

# CHAPTER 11

## Checking Up on Yourself

*You are young, my son, and, as the years go by, time will change and even reverse many of your present opinions.*

Plato

**T**HIS BOOK HAS EMPHASIZED THAT farming is a business. Family farming is not a large scale business, but, in some ways, it is a rather complicated one. Most farmers have several sources of income depending on their choice of crop and livestock enterprises. The total sales on family farms may easily run from \$4,000 to \$10,000 per year or more. Probably the cash expenses are nearly half as much. Often the investment in operating capital is more than the amount of sales. In addition, the farmer may own, or at least have a considerable investment in the farm he operates.

### **Don't Depend on Your Memory**

No farmer, however good his memory, can keep all of the details of his business in mind. In fact, if he tries to do so, it is good evidence that he is not a first class manager. Successful farmers say that one of the secrets of good management is to have a record-keeping system so there is no need to remember details. But they note the importance of having the facts at hand when they are needed.

In older days, many farmers frowned on "keeping books." Farmers were expected to learn by observation what they needed to know and to remember the necessary details. In the day when farming did not require many money transactions, they had a

point. But today's farmer who fails to make use of modern business methods in his farming is still "going it walking plow style."

### **Keep Your Records Simple**

The farmer wants his facts reasonably simple. He seldom has a business large enough to afford a bookkeeper. Since he must do the book work himself—usually with the help of his wife—he doesn't have a lot of time to give to it.

Farmers do not always agree on what makes up the essentials. But every farmer needs enough records to make up a net income statement at the end of the year. The federal government and some state governments insist on an income tax statement each year.

There are several kinds of facts that a farmer can use in his business. From this list, a farmer can choose the ones that fit his own case.

1. *A Record of Farm Income and Expenses.* A system that keeps the different kinds of items separated during the year saves a lot of work in making up the net income statement later on.
2. *An Inventory Account.* This is a list of production items such as livestock and feed on hand at some particular time. It may be a physical inventory listing only numbers and quantity. Or it may be a value inventory setting down what the items are worth. Most farmers who keep an inventory set down both the number and the value of the products on hand.
3. *A Capital Account.* This is another kind of inventory. It is a record of power, machinery, equipment, buildings, and similar items. In other words, it is a list of the main "tools" of production on which depreciation should be figured. On some farms mature breeding stock are included in this inventory. If the farm is owned, the value of the farm land (less buildings, fences, tile, and the like) may be included here. But depreciation is not charged on land.
4. *A Net Worth Statement.* This is set up to tell the family what it is worth financially. If made out at the end of each year, family members will know whether they are getting ahead or going behind and how much.

5. *Production and Operation Records.* These may be anything from very simple records to very elaborate ones. They may be kept largely for historical purposes as a diary is kept. Most farmers keep these records so they will know more about the business. Crop production records, livestock records, feed records, labor records, power records, or others can be included here.
6. *A Business Analysis.* This is a study of the records the farmer has kept. An analysis should show why the farm made the income it did and the strong and weak points about the business. It does for a farm what a medical examination does for an individual. It tells him both what is right and what is wrong. From there he can start to figure out what needs to be done to improve the business.
7. *A Family Living Record.* This is for the family what the farm record is for the farm. It tells the family what it costs for living and how much was spent or invested in non-business items. Very often it pays to know. Perhaps the family does not spend enough of its income for living. Or the family may spend too much. The way to know how much the family spends is to have the facts.

### **Keeping the Farm Record**

The first decision is to choose the kind of a record book to use. There are many kinds. Some farmers simply take a notebook and make one column for sales and another for expenses. This kind of record book is better than none at all. Its weakness is that at the end of the year the farmer must go over it again to sort out the items. Nor does it tell him very much about the business.

Most state agricultural colleges have prepared farm record books. Many commercial ones are on the market. Those from the college can be secured from the county agent or possibly the banker.

When a farm family starts keeping records, the farmer usually insists that he wants a "simple" record book. Experience in working with hundreds of farmers suggests that a record book is simple if the farmer understands it; if he doesn't, it's not. So a better question is, will the record book furnish the facts needed

# Better Farm Accounting

With Separate DEPRECIATION SCHEDULE  
for Continuous Use

Year	_____
Name	_____
Post Office	_____
County	_____

A Practical Guide by Iowa State College Farm Management Specialists

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*Locate topic desired  
with right thumb, bend  
book backwards, turn to  
page where black strip  
appears matching topic.*

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FIG. 65—A well-planned farm account book is a real aid to the farm family both in keeping the farm records during the year and in using them when the year's business is completed.

both during the year and at the end? If it does, then as soon as the farmer becomes familiar with the book, it will seem simple enough. It is true that some record books are more complicated than they need to be. Many are poorly designed. The real point is whether they tell the farmer what he wants to know.

The better record books have separate places for items that are alike. Space is provided so that the sales of eggs, hogs, cattle, and other items can be separated as the year goes along. The farmer can then get a total of each kind of item at the end of the year. Usually, expenses are handled the same way. Probably he will want to know how much feed was bought during the year and what was paid out for hired help. Likewise for the other major kinds of farm expenses. So he will want the record book to have a separate place for the different kinds of expense items.

Another question will be whether to keep the record book on a cash or an inventory basis. Most farmers use the cash method. But there are many advantages in using inventories. It takes a bit more record keeping but after the farmer has learned how, it's a simple job. Until he has, of course, it isn't. So the question is whether he wants to take the time to learn or not.

### Cash Income Basis

The following example explains why an inventory record is a big help to the farmer. Take a case of a young man starting

TABLE 69  
A BEGINNING FAMILY'S FARM RECORD SUMMARY—CASH BASIS

Income	Expenses*
Sale of: grain.....\$ 362	Machinery bought.....\$1,600
hogs..... 610	Cows and sows bought..... 800
milk..... 436	Farm operating expenses..... 1,248
eggs, etc..... 94	Cash rent..... 252
Work for neighbor..... 98	
Total income.....\$1,600	Total farm expenses..... \$3,900
	Household expenses..... 712
	Life insurance..... 88
	Total for family..... \$ 800
	Total expenses for year..... \$4,700

\* Many of these items do not go in an income tax report.

