspondingly increased and the average earnings for the two years will be correct. Since inventories must necessarily involve estimates of value, the question often is raised as to the dependability of accounts based on these estimates. Care and practice in inventory taking will help to solve this problem. It may be said, however, that results secured from the Illinois farm-account project have proved accurate enough to serve as safe guides in farm management. Similar guiding accounts in other industries are also based on inventory estimates, and the problem of getting accurate inventories is fully as great in such industries as manufacturing and mining as it is in farming. When the closing inventory has been made, the account book should be checked carefully to see that all entries are complete and accurate.

Books Given Second Check for Accuracy

All those enrolled in the farm-accounting project are expected to complete their account books and bring them to a designated place, usually a nearby town, where the account keeper and a representative of the University check the book again for completeness and accuracy. The account keeper is asked to call attention to any peculiarities of lease arrangement or other unusual features of his account in order that it may be correctly interpreted.

Appointments for the checking are made individually at such time as the University representative can be in the particular county. Notices are sent in advance to each account keeper. Because of the large number of books to be checked in a short time, the University representatives appreciate prompt cooperation of the account keepers in completing their records and in being on time for appointments.

Most farmers prefer to close their accounts on or about January 1. The work is carried on in 95 counties, however, and it is therefore impossible for the University representative to be in each county immediately after the close of the year. This need not lead to any serious inconvenience. The account keeper can take his closing inventory and complete the year's record, then hold it until notified as to the time and place for the book-checking appointments. He also can send to the farm adviser's office for a new account book and begin his next year's record.

When the checking job is completed, the book is sent by messenger, express, or registered mail to the University, great care being taken that no book is lost. It is recognized that these are valuable private records which cannot be replaced.

Useful Facts Found in Account Analysis

Few farm operators working alone analyze their accounts to get all the useful facts which they might yield. The farm-accounting service is designed to overcome this. The books, after they arrive at the University, are checked again for accuracy, are then subjected to an analysis, and the results set up in a summary of the year's business in the individual book. The book is then returned to its owner, usually thru the farm adviser's office.

Before each book leaves the University, a summary is taken from it for the purpose of setting up standards and making county or area reports. These reports include a statement as to farm earnings in the county or area during the preceding year and a comparison with past years. They bring out the chief differences between the more successful and less successful farms. Most important of all, they carry a set of tables giving in three separate columns the average figures for all accounting farms in the county or area alongside the average figures for the most profitable and for the least profitable farms. A fourth column is used for the figures on each individual farm. These individual figures are recorded in only one copy, which is then presented to the farmer whose business they represent. Thus he can compare every figure on his own business with the average figure for all farms, the average of the most successful farms, and the average of the least successful farms on which accounts are kept in his locality. This adds greatly to the significance of the farmer's own records. It is something which he cannot get by analyzing his own accounts.

Figs. 2 and 3 illustrate the comparative arrangement of the figures and show the kind of information secured from this type of analysis. These tables are reproductions of the actual tables returned to an individual farm-account cooperator.

A further means of helping the farmer see where his business needs adjustment is illustrated in Fig. 4. Here some of the more important factors which influence earnings and which are secured from the account book are named at the top of the various columns. The average performance of all farms on these factors is shown by the figures between the two lines across the middle of the chart. When the individual's copy of the report is returned to him, his own

