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# Managing Your Farm Financial Future

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# CHAPTER I

## Farm Financial Decisionmaking — A Perspective

Farming in the U.S. today is a dynamic, highly competitive ball game. Capital and managerial requirements are rising rapidly; rewards are improving but have become highly variable among farmers. As a result, beginning as well as established farmers face many tough, highly individualized business decisions. This publication and accompanying set of six worksheets are designed to provide farmers, managers, their financial advisers, and farm management consultants and educators with concepts and tools for making better business decisions under such conditions.

This first chapter provides a perspective of farm financial decisionmaking under present and likely future conditions. It focuses on some key questions to be answered in planning your future in farming, and discusses some basic concepts and tools underlying the successful management of the modern farm business. It concludes with a brief description of the remaining two chapters in this publication.

### Managing Your Financial Future

In planning your future in farming, there are two key questions that you need to find answers to: (1) Where is the farming industry headed? and (2) Where are you and your business headed?

#### WHERE IS THE FARMING INDUSTRY HEADED?

The importance of reflecting on this first question is summed up in the adage, "Sometimes a man thinks he is ahead of his times because the times aren't going in his direction at all." Farming is a rapidly changing, highly diverse industry. Thus, you must carefully appraise the direction the industry is headed before you can make a sound decision regarding your own future.

#### Capital Requirements Rising Rapidly

Farming in the United States has undergone many marked changes in recent years and is still changing rapidly. As late as 1940, labor still accounted for more

than half of the resources used in farming. Today, labor accounts for less than 20 percent of farm resources, being replaced by a sharp increase in the use of capital.

This adjustment has fostered much larger farms and bigger investments in land and equipment as well as operating capital. Records for a group of farmers in southeast Minnesota covering the period since World War II illustrate this (table 1). While the number of workers per farm has remained relatively constant, acreage per farm has almost doubled, and total capital invested has gone up about 15 times — from about \$39,000 in 1948 to more than one-half million dollars per farm in 1978. This capital increase came from about a ten-fold increase in land values per acre, crop and livestock inventories, and power machinery.

Table 1. Changing requirements and rewards of farms in southeast Minnesota, selected years.<sup>1</sup>

	1948	1958	1968	1978	1978 as % of 1948
Total acres	225	240	294	385	171
Value per acre <sup>2</sup> (\$)	104	179	286	1,191	1,145
Number of workers	2.0	1.8	1.7	1.9	95
<b>Investment</b>					
Crops and livestock	11,315	15,649	23,200	88,172	779
Power and machinery	3,964	9,181	14,972	42,783	1,079
Land and buildings <sup>2</sup>	23,400	42,960	84,084	458,535	1,960
	38,679	67,790	122,256	589,490	1,534
<b>Earnings</b>					
Farm sales	17,188	22,970	36,607	135,766	790
Operator earnings	5,177	5,364	8,316	40,055	774
Profit margin (earnings/sales)	.30	.23	.23	.30	1
Earnings, high 1/5	9,623	11,051	18,624	93,639	973
Earnings, low 1/5	1,652	806	493	-2,033	-123

<sup>1</sup> Annual reports of the Southeastern Minnesota Farm Management Association, Department of Agricultural and Applied Economics, University of Minnesota, selected years.

<sup>2</sup> Value per acre as reported for southeast Minnesota in *The Minnesota Rural Real Estate Market in 1978*, by Rodney Christianson and Philip Raup, Department of Agricultural and Applied Economics, University of Minnesota, Economic Report ER 79-3, March 1979. Value of land and buildings determined by multiplying total acres by value per acre.



For established as well as beginning farmers, two questions come to the fore: (1) How much land is, or will be, required to provide full and efficient employment for one man's labor? and (2) How much capital must be invested in machinery, equipment, and other items to make an efficient operation? Obviously, the exact amount will vary by type of farm and area of the country. It also will vary by family — the levels of efficiency the family attains in the use of resources and the income drain the family's level of living and debt repayment places on the business.

Table 2 illustrates the relative amounts of land and other capital required for full employment. Levels of efficiency and size that should be attained on the major enterprise are also noted.

### Managerial Requirements Rising

As farms have become larger and more complex, their managerial requirements have risen sharply as well. This has also changed the emphasis on the qualifications a farmer should have. Successful use of modern farming methods requires a high degree of technical knowledge and production skill. Successful handling of large investments and cash flows in the face of high and rising costs and uncertain product prices, coupled with weather and other production risks, requires expert business and financial skills. For most crop and selected livestock farms, marketing skills are also very important. For larger operations, labor management is coming to the fore.