TABLE 70  
SECOND YEAR FARM RECORD SUMMARY—CASH BASIS

Income	Expenses
Sale of: grain.....\$ 390	Machinery bought.....\$ 640
hogs.....1,516	Cow and boar.....160
milk.....642	Operating expenses.....1,438
chickens and eggs.....218	Cash rent.....262
Misc. income.....34	Total farm expenses.....\$2,500
Total cash income.....\$2,800	Household expenses.....\$742
	Doctor bill.....70
	Life insurance.....88
	Total for family.....\$ 900
	Total expenses for year..\$3,400

farming. Let's say he is able to rent a good, medium-sized farm on a crop share basis with cash rent for pasture and hay land. He and his wife have their household goods and \$2,000 to start with. Prices are fairly good; corn is 70 cents per bushel, hogs \$9.00 per cwt. They decide on milk cows, hogs, and chickens for their main income with occasional extra crops to sell. Most of the feed will be raised. The facts from his farm and home record summary at the end of the first year on a cash basis, appear in Table 69.

The cash income for the year was \$3,100 short of breaking even. This does not look like a very good start. But they were able to borrow money to keep things going. During the second year, they had more to sell. But their expenses were somewhat larger as well. The result is shown in Table 70.

Again the family lacked \$600 of being able to pay all their bills out of the cash income. They didn't seem to be making much progress in farming. In fact, they may well have felt quite discouraged about it.

The cash record shows the amount of money paid out and taken in each year. By looking only at the cash summary, the young couple would feel that farming was a poor business indeed. During the first year, they not only had to borrow money to start farming but had to use borrowed money to live on as well. At least, this is the net effect of the year's experience. During the second year, they had only \$300 left after paying farm expenses so they also seemed to go behind by \$600 after paying

for living costs. Finally, in the third year, they more than made ends meet.

Such is the over-all story from their cash records. To many a young couple, such a record would lead to discouragement rather than satisfaction with their farming venture. It is a common experience to have just such financial results during the beginning years of farming.

### **Record With Inventories Will Look Different**

The above summary does not give a true picture. Suppose the family goes back over its accounts using the same figures as above but sets them up on an inventory basis. The results will look like those in Table 71.

TABLE 71  
THE BEGINNING FAMILY'S RECORD SUMMARY—INVENTORY BASIS

	First Year	Second Year
Record summary		
Sales from farm . . . . .	\$1,600	\$2,800
End of year inventory . . . . . (livestock and feed)	1,800	2,100
Total credits . . . . .	\$3,400	\$4,900
Inventory, first of year . . . . . (livestock and feed)	0	1,800
Farm expenses . . . . .	1,500	1,700
Livestock bought . . . . .	800	160
Depreciation on machinery and equipment . . . . .	100	140
Total debits . . . . .	\$2,400	\$3,800
Net farm income . . . . .	\$1,000	\$1,100

Here the first year shows quite a satisfactory income of \$1,000 net for the year's operations. This, even though the family has not counted the value of products raised and used in the home such as milk, eggs, meat, etc. These should be included in the net income. The second year shows a small improvement in net income over the first one.

The family living expenses were not included in the figures immediately above since they would be the same as before. Of course, figuring up the record on an inventory basis will not give

the family any more cash on which to live. But it tells them how successful they have been in their business, how much income they have really made from their farming.

### **How Much Income Was Saved**

If this young couple studies its property account and net worth statement, they will see why the cash record summary tells the wrong story. Most of the income during the first two years went to purchase livestock and machinery. Further study should give the family even more encouragement. Even though their bank notes are larger at the end of two years than they would like, they see that they are making steady progress. Their modest capital of \$2,000 has grown to \$2,400. They have two valuable years of experience in managing and operating a farm. They have gained confidence in themselves that they can get ahead. If they show their full statement to the banker, he, too, can see that they are getting themselves organized to do a larger volume of business. Nor have they over-extended their credit in doing this.

It will still be true, of course, that this family will likely find, for quite some time, three or four places to put every dollar they take in. Their bank balance will remain distressingly small. And they seem to be and are, a long way from farm ownership. The important point is that they have a true picture of the income and financial progress they are making.

### **Income Tax Effects Vary**

A further point has to do with the income taxes they must pay, if any. On the cash basis, if they have one child and paid on the high 1944 tax rates, they would owe nothing the first year and \$9.00 the second year. The inventory method, since it shows the income that is made whether it comes in as cash or not, costs a little more. The first year's tax would be \$12.00, the second \$14.00. Income is being made and accumulated even though it is not being taken as cash. But the cash method or reporting costs a farmer much more when he sells out his farm business or if he greatly reduces the size of it. For then he may sell several years accumulation at one time and must pay in the higher tax brackets. The man on the accrual basis pays his tax as income is produced.



**SALES OF LIVESTOCK RAISED**  
Enter Net Amount Received After Freight, Commission, etc., have been deducted

Date	What and to Whom Sold—Sale Price	Hogs			Cattle		
		No.	Weight	Amount	No.	Weight	Amount
4/24	20 Butchers to Nelson Pack 0148	20	4700	\$ 658 00			\$
5/7	20 " " " " 1380	20	4600	634 50			
5/28	7 " " " " 1350	7	1610	217 35			
7/16	19 Packers " " " 1200	19	6840	820 80			
9/4	2 Poor Deals				2	220	17 00
10/22	20 Butchers to Nelson Pack 138	20	4010	521 20			
11/5	40 " " " " 1280	40	8030	1027 84			
12/3	31 " " " " 1140	31	6080	766 10			
Totals		157	35870	\$ 4586 19	2	220	\$ 17 00

Date	What and to Whom Sold—Sale Price	Poultry			Sheep and Horses		
		No.	Weight	Amount	No.	Weight	Amount
3/28	Cull Hens	30	1600	\$ 40 00			\$
5/19	" "	28	130	33 40			
6/28	Springs	100	398	127 30			
7/18	" "	90	350	105 00			
8/24	Old Hens	140	536	134 10			
9/27	3yr Mare to Jones				1		50 00
Totals		388	1374	\$ 439 80	1		\$ 50 00

FIG. 66—Keeping the farm record up to date is largely a matter of habit. Those who develop the habit at the beginning of their farming career will find that it serves them well during their farming years. Here is a page for reporting the sale of hogs, cattle, poultry, sheep and horses.