Items	<u>Your farm</u>	Average of 47 farms	16 most profitable farms	16 least profitable farms
Capital investments				
Land	\$26 775	\$35 959	\$33 352	\$37 557
Farm improvements	4 950	4 254	3 920	3 873
Horses	905	565	534	554
Cattle	695	1 478	1 501	905
Hogs	220	1 322	1 573	1 097
Sheep	---	77	121	67
Bees	---	3	5	3
Poultry	158	148	113	144
Livestock, total	(1 978)	(3 593)	(3 847)	(2 770)
Machinery and equipment	1 632	1 863	1 578	1 722
Feed, grain, and supplies	3 020	3 238	3 080	2 768
Total investment	\$38 355	\$49 907	\$45 777	\$48 690
Receipts and net increases				
Horses	\$ 25	\$ --	\$ --	\$ --
Cattle	246	863	1 233	327
Hogs	801	3 015	4 151	2 198
Sheep	---	63	120	34
Bees	---	1	---	6
Poultry	305	153	150	103
Egg sales	78	165	165	108
Dairy sales	292	327	292	363
Livestock, total	(1 747)	(4 587)	(6 111)	(3 139)
Feed, grain, and supplies	1 429	1 388	746	1 358
Labor off farm	10	41	36	20
Miscellaneous receipts	---	38	100	7
Total receipts and net increases	\$ 3 186	\$ 6 054	\$ 6 993	\$ 4 564
Expenses and net decreases				
Farm improvements	\$ 179	\$ 255	\$ 237	\$ 253
Horses	---	22	28	3
Miscellaneous livestock decreases, bees	---	---	1	---
Machinery and equipment	304	573	537	583
Feed, grain, and supplies	---	---	---	---
Livestock expense	---	65	72	53
Crop expense	48	247	216	222
Hired labor	---	437	395	349
Taxes	270	449	430	380
Miscellaneous expenses	15	30	29	28
Total expenses and net decreases	\$ 816	\$ 2 078	\$ 1 945	\$ 1 871
Receipts less expenses	\$ 2 370	\$ 3 976	\$ 5 048	\$ 2 693
Total unpaid labor	(1 490)	(978)	(974)	(1 064)
Operator's labor	720	720	720	720
Family labor	770	258	254	344
Net income from investment and management	880	2 998	4 074	1 589
Rate earned on investment	2.3%	6.01%	8.90%	3.25%
Income left before paying for operator's labor	1 600	3 718	4 794	2 309
5 percent of capital invested	1 918	2 495	2 289	2 434
Labor and management wage	\$ - 318	\$ 1 223	\$ 2 505	\$ - 125

FIG. 2.—HOW FARM-ACCOUNT FIGURES ARE COMPARED FOR THE BENEFIT OF INDIVIDUAL ACCOUNT-KEEPING FARMERS

performance is pictured by drawing a heavy red line across each column at the height where his own records show he stands. Each column then becomes a kind of thermometer showing the individual

Factors helping to analyze the farm business	Your farm	Average of 47 farms	16 most profitable farms	16 least profitable farms
Size of farm, acres	163	243	229	230
Land area tillable, percent	98	82.7	80.8	88.3
Acres in -- Corn	65	90	87	87
Oats	30	35	31	39
Wheat	--	17	19	11
Barley	5	11	11	13
Timothy	40	--	--	--
Crop yields--Corn, bushels an acre	50	45.1	45.3	41.6
Oats, bushels an acre	46.7	43.9	45.0	40.3
Wheat, bushels an acre	--	20.3	23.3	15.2
Barley, bushels an acre	28	29.4	32.6	25.9
Returns for \$100 of feed fed to productive livestock	\$ 95	\$147	\$156	\$121
Returns for \$100 invested in all productive livestock	154	147	173	140
Returns for \$100 invested in:				
Cattle	77	76	94	72
Hogs	344	233	253	216
Poultry	205	208	257	140
Dairy sales from each dairy cow	49	73	70	85
Investment in productive livestock an acre	7.30	12.86	15.44	9.76
Receipts from productive livestock an acre	11.25	18.88	26.68	13.65
Man labor cost for \$100 gross income	\$ 47	\$23	\$20	\$31
Man labor cost an acre	9.74	5.82	5.98	6.14
Power and machinery cost a crop acre	3.93	5.18	5.31	5.21
Expenses for \$100 gross income	\$ 72	\$50	\$42	\$65
Machinery cost an acre	1.99	2.36	2.34	2.53
Farm improvements cost an acre	1.17	1.05	1.03	1.10
Gross receipts an acre	20.82	24.91	30.54	19.67
Total expenses an acre	15.07	12.57	12.75	12.76
Net receipts an acre	5.75	12.34	17.79	6.91
Farms with tractor, percent	yes	85	88	69
Value of land an acre	\$175	\$152	\$146	\$163
Total investment an acre	251	205	200	212

FIG. 3.—SET-UP OF FARM-ACCOUNT FIGURES FOR ANALYSIS OF INDIVIDUAL FARM BUSINESSES

whether his performance in that phase of the business is better or worse than on other accounting farms in his locality.