### Gaining Entry — the Need to Piggyback

Because of the marked shift from a land/labor-oriented farming to one dominated by high capital and managerial requirements, entry requirements have risen to the point where successful entry into farming requires that one normally piggyback on an existing farming operation — at least in the early going. Such arrangements may involve assistance from a family member, such as the sharing of machinery or co-signature on a note. Certainly there are exceptions to this rule, but it takes an exceptional manager or situation to gain entry strictly on his or her own.

### Rewards — Improving, but Highly Variable

Like any industry where the entry requirements are rising, the economic rewards of farming are improving — on the average. Returning to table 1, we can see that the financial rewards of southeast Minnesota farmers exhibited a marked improvement, particularly in the past decade. Sales have shown an eight-fold increase since 1948, while profit margins have remained constant.

But with the increased size and risks involved has come greater variation in the rewards received. Some families have been very successful; others have fared poorly. In 1948, the difference between the high and low earning farms in the southeast Minnesota study (table 1) was about \$8,000. By 1978, this gap had widened to more than \$95,000 (\$93,639 versus -\$2,033).

Reported earnings of various size dairy farms in Wisconsin (figure 1) also demonstrate that there are financial successes and failures regardless of the size and type of farming operation. Farms with 30 cows had earnings ranging from about -\$4,000 for the low one-third earnings farms to about \$12,000 for the high one-third earnings group. Farms with 100 cows had earnings ranging from about zero to about \$35,000.

### Emerging Pattern — the Labor and Capital Leagues

Thus, it is becoming increasingly clear that there is no such thing as an average farmer or farm situation. Farms are becoming more and more variable in terms of the amounts of resources used and the resulting financial rewards received. In fact, it appears that farmers now can be grouped into labor- and capital-oriented leagues by their relative use of capital and their managerial skill (figure 2).

Some farmers continue to spend a major part of their time supplying skilled labor to the farm. They have little desire to hire labor and thereby shift their roles from that of a working manager to one who manages labor and finances. Their earnings may be high for the resources they control, but their relatively

Table 2. Land and other capital required for full employment (2,800 hours) on various types of farms.

	Crop Acres	Livestock	Machinery and Equipment Investment	Livestock, Feed, and Operating Capital	Income Above Variable Costs	Efficiency Level (Major Enterprise)
Dairy — Grade A — Wisconsin	130	35 cows	\$35,000	\$ 40,000	\$27,500	14,000 lbs. per cow
Farrow Finish Hog — Corn Belt	200	100 litters	\$49,000	\$ 43,000	\$32,500	7.5 pigs/litter
Hog — Beef Finishing — Corn Belt	200	60 litters, 100 steer calves	\$49,000	\$ 65,000	\$28,500	7.5 pigs/litter
Cash Grain — Corn Belt*	450	—	\$90,000	\$ 20,000	\$24,000	100 bu. corn; 32 bu. soybeans
Wheat — Sorghum — Beef Backgrounding — Great Plains	800	200 steer calves	\$90,000	\$110,000	\$26,000	30 bu. wheat; 55 bu. sorghum

\*Requires only approximately 2,100 hours per year, but the seasonal labor requirements in the planting and harvesting periods make it difficult to handle more acreage without hired labor.



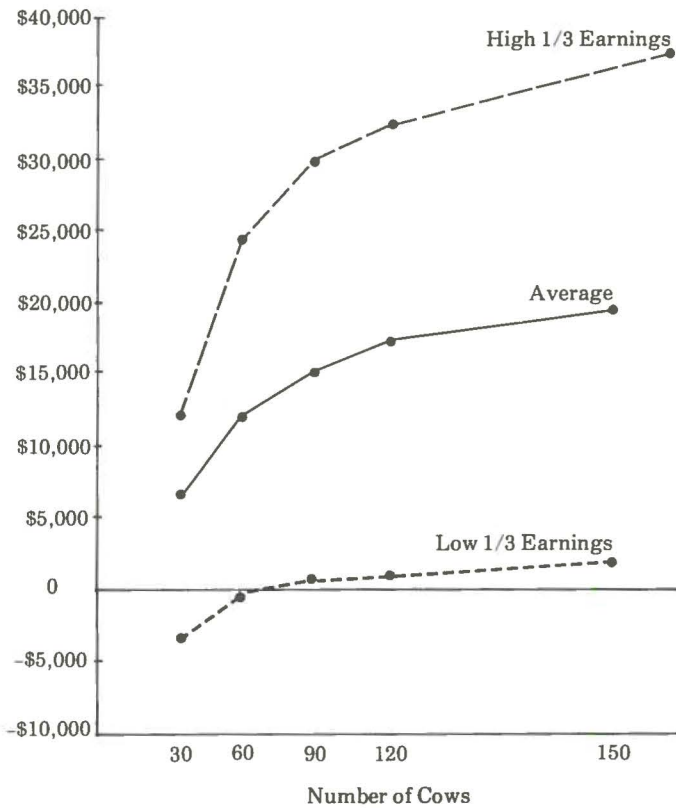


Figure 1. Return to labor and management per operator, by earnings groups, 1976-78 averages, by herd size, Wisconsin.