Some important points about each of the seven kinds of records mentioned earlier in the chapter may well be discussed further.

### **A Place for the Day-by-Day Business**

Most people want a record book that has a separate place for each main kind of income and expense item. They want it to be easily summarized for income tax purposes. Basically, most farm record books are built around one of two plans or of a combination of them.

One plan is to have the items listed by the kind of item with enough space in one place for a year's business. There will be a page for egg sales, another for dairy products, a third for hogs, etc. Expenses may be separated the same way. One page may be for feed bought, another for hired labor, another for gas and oil, etc.

The other plan is to have several columns for sales of different kinds on one page, and columns for expenses on another. One page will have columns for eggs, dairy products, hogs, etc. The other for feed bought, labor hired, gas and oil, etc. Some record books are a combination of these two basic ideas.

Many farmers want the expense headings in the record book to be the same as the expense list on the federal income tax blank. This can be done but it is not important. Several blank lines for expenses appear on the tax form and these can be used for the list of items the farmer uses in his record book. The internal revenue people ask that the expense list be complete, easily understood, and be an accurate report of the various farm expenses. But expense items need not be listed in exactly the way the tax blank has them.

### **What Are Expenses?**

This may seem like a schoolboy's question. Yet back of it lie some important problems in a farmer's record keeping. First is the problem of separating farm expenses from personal or family expenses. For example, the auto serves for both business and personal use on most farms. Perhaps on a particular trip it is used to take the eggs to town, a part of the farm business. Perhaps groceries were brought home and this was the real reason for the trip. Thus business and personal use of the car are combined. To handle this problem, the usual method is to divide the total



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**FIG. 67**—Farm expenses must be separated from personal and family ones. A word book with the proper headings saves a lot of time in putting similar items together so they can be added easily at the end of the year.

auto expense at the end of the year between farm and family expense—say 50-50 or 60-40 or some other proportion based on judgment of the proper division of expense between the farm and family. The same is true for electricity, part of which may be for farm use and part for the family. Telephone expense is a similar case.

Most items are clearly one or the other. Groceries, clothing, medical bills, recreation, and items for the house are personal expenses. However, food bought for hired farm workers is a farm expense. This is usually estimated as a lump sum at the end of the year. On the other hand, machinery repairs, crop expenses, feed bought, fuel for the tractor, and the like are plainly farm expense items.

Many farmers use their check stubs as a source of much of their farm expense information. When each check is written its purpose is noted on the stub. It makes a useful source of information later for filling out the record book.

### **Items With a Longer Life**

A more difficult problem is to choose between farm expenses that should be charged off during a single year and those that should be spread over a period of years. This decision should be made at the end of the year. For example, in buying a tractor, whether a new or a used one, the cost can be seen as a proper charge over a period of years. The tractor will help raise several crops before it is worn out: how many will have to be estimated in each case. Machinery, most equipment, buildings, fences, tiling; all of these have a useful life of a few to many years. They should be charged off over the period of years of their expected useful life. These items are listed in the capital account at the end of the year.

The cost of such items as lime and fertilizer are more difficult to handle. Lime may benefit five to ten crops, fertilizer more than one. When the amount spent for these items is much the same from year to year, charge off all that is spent during the year. If a much larger than usual amount is spent in one year compared to the average, the cost may be spread over the number of years that the crops are improved.

### **How Much Capital Is Working for You?**

The inventory account is a simple part of the record but an important one. It is made up of a list of all livestock and feed

on hand at any one time. Usually, this list is made out on the last day of the year. Some who rent their farms prefer to make up the list for the last day of their lease year. However, since most farmers report their income tax on a calendar year basis, the last day of December is preferred.

A simple method of taking an inventory is to take a notebook, go around the farmstead on the day chosen, and make a complete list of what is on hand. Livestock are listed by age, sex, or other groups, and the number, estimated weight, and value are set down. Such a list might start out like the list in Table 72.

TABLE 72  
INVENTORY LIST

No.	Kind	Weight	Price
50.....	fall pigs	110 pounds average	16c a pound
20.....	bred gilts	250 pounds each	\$ 50.00 a head
1.....	boar	300 pounds	50.00
5.....	milk cows (younger)	1,100 pounds each	160.00 a head
3.....	milk cows (older)	1,100 pounds each	140.00 a head
2.....	heifers	900 pounds each	140.00 a head
1.....	yearling heifer	600 pounds	80.00
2.....	heifer calves	300 pounds each	50.00 a head
17.....	feeding steers	750 pounds each	10c a pound
Corn in west crib 1,000 bushels.....			1.00 a bushel
Corn in east crib (full) 1,400 bushels.			1.00 a bushel
Corn, shelled 300 bushels.....			1.00 a bushel
Oats, 550 bushels.....			60c a bushel
Hay, back bent, (20' x 22' x 20')....		20 Tons	12.00 a ton
Hay, middle bent.....		10 Tons	9.00 a ton

And so on until the list is complete. It can later be transferred to the farm record book.

In taking an inventory, several points should be watched. First, be certain to have a correct count of the livestock. Every animal should be listed regardless of its condition. Many a man decides to leave out the runts "because they are going to die anyway." In the end, some may be sold and the livestock numbers will not be in balance at the end of the year. By that time, the farmer has forgotten that he failed to count them. So he does not know how to correct his mistake.

Second, be careful to see that the inventory record is complete and the amounts correct. In other words, make up the inventory in the barnyard where a correct count can be secured.