These tables show clearly some of the handicaps which limit the net earnings of this particular farm. For instance, the farm is low in gross income and high in total expense an acre. Other figures show that the extra expense is caused chiefly by high labor charges.

(The numbers between the lines across the middle of the page are the approximate averages for your county for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.)

Rate earned	Bushels an acre of—			Returns for \$100 invested in—			Livestock income for \$100 worth of feed fed	Dairy sales from each dairy cow	Investment an acre in live- stock	Power and equipment cost for each crop acre	Cost for \$100 income		Gross receipts		Size of farm, acres
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Man labor	Operat- ing expense	An acre	A farm	
13	66	65	34	146	373	348	217	113	20	1.70	9	15	46	13 000	380
12	63	62	32	136	353	328	207	133	19	2.20	11	20	43	12 000	360
11	60	59	30	126	333	308	197	123	18	2.70	13	25	40	11 000	340
10	57	56	28	116	313	288	187	113	17	3.20	15	30	37	10 000	320
9	54	53	26	106	293	268	177	103	16	3.70	17	35	34	9 000	300
8	51	50	24	96	273	248	167	93	15	4.20	19	40	31	8 000	280
7	48	47	22	86	253	228	157	83	14	4.70	21	45	28	7 000	260
6	45	44	20	76	233	208	147	73	13	5.20	23	50	25	6 000	240
5	42	41	18	66	213	188	137	63	12	5.70	25	55	22	5 000	220
4	39	38	16	56	193	168	127	53	11	6.20	27	60	19	4 000	200
3	36	35	14	46	173	148	117	43	10	6.70	29	65	16	3 000	180
2	33	32	12	36	153	128	107	33	9	7.20	31	70	13	2 000	160
1	30	29	10	26	133	108	97	23	8	7.70	33	75	10	1 000	140
0	27	26	8	16	113	88	87	13	7	8.20	35	80	7	500	120
0	24	23	6	6	93	68	77	3	6	8.70	37	85	4	200	100

FIG. 4.—A FURTHER MEANS OF SHOWING INDIVIDUAL ACCOUNT-KEEPING
FARMERS WHERE THEIR BUSINESSES NEED ADJUSTMENT

The figures indicate that the labor is all furnished by the family and that there are two full-time men working on the farm, the father and a grown son. It is evident that the labor charge does not mean a cash outlay in the form of wages. It should not be dismissed as unimportant, however, since the labor available offers the possible opportunity of doing a larger business. Those furnishing the labor pre-

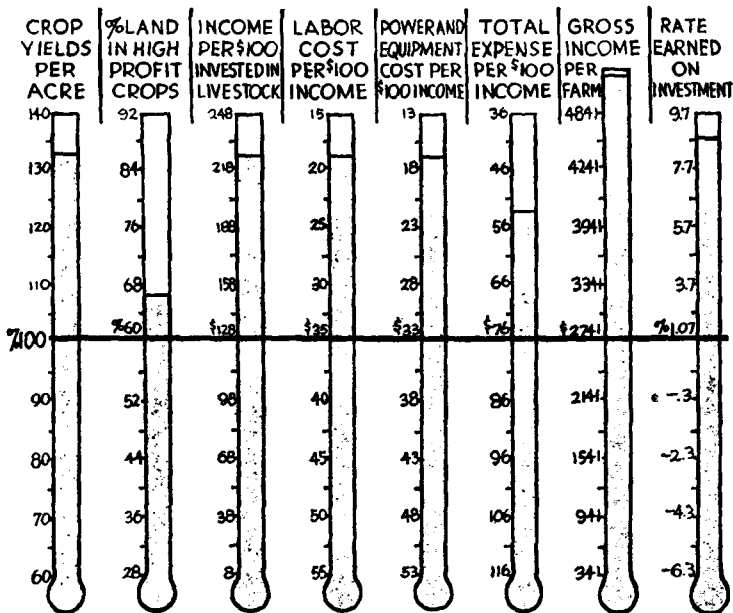


FIG. 5.—THERMOMETER CHART SHOWING ACTUAL PROGRESS ON AN ILLINOIS FARM

The dark line across the middle shows where the *factors* stood, averaging the three years preceding reorganization. Above the line are shown these same factors, averaging the three years after reorganization. The result of the new plan of operation on this 170-acre farm was an increased annual net earning of \$2,300 (averaging two three-year periods before and after reorganization).

sumably are not content with less than a normal return for their own time and effort.