### HOG INVENTORY

Use Farm Prices

Description	Beginning of Year				End of Year			
	No.	Total Weight	Price	Total Value	No.	Total Weight	Price	Total Value
Old Sows			\$	\$			\$	\$
Bred Gilts	20	5000	50 <sup>00</sup>	1000 -	20	6000	50 <sup>00</sup>	1000 -
Other Spring Pigs					10	2000	14 <sup>7</sup>	280 -
Fall Pigs	50	5000	16 <sup>4</sup>	800 -				
Feeder Pigs (Purchased)								
Boars	1	300		60 -	1	300		65 -
Total Hogs	71	10300		\$1850 -	31	8300		\$1345 -

### CATTLE INVENTORY

Description	Beginning of Year				End of Year			
	No.	Total Weight	Price	Total Value	No.	Total Weight	Price	Total Value
Milk Cows <i>2-5 yrs</i>	5	5500	\$160 <sup>00</sup>	\$800 -	5	5500	\$155 <sup>00</sup>	\$775 -
<i>Older</i>	3	3300	140 <sup>00</sup>	420 -	3	3200	135 <sup>00</sup>	405 -
<i>1st Calf</i>	2	1800	140 <sup>00</sup>	280 -	2	2000	140 <sup>00</sup>	280 -
Beef Cows								
Bull								
Total Breeding Stock	10	10600		\$1500 -	10	10800		\$1460 -
Calves (under 1 year)	2	600	50 <sup>00</sup>	100 -	3	900	40 <sup>00</sup>	120 -
Heifers (1 to 2 years)	1	600	80 <sup>00</sup>	80 -	3	2100	100 <sup>00</sup>	300 -
Feeding Cattle <i>Plain Krlays</i>	17	12750	10 <sup>4</sup>	1275 -	10	5000	13 <sup>4</sup>	650 -
Total Young and Fat Cattle	20	13950		\$1455 -	16	8000		\$1070 -
Total Breeding plus Young and Fat Cattle	30	24550		\$2955 -	26	18800		\$2530 -

FIG. 68—Keeping the farm account on the inventory basis is a big help to the business-like farmer. Where the account book has the proper kind of pages, the inventory method is easy to use. Here we find the hog and cattle inventory for the beginning and end of the year.

Third, use reasonable prices. For those things that have a ready market, the local market price (farm basis) should be used. Price milk cows and other breeding stock on a conservative basis from year to year. Marking up the cows, say \$20.00 or \$25.00 per head, may make the income look good that year but it will not pay the bills nor make the cows produce more. For items that do not have a well-established price, the usual rule is to use a conservative value based on good judgment. It should be in line with the value of similar items on the previous inventory.

After the livestock and feed are checked over, the inventory pages of the farm record book are filled out. Similar items may be lumped together. However, enough detail should be used so that the record will tell you what you want to know when you later refer to it.

The capital account is another sort of inventory. It is used for handling items that are not all charged off during a single year. Farm record books provide separate pages for this purpose. The idea is to charge depreciation for their use. Depreciation is the value that is worn out or used up by a year's use.

A corn planter costing \$120.00 may plant twenty crops before it is worn out. A depreciation or use charge of \$6.00 a year should be made. Similarly, a barn costing \$2,400 may have an estimated life of fifty years. One year's depreciation would amount to \$48.00. Farmers who buy their milk cows and work stock may place them in the capital account and charge depreciation for their use each year.

In the case of orchards, appreciation or an increase in value may take place from year to year when the trees are young and depreciation occurs as they get older. This is a special case and may require help from a specialist.

### **What Are You Worth Financially?**

The net worth statement serves two purposes. First, if kept from year to year, the family will know how much it is getting ahead or going behind. The values used should be conservative or the results may be misleading. It is easy, for example, to have the net worth statement indicate good progress to family members if they raise the value of their property. The net worth statement also shows the relation of what they own to the amount they owe others.



### MACHINERY DEPRECIATION SCHEDULE

[illegible]

This brings out the second use of the net worth statement. The bank or other creditor usually wants to know how much property the family owns, what kind of property it is, whether the values used are conservative or not, and the individual's past financial record. Few lenders care to loan more than 40 to 50 per cent of the total value of personal farm property. Real estate loans occasionally run to 75 per cent of the appraised value of land and buildings. But this is sometimes risky for both borrower and lender. Household items are seldom counted as assets in making a loan. The cash or loan value of life insurance is used for security only in case of extreme need.

In other words, a net worth statement is a useful and easily kept record. It should be used by every business-like farm family.

### **How Much Did the Farm Produce?**

The most useful production records are those kept on enterprises having the largest effect on profits. These include the major crops and livestock handled by the farmer.

One kind of crop records is to set down how much is raised in bushels, tons, etc. Or record the value of crops raised showing the value of each crop and the total dollars worth of crops that are produced. Many record books make provision for both kinds of records.

Another convenient record is an outline map of the farm made each year to show the crops raised in each field. Some farmers use the map to show the crop yields from each field, the manure, fertilizer, or lime used, and the location of wet spots or other places that need special attention. These points may be needed in planning future cropping programs.

Livestock records show either how much is produced, the value, or both. This can easily be kept by setting down the details at the time of sales, purchases, births or deaths. Some keep a daily egg record or a daily milk record. A breeding record is often used. This is necessary where purebred livestock are to be registered.

Records of the amount of feed fed to various kinds of livestock are of value to the livestock farmer. A once-a-month estimate will do quite well. Labor records may be kept but have limited usefulness for the diversified farmer. They are more important in specialized farming.

# NET WORTH STATEMENT

*John A. Farmer - 1945*

What We Own	Beginning of Year	End of Year	What We Owe	Beginning of Year	End of Year
<b>Current Assets</b>	\$	\$	<b>Notes Payable—List</b>	\$	\$
Cash—Checking and Savings Account	160 00	653 00	Bank, Cattle note	1000 00	
Life Ins.—Cash Value Plus Accum. Dividends	400 00	462 00	" , 2 other notes	1000 00	
Bonds—Present Value	150 00	225 00	" , Cattle note		600 00
Stocks—Present Value <i>In coop.</i>	100 00	100 00	Loans on Life Insurance		
Good Notes and Accounts Due Us			Accounts Payable—List		
			<i>Doctor Brown</i>		2 00 00
Feeds (Page 33)	3143 00	2800 00			
Seeds and Supplies (Page 33)					
Hogs (Page 34)	1850 00	1345 00			
Cattle—Breeding Stock (Page 34)	1500 00	1460 00	Income Tax—Due		
Young and Fat (Page 34)	1465 00	1070 00	Taxes—Past Due		
Poultry (Page 35)	332 00	330 00	Interest—Due or Soon Due		
Sheep (Page 35)			Rent—Due or Soon Due		
<b>Semi-Current Assets</b>					
Horses (Page 35)	200 00	150 00			
Mach. & Equip. (pp. 2a, 3a, & 4a Depr. Sch.)	3500 00	3225 00			
			Mortgage on Farm <i>Peoples Life Ins Co</i>	12,000 00	11,000 00
<b>Fixed Assets</b>					
Farm Operated <i>150 A. \$200 per A.</i>	30,000 00	30,000 00	Mortgage on Other Real Estate		
Other Real Estate Owned					
Total We Own	42,790 00	41,810 00	Total We Owe	14,000 00	11,800 00

Total We Own ~~42,790~~ minus Total We Owe ~~\$ 14,000~~ at Beginning of Year = ~~\$ 28,790~~ Our Net Worth at Beginning of Year.

Total We Own ~~\$ 41,810~~ minus Total We Owe ~~\$ 11,800~~ at End of Year = ~~\$ 30,010~~ Our Net Worth at End of Year.

Our Net Worth at End of Year ~~\$ 30,010~~ minus Our Net Worth at Beginning of Year ~~\$ 28,790~~ = ~~\$ 1,220~~ Our Increase ~~and Decrease~~ in Net Worth for the Year.

FIG. 70—The net worth statement, if kept up to date year by year, is one of the most valuable records for the farm family. It is very useful when discussing credit needs with the banker or other credit agency.

### **Put the Farm Business Under a Magnifying Glass**

The most valuable part of the farm record for the family is the business analysis. Yet, this is the part that many farmers fail to use.

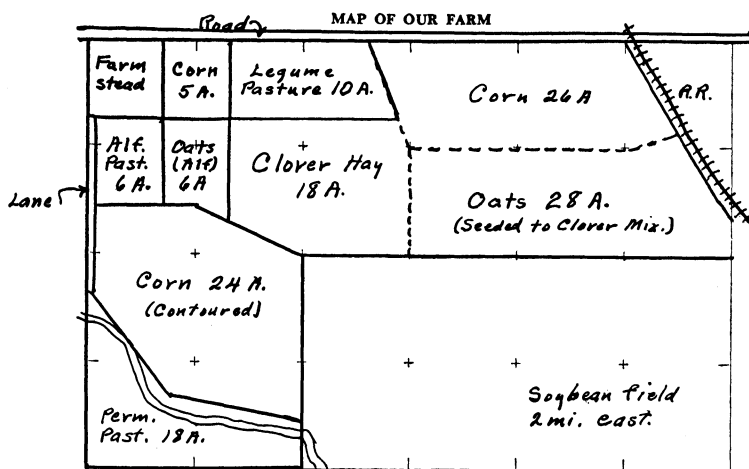
A good analysis should really "talk" to the farmer about the year's results. Perhaps it will say, "Nice going, you did a good job there." Or perhaps, "Careful, mister, you slipped on that part of the business." Or maybe, "Here looks to be the place to step out and expand next year."

Some facts needed in the analysis include:

1. Facts to indicate if the size of business fits the farmer. A business that is too small for the operator is like a man cutting a wheat field with an old fashioned cradle. He may be doing a first-class job but he would not get much accomplished. A man trying to run too large a business for his ability as a manager may be equally bad off from the net income standpoint.
2. An analysis should show if the combination of enterprises is a good one for the individual's situation. That is, is the farmer producing the right things and in the best proportions?
3. It should show how efficient the farmer is as a producer. Does he put a lot into the business in proportion to the returns secured, or does he get a lot of production in proportion to what goes into the business? He will want to know if he is efficient with livestock, machinery, equipment, and in labor use and crop production.
4. Finally, the record should tell the farmer and his wife if they are able to keep the costs of farming in line. They are concerned with costs per unit of production rather than the total cost in dollars. They also want to know if a large share of the costs are the kind that are hard to lower during a period of falling prices.

### **How Well Do the Parts of the Business Fit Together?**

No single or simple measure tells a farmer if he has the best combination of crops and livestock, of capital and labor. If the farm income is low for the size and type of business, prices



## CROP RECORD

Kind of Crop	Production			Value		Value of Landlord's Share	Variety of Seed, Fertilizer Used, Manure Applications, etc.	Line No.
	Acres	Yield per A.	Total Yield	Cl. Inv. Price	Total Value			
	(1)	(2)	(3)	(4)	(5)	(6)		
Corn	26 <sup>A</sup>	61	1600	\$1 <sup>00</sup>	\$1600		Some Manure	1
	5	60	300	1 <sup>00</sup>	300		Manured	2
	24	40	960	1 <sup>00</sup>	960		2nd year corn. Poor stand some manure	4
Silage								
Small Grain—Kind	Oats	28	45	1200	60¢	720	Some spots need more lime	5
	6	50	300	60¢	180		200# 0-20-0 per Acre	6
Soybeans	Rented	20	10	200	2 <sup>00</sup>	400	Poor land - seed was poor. Didn't pay	7
Hay—Kind	Cl. Mix	18	1st 1 <sup>1</sup> / <sub>4</sub>	24	12 <sup>00</sup>	288		8
			2nd 3 <sup>1</sup> / <sub>4</sub>	14	12 <sup>00</sup>	168		9
								10
Total A. in Harvested Crops	127 <sup>A</sup>	Value of Harvested Crops			\$4616	\$160		11
Rotation Pasture—Kind	Hay	6			15 <sup>00</sup>	90	Seed and Non-feed Crops	12
	Clover Mix.	10			12 <sup>00</sup>	120	Kind Value	13
Total Acres in Rotation	143 <sup>A</sup>						Timothy	14
Permanent Pasture	18				7 <sup>00</sup>	126	Red Clover	15
							Other	16
Farmstead, Waste, etc.	7						Total	17
Roads	2						Value of Harv. Crops	18
Total Farm	170 <sup>A</sup>	Total Value of Feed Raised			\$4952		Total Val. Crops Prod.	19

\* Use cash rental rate.

FIG. 71—A crop production record will help the farm family in studying its business as well as in planning future operations.

considered, a man should examine the combination he is using. If the income is satisfactory, the combination is not a poor one but it may not be the best one.

If the total output from the farm per man-year of work used is average or above compared to similar farms in the area, this would indicate a reasonably good combination is being used but it may be improved.

One evidence of a good combination is that the farm business runs smoothly throughout the year. If a man is always at his wits end to keep his operations on schedule, he needs some changes in his business. Or, if he is intensely busy at one time and has idle time at another, he will want to re-check his combination. But he will have to keep the type of farming he follows in mind. A wheat farmer in the Plains or a cash grain farmer in the Corn Belt is almost sure to have peak labor loads at one time and slack time at others. But it is still possible to check to see if certain changes might not give better results.