The low gross income an acre when applied to the 153 acres in this farm results in a total income from receipts and net increases in inventories of only \$3,186. The average farm, keeping accounts in the same county for the same year, did a gross business of \$6,054 on 243 acres with about the same amount of labor.

Evidently more business an acre should be done on the farm in question. The relatively low income an acre is not caused by low crop yields, since the principal crops on the farm show higher than average yields. Neither is it caused by non-tillable land which can be used only for pasture. The crop figures do show, however, that for a good all-tillable farm too much of the acreage is in crops which normally return a low income an acre. There are 40 acres of timothy used for hay and pasture and 30 acres of oats, some of the oats being sold as a cash crop. There also is a small bluegrass pasture of 5 acres, making a total of 75 acres, or about half the farm, in those crops which, according to cost-accounting studies, normally produce a low gross income an acre. This mar's accounts therefore show that he can increase his gross income as well as his net earnings by improving his cropping system.

Valuable suggestions as to what changes can best be made in the cropping system are supplied out of experience with accounts on many other farms in the accounting service. This experience is brought to bear on the particular case thru the data and discussion in accounting reports as well as thru the personal conversation of the accounting service representative who visits annually 500 or 600 farms having widely different degrees of success. He not only visits these farms, but carries their accounts with him and knows their successes and their failures. The county farm adviser also is present when each report is being presented to the individual farmer and knows what the principal problems of the particular farm are. Thru the farm adviser any part of the organized program of the Agricultural Extension Service may be brought to bear on the problems revealed in the account.

Referring again to the farmer's own figures in Figs. 2, 3, and 4 there is evidence that the gross income and net earnings can be increased by improvements in the livestock enterprises. The figures showing the livestock income for each \$100 invested indicate that this farm operator has secured a normal turnover of capital invested in livestock, but his livestock income for each \$100 of feed is low. This indicates too high a feed cost for the gains produced. He may be wasting some kind of feed thru a failure to balance his rations and he may be able to reduce his feed costs by providing more of the right kinds of pasture. Other possibilities are likely to appear in the conversations between the farm operator, the farm adviser, and the accounting service representative.

Another opportunity for improvement is indicated in the small

amount of dairy sales a cow. With six cows classed as dairy cows and only \$49 sales for each one, there is an evident need for improvement in the quality of the dairy herd. Finally, there is an indication in the account that this farmer, after he has improved his efficiency with the livestock now being kept, should consider the possibility of increasing his volume of business by keeping more livestock. His investment an acre in livestock is considerably below that of the average accounting farm in the county and still further below that of the farms in the most profitable group. He is selling feed grains and hence is not limited by lack of these items. The proposed change in his cropping system should result in larger supplies of legume hay and pasture. He has the labor to take care of more livestock.

Some of the needs of this farm might have been evident without the help of accounts, but a suitable set of farm accounts properly interpreted brings out specific instances of poor organization or operation and also shows the ways in which the particular shortcomings handicap other phases of the business. This is a great incentive for correcting the particular faults of the individual business and consequently increasing the individual income.

The annual county and area reports have also been used to convey to farm-account cooperators timely discussions on some special subjects of practical importance in farm management. A few pages of pointed discussion on some one subject are included each year. Such subjects as "Selecting and Combining the Farm Enterprises," "Planning the Cropping System," "Making a Farm Budget," and "Keeping Farm Production in Line With Market Demands" have been used in recent years.