There are many poor combinations, either in the choice of enterprises or the timing of them. Raising beef cattle or keeping a large flock of sheep on a small farm, or keeping a large dairy herd in a diversified farming area with no special market for dairy products are examples.

The family that plans to have milk cows freshen, sows farrow, and plans to start baby chicks during a single spring month has a lot to learn about improving its timing. The Plains Area livestock farmer who has not learned the value of keeping a few extra stacks of hay or a trench silo or two of sorghum silage as a reserve feed supply as protection against dry years can still use new ideas.

A common experience is to find a farmer with a "one plow" size farm using a set of equipment of two or three plow size. Operating large machinery adds to the farmer's pride, but it is likely to lower the income level of his family. Occasionally, it is the other way around. The larger operator is skimping along with too-small equipment. He is always so far behind with his work that his crop yields are low or his labor bill too high. A good farm analysis will indicate weak points such as these.

### **Production Measuring Sticks for the Farm Business**

Using production yardsticks is a fairly simple matter for ordinary levels of efficiency. Nearly all farm record books include an analysis page with some easily used measuring sticks.

## SUMMARY OF INVENTORIES AND INCOME—Accrual Basis

Farm Income  
Schedule

Description	Beginning Inventory (Col. 1)		(From page 6) Livestock Purchased (Col. 2)		(From page 1)	(From page 1) Died or Used	Income (Col. 3)		Closing Inventory (Col. 4)	
	No.	Value	No.	Value	Raised		No.	Value	No.	Value
Hogs	71	\$ 1850 00	1	\$ 65 00	120	13	158	\$ 4628 00	31	\$ 1245 00
All Cattle	36	2955 00	10	520 00	10	5	2	17 00	26	2538 00
							17	2250 00		
Poultry	220	332 00	400	64 00				442 00	220	332 00
Sheep										
Horses	4	200 00					1	50 00	3	150 00
Feeds		3149 00		†			†			2800 00
Seeds				†			†			
Total Inv. & L. S. Purchased		\$ 8480 00		\$ 649 00						\$ 7155 00

\* Enter total livestock sold, (raised and bought)—Pages 4 &amp; 5.

† See directly below where detailed sales are recorded.

‡ Entered as expense item on page 31.

In any class of livestock the sum of No. in column 1 plus column 2 plus raised should equal the sum of No. in column 3 plus column 4 plus died and used.

Dairy Products (Page 2)	1653 00
Eggs (Page 3)	833 00
Corn Sales (Page 6)	200 00
Small Grain Sales (Page 6)	
Soybean Sales (Page 6)	252 00
Other Crop Sales (Page 6)	
Government Payments (P. 7)	96 00
Labor Off Farm (Page 7)	8 00
Machine Work (Page 7)	86 00
Refunds (Page 7)	25 00
Other Income (Page 7)	13 00
Total Income	\$10551 00

## SUMMARY OF INCOME AND EXPENSES—Accrual Basis

Closing Inventory (Col. 4 above)	\$ 7155 00	Beginning Inventory (Col. 1 above)	\$ 8480 00
Income (Col. 3 above)	10651 00	Purchases (Col. 2 above)	649 00
		Expenses (Page 31—Col. 1)	4123 00
		(Page 31—Col. 2)	890 00
		Depreciation (Page 31—Col. 3)	688 00
Total Income	\$17706 00	Total Expense	\$14830 00
Net Farm Income (Total Income minus Total Expense)			\$ 2876 00

## SUMMARY OF EXPENSES—Use for Either Cash or Accrual Basis

31

Description (From pages 28 and 29)	Amount (Col. 1)	Description (From page 29)	Amount (Col. 2)
Labor Hired	\$ 1200 -	Taxes <i>Farm and pers. property</i>	\$ 326 -
Feed Bought	993 -	Insurance <i>Bldgs, livestock, feed</i>	42 -
Truck and Machine Hire	350 -	Interest <i>note and mortgage</i>	512 -
Fuel and Oil for Farm Use	282 -	Rent <i>(no cash.)</i>	-
Auto Expense (farm share)	146 -		
Machinery Repairs	230 -		
Building Repairs	220 -		
Seeds, Inoculation, Lime, Fertilizer, Twine, etc.	402 -		
Veterinary, Vaccination, Breeding Fees, Medicine, etc.	184 -		
Telephone and Electricity (farm share)	84 -		
Farm Organizations, Farm Journals, Bank Charges, etc.	32 -		
Total	\$4123 -	Total	\$ 890 00

SUMMARY OF DEPRECIATION—Use for Either Cash or Accrual Basis  
From Depreciation Supplement

Items	Year Bought	Cost	Est. Years Life	Depre- ciation This Year* (Col. 3)	Value End of Year
Machinery (Page 2a or 3a)	1935	\$ 2100 00		186	1840 00
New Added This Year <i>Disc.</i>	1941				
	1945	145 00	12	\$ 12	\$ 133 00
Machinery (Page 4a or 5a)					
New Added This Year					
Truck (Page 4a or 5a)					
New Added This Year					
Tractors (Page 4a or 5a)	1942	1430 00	12	110	990 00
New Added This Year					
Auto (farm share) $\frac{1}{2}$	1942	450 00	9	50	250 00
New Added This Year					
Farm Buildings <i>(Bought farm, 1943)</i>	1943	7000 00	33	210	6370 00
New Added This Year					
Fences (Page 6a or 7a)	1943	930 00	14	65	735 00
New Added This Year					
Tile (Page 6a or 7a)	Varin	2200 00	40	55	2050 00
New Added This Year					
Total Depreciation				\$ 688	

\* Enter Totals from depreciation column for current year, Depreciation Supplement.

FIG. 72—The net income page shows the financial results of the year's work and planning. Here we see the results figured on the accrual basis.



EFFICIENCY FACTORS		Our Farm		More Profitable Farms in Area*	
Where to find or how to determine					
Net Farm Income (page 30 or 32)	1				
	2	2876		5302	
Total Acres (page 37, line 19, column 1)	4	170 A.		164 A.	
Crop Acres (page 37, line 11, column 1)	5	127 A.		118 A.	
Per Cent Land in Crops (line 5 ÷ line 4)	6	75 %		72 %	
Months of Man Labor (operator and family. 14 + hired 10)	7	24 Mos.		18 Mos.	
CROP ACRES AND YIELDS		Acres	Yield	Acres	Yield
Corn (page 37—Total Yield ÷ No. of Acres)	9	55 A.	52 Bu.	66 A.	62 Bu.
Oats (page 37—Total Yield ÷ No. of Acres)	10	34 A.	44 Bu.	28 A.	55 Bu.
Soybeans (page 37—Total Yield ÷ No. of Acres)	11	20 A.	10 Bu.	9 A.	28 Bu.
Hay (page 37—Total Yield ÷ No. of Acres)	12	18 A.	2.1 T.	19 A.	2.6 T.
Gross Value of Crops per Crop Acre (page 34—I)	13	\$ 36		\$ 50	
LIVESTOCK RETURNS					
[Livestock Returns per \$100 Feed Fed (page 38—III)]	15	155		148	
	16	No.	Amt.	No.	Amt.
Hog Sales per Litter (Hog Sales, Page 4—4628 ÷ No. Litters—Page 1)	17	20	\$ 231	26	\$ 221
Pigs Weaned per Litter (Pigs Weaned ÷ No. Litters—Page 1)	18	6.5	Pigs	6.5	Pigs
Dairy Income per Cow (Page 2)	19	10	\$ 165	10	\$ 178
Lbs. Butterfat per Cow (Page 2)	20	305	Lbs.	266	Lbs.
Egg Income per Hen (Page 3)	21	200	\$ 4.35	140	\$ 3.88
Eggs Produced per Hen (Page 3)	22	175	Eggs	186	Eggs
LABOR AND EQUIPMENT USE					
Crop Acres per Man (Line 5 + No. Men [Line 7 above + 12])	24	63 A.		90 A.	
[Gross Profit per Acre (Page 38—IV—Gross Profit ÷ Line 4 above)]	25	\$ 45		\$ 58	
Operating expenses per Acre (Page 31—Total Col. 1 + Line 4 above)	26	\$ 24		\$ 17	
Net Income per Acre (Page 30 or Page 32—Net Income ÷ Line 4 above)	27	\$ 17		\$ 32	
[Gross Profit per Man (Page 38—IV—Gross Profit ÷ No. Men [Line 7 above + 12])]	28	\$ 3790		\$ 6660	
Power and Equipment Cost per Acre (Page 38—II)	29	\$ 10.10		\$ 12.05	

\* Get report from County Extension Director or from Extension Service, Iowa State College, Ames, Iowa.  
 † Can only be determined if records are kept on accrual basis.

FIG. 73—For the farmer who thinks of himself as a business man, the farm record analysis pages are the most important part of the farm account book. Here is where the farmer can study the results of the year's operation and find suggestions for making better plans for the year ahead.

Being efficient in production means getting good results in relation to the resources used. It is modified to a degree by the size of the business. That is, if labor is to be effective, the farm business must be large enough so the farmer and his hired help can be usefully employed.

A farmer can measure production results either in the quantity produced or in money returns. Usually it is best to use measures of both kinds. The man who tries to get the highest possible yield from an acre or the largest possible production from a milk cow, brood sow, or hen is striving for high production but not for the most efficient level of production. However, with ordinary levels of production per acre, per cow, etc., the farmer with the larger production per unit is likely to have the more efficient production.

The measures to use depend a good deal on the type of farming being used.

On a crop farm, the yield per acre of the important crops has a good deal of effect on farm income. Of course, yields should be measured in relation to productivity of the land being farmed and weather conditions for the year. Often, better management gives higher yields per acre with little if any increase in costs. Another crop measure is the value of all crops raised per acre of total crop land. This measures both the effects of the yield and the combination of crops being raised. For the crop farmer, being able to get a comparatively high value per acre of crop land may mean the difference between a mediocre and a very satisfactory farm income. The comparison must be made with similar type farms operating under like conditions.

### **Did the Livestock Really Pay?**

For the livestock farmer, the livestock income in relation to the value of the feed fed to the livestock will be the best single measure of results. This can be easily figured. The following example shows the method to use. The facts about the farm business should include: crop and livestock inventory values, sales, cost of feed and livestock purchased, and crop production records.

The above example includes all of the livestock on the farm other than horses that furnish power. The same method can be used to check the feeding efficiency for each livestock enterprise if records are kept of the feed used. On many farms, this

TABLE 73  
METHOD OF CHECKING LIVESTOCK FEEDING EFFICIENCY ON A FARM

First: List the Value of Feed	Second: List Value of Livestock and Products
Value of all feed crops raised.....\$1,676	Sale of livestock and poultry.....\$2,437
Value of pasture.....330	Sale of cream and eggs....1,085
Feed bought during year...662	Products used in the house..244
Feed on hand, beginning of year.....1,413	Livestock inventory, end of year.....2,236
(1) Total feed on farm during year.....\$4,081	(4) Total livestock credits.....\$6,002
Feed crops sold.....\$10	Livestock and chickens bought.....\$209
Feed crops used for seed....40	Livestock inventory, first of year.....1,880
Feed fed to work horses....132	(5) Total livestock debits...\$2,089
Feed on hand at end of year.\$1,322	(6) Year's income from livestock.....\$3,913
(2) Total feed not fed.....\$1,504	(Subtract [5] from [4])
(3) Value of feed fed to livestock.....\$2,577	
(Subtract [2] from [1])	
Third: Compare feed cost to livestock income	Fourth: Figure livestock income per \$1.00 of feed used
(6) Income from livestock..\$3,913	Income per \$1.00 of feed fed.....\$1.52
(3) Feed fed to livestock...\$2,577	(Divide [6] by [3])
Difference.....\$1,336	

additional information will be very valuable (See Chapter 7). But the over-all efficiency of all the livestock on the farm taken as a unit is a more important factor. Any farmer who keeps inventory, cash, and crop production records can use this method to check on his feeding efficiency.

Note that no costs other than feed have been considered. The margin over the value of feed must be high enough to cover all other costs and leave a profit. Usually this margin needs to be 20 to 30 per cent. The margin needed is higher on dairy farms than it is where beef cattle are the main roughage-using enterprise. It is higher for poultry farms than hog farms.