Trial of different methods has led to the conclusion that these annual farm business reports are best returned to the farmer by means of personal visits. An attempt has been made each year, therefore, to visit each account keeper on his farm and discuss briefly with him the significant points brought out in the analysis of his record. The farmer likes this method because he can be more frank in discussing his personal record than he would be in a meeting. It has the added advantage that the representative of the University who returns the record can see the farm as well as some of its improvements, its livestock, and its equipment. He is then better able to bring to bear on the individual problem the experience he gains from visiting other farms with similar problems, on some of which a solution may have been found. The disadvantages of the method are that it requires much time to visit hundreds of farms located in nearly all

That the correction of weaknesses revealed in a farm account does add to the net earnings of the business is indicated by the experience of many Illinois farmers. In particular this was shown to be true of nineteen Woodford county farmers whose results were reported in Bulletin 252, "Increasing Farm Earnings by the Use of Simple Farm Accounts." On these nineteen farms improvements made as a result of accounting information had added \$650 to the annual net income a farm after seven years of account keeping.

A great variety of weak and strong features have been revealed in the individual accounts. Usually a marked violation of one or more of the accepted principles of good farm management has lowered farm earnings. A discussion of these principles is presented in Bulletin 329, "Organizing the Corn-Belt Farm for Profitable Production." In a like manner, accounts showing farm businesses organized and operated in line with these principles have indicated relatively good earnings as compared with other farms in the same locality. When the accounts of any given year from any county or other locality are classified according to earnings, the one-third of them making the best earnings almost invariably show \$1,500 to \$3,000 higher net incomes a farm than the third with the lowest earnings. As a rule the difference is between \$2,000 and \$3,000. With very few exceptions the standard accounts kept in the Illinois farm-accounting service show the reasons for the lower earnings on the less successful farms and for the higher earnings on those which are more successful. When these reasons are known, they serve as a guide to greater efficiency and larger net earnings on the individual farm.

correspond with the increase in feed and grass crops. These two enterprises must always be proportional. There must be enough feed and grass crops to provide feed for the stock and there must be sufficient livestock to consume the feed raised. As a result of this reorganization, farm number 23 would have several substantial sources of income instead of one main source. More money would be received for livestock and livestock products and less for wheat. In years when the wheat crop was a failure, there would be a substantial income from livestock to "fall back on." Furthermore, rotation of crops and application of manure would increase the yield of all the crops grown.

Farm cost figures gathered from North Dakota farms for the past five years seem to indicate, beyond any doubt, that a well balanced system of agriculture pays best in the long run. The one crop farmer may possibly make a big stake one year, and even for several years, but he is bound to fall when hard times strike him. Farming at best is pretty much of a gamble and one crop farming is the most extreme type of gambling that a farmer can indulge in. Making good as a farmer is a job of a lifetime and it is the average net income over a period of 15 to 20 years which determines a man's success or failure as a farmer. For this reason it seems desirable to eliminate as much of the risk as possible. The farm having several sources of income is not entirely dependent upon any one of these and a total failure on a farm of this kind is practically impossible. Livestock products bring an income every month which can be used to pay grocery bills and other current expenses. The farmer who raises a large percentage of his own food, has always got something to live on, even if times may be rather hard. It seems, therefore, that the system of farming which pays the best, and the system which insures the greatest degree of safety, is a well balanced system providing for a definite rotation of crops and providing, also, for the raising of livestock. Farm cost figures seem to indicate that the diversified farmer with considerable investment in livestock is usually the farmer who weathers hard times best in any community. The one crop farmer or the man who depends almost entirely upon crops to the exclusion of livestock, is generally the man who goes bankrupt first of all when hard times hit the community.

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of the counties in the state and the time for each visit must be short. Experience has shown, however, that by good planning and the hearty cooperation of the county farm advisers as well as the individual ac-



FIG. 6.—STUDYING THE YEAR'S ACCOUNTS

Father and son confer with the University representative about the significant points in the annual farm business report.

count keepers about as many individuals can be visited each day as can be induced to come to meetings during a part of the year when farmers are very busy.

Accounts Pave Way to Added Earnings

It is only when accounting figures are faced frankly and thoughtfully and acted upon that they can bring increased earnings to any business. First the operator of the business must be sure that his records and their analysis are accurate and dependable. One year's records can hardly be depended upon, since variations between years are such that any one year may not be typical of the business. For this reason it is desirable to have at least three years of records. As a rule, plans based on three or more years of accounting are reliable. Changes to correct phases of the business that have been shown as weak over a period of three years have improved earnings. A continuation of the records is then desirable to determine whether the changes made actually result in the expected improvement in earnings. If they do not, the accounts should show why and thus help in reaching the desired end.