To determine how good a job he has done in making wise use of feed, he needs to compare his results with the results secured by other farmers during the same year. In Iowa, for example, the records kept by a large number of farmers show

the following averages for sixteen years in over-all feeding results. The farmers had dairy, dual and beef cattle, hogs, sheep, chickens, and turkeys among them. The feed return figure measures the margin of the income from the livestock over the value of feed fed to all the livestock.

The gross income from livestock per \$1.00 of feed and pasture fed to the livestock is as follows:

16-year average .....	\$1.43
High year (1941) .....	1.87
Low year (1931) .....	0.85
Years less than \$1.00 .....	1
\$1.00 to 1.20 .....	2
1.21 to 1.40 .....	3
1.41 to 1.60 .....	7
1.60 and up .....	3

Other measures also may be used to check on the results from the different kinds of livestock. Useful measures for hogs are the number of pigs weaned per litter, average weight of pigs at 45 days and 180 days, income per litter of pigs raised, and similar information. With milk cows, the quantity of butterfat or milk produced per cow and the income from dairy products per cow are useful. The weight of calves at weaning time and the percentage calf crop are important with beef cows. Daily gains and feeding margins on feeding cattle are useful to have. With chickens, per cent of baby chicks raised, days to reach market weight, egg production per hen, and income per hen will be useful.

### **Yardsticks for Checking on Workers and Use of Capital**

In Midwest farming, labor is the most expensive single resource used. It is important to check on labor use. Some measures are adapted for making comparisons among farms of similar sizes and type. A reasonable standard for a cash grain farm in central or western Kansas may be 350 acres of crops per man-year; on a medium size cash grain farm in Iowa or Illinois, 140 acres; while dairy farms and smaller farms may have only 50 acres of crops for each twelve months of farm labor used. Where a large acreage of crops is cared for per man, there will be little time for livestock.

On livestock farms the kind of livestock will govern the number which can be cared for per man-year of labor. Diversified

dairy farms usually keep seven to ten cows per man—specialized dairy farms up to double this number or more. Men who like hogs and have farms adapted to them often raise 150 to 300 head per man along with taking care of the other farm work. Feeder cattle per man may also run to large numbers.

The income from livestock per man will be a good measure of the labor efficiency. Since prices change, it is best to compare with other farmers during the same year. A comparison with the figures from previous years on the same farm can be used if allowance is made for price changes.

The total income produced on the farm per worker is one of the best measures to use. The examples of two actual cases in Table 74 show the method.

TABLE 74  
FIGURING THE TOTAL INCOME (VALUE OF PRODUCTION) PER FARM AND PER MAN-  
YEAR OF LABOR

	Farm A	Farm B
Sale of livestock and products.....	\$ 6,388	\$ 1,484
Cash income from crops and other sources...	462	336
Value of home used products.....	213	180
Total.....	\$ 7,063	\$ 2,000
Change in livestock-feed inventory during year.....	\$+ 462	\$+ 712
Cost of livestock and feed bought (Subtract)...	-1,022	- 397
(1) Gross for year from farm.....	\$ 6,503	\$ 2,315
Months of all labor used for farm work.....	24	13
(2) Man-years of labor (Divide by 12).....	2.00	1.08
Total income per man (Divide [1] by [2])....	\$3,252	\$2,144

This method gives the total value of farm production and the production per worker in a given year. In the example the two farms are similar in acreage, in soil, and in type of farming. Yet they show very different results in the value of production from a year's labor. Farmer A had 50 per cent more income per man and nearly three times as much from the whole farm out of which to pay his farm expenses than Farmer B. While his additional expenses might possibly more than use up the additional income, this is not likely on farms of high productivity and high labor efficiency.

Both of these farmers are interested in the reasons for the difference. One reason is that Farmer A received \$2.13 for each \$1.00 of feed fed to his livestock while Farmer B only received 81 cents for \$1.00 of feed fed during this particular year.

Using capital wisely is important for all farmers and especially for the young man who is short of money. One measure of capital use is the amount of operating capital used for each \$100 of total income. Also important is the investment in land and improvements per \$100 of gross. Where capital is limited, the farmer wants to invest it in the part of the business that earns the highest rate of return.

### **Are Your Costs Too High?**

Because operating costs often require 30 to 50 per cent of the gross income, determining if they are too high is important. However, costs are more uniform between farms of similar size and type than are the amounts and values of production. This does not mean that costs can be ignored. A dollar saved by reducing expenses is just as useful as an extra dollar secured by increasing farm production. The wise manager watches both ends of the business to keep production at a high level and expenses under control.

It is important to note the farms with the highest net income (in normal times) are those that carry on a high level of production for their size rather than farms with the smallest dollar expenses. In other words, too much effort given to lowering expenses may result in a smaller rather than a larger net income. The well-managed farm is the one whose gross income rises faster than expenses.

Common measures of costs are:

1. Operating cost per acre or per \$100 gross income.
  2. Fixed costs per acre or per \$100 gross income.
  3. Power and machinery cost per acre.
  4. Cost per unit of product. This may be useful in specialized kinds of production where most costs can be kept separately.
- It is of little use on a diversified family farm.

### **The Final Test**

As suggested before, the most important single measure of operating success is net farm income, the return for labor and

management, or some similar over-all financial measure. This should be figured for the whole farm business—including the landlord's share where the farm is rented. Only in this way can both the operator and landlord see whether the rental division seems fair and reasonable. Also, it is the only way one farm can be compared with others regardless of the tenure arrangements.

If the net income is not satisfactory, the family should see what it can do to improve the situation. While an individual family has little control over prices, weather and some other factors, it does have control over many of the factors affecting farm income.

The farmer and his wife should look over their own farm some day as a skillful neighboring farmer might do if he were studying them and their business. With a critical but friendly eye, let them ask themselves, "Why do those folks operate the farm the way they do now? Is their business too small or too large? What new ideas and methods could they use to advantage?" And so on. Such a critical examination can do wonders to help a family improve their operations and management if they can learn to "see themselves as their neighbors see them."

This chapter has pointed out the need of getting and using the facts. Self improvement is not an easy task. But it can be both a pleasant and a profitable one if the family makes a determined effort to do it.

On many specific problems it will be wise to consult the farm management department of your state agricultural college.