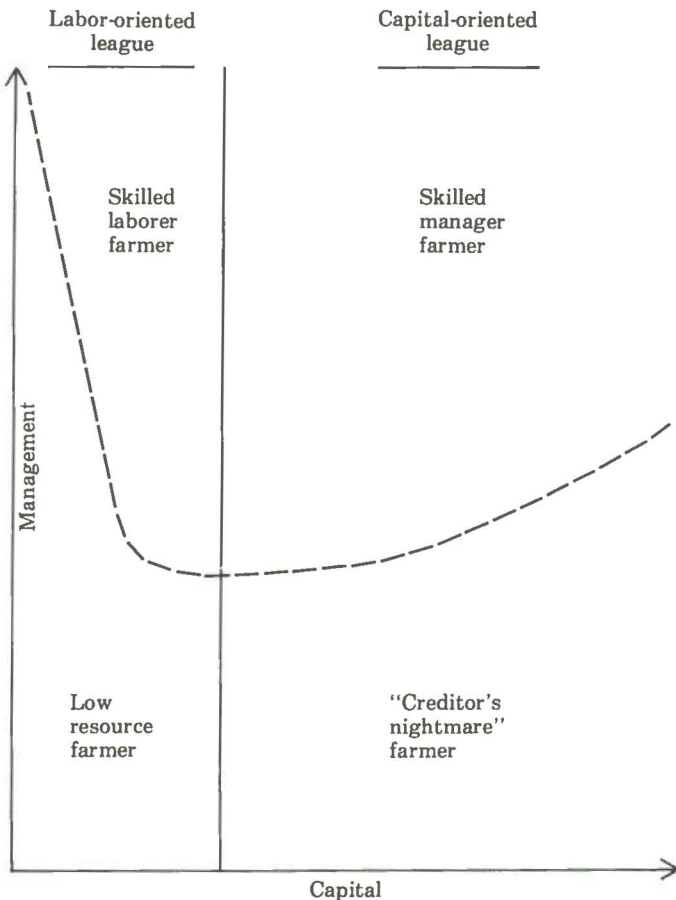


Figure 2. Grouping today's farmers — the labor and capital leagues.

limited use of capital and hired labor puts a ceiling on their potential earnings. They are *skilled laborer farmers* in the labor-oriented league.

Others in this league, however, are not effectively combining their long hours of manual labor with their often-limited capital. They are *low resource farmers*. Many in this group have not been able to keep pace when age slows them down, since their returns have depended so heavily on their own labor. Many have been leaving farming for other jobs or retirement. Those remaining farmers in this grouping are now experiencing low levels of family living or securing a major part of their income from off the farm.

Some farm operators have shifted their work emphasis from supplying skilled labor to that of being primarily a farm manager. They direct large amounts of capital and hired labor. They receive not only a comfortable management wage, but also a good return on investment. They often enjoy exceptional earnings for their managerial efforts and succeed in attracting additional capital. They are *skilled manager farmers* of the capital-oriented league.

But, as shown in figure 1, employing large amounts of capital does not insure high earnings. If a farm manager is inept at handling larger amounts of capital, earnings may actually fall because there are more units to lose money on. As a result, a number of expansion-minded farmers have become *creditor's nightmare farmers*.

### Implications for Farm Business Decisionmaking

As a result of these many dynamic changes in farming, beginning as well as established farmers face many tough, highly individualized business decisions. This is because each family/business situation is different. For example, each farm manager has a different current family/financial/management situation or a different point of reference to start from.

Entering farmers who were careful in choosing their parents or spouses may have little trouble gaining entry, while others may struggle for years and eventually give up. Established farmers in the low resource league of figure 2 face an entirely different set of problems and opportunities than the skilled manager type operator. Similarly, middle-aged managers of large, successful units face a different set of retirement/transfer problems than those faced by managers of small units that will likely become part of some other farming unit some day.

Likewise, each farm family or farming unit has its own set of conflicting goals and objectives that must be resolved. Every business-oriented farmer faces a conflict between profitability and security, and the use of income for current consumption versus plowing it back into the business. In attempting to resolve these conflicts, the gambler-type person will likely opt for high profits and high living; the risk averter will go for security and savings. The beginning farmer will likely seek profits and plow back excess earnings, while the farmer reaching retirement will seek security while desiring to maintain a comfortable standard of living.



The need to merge generations in the same business further complicates the process of goal conflict resolution.

In addition, the farm manager is usually faced with a number of investment and financing decisions. But the number of alternatives open is often either too few or too many. For example, beginning farmers, low resource farmers, or "creditor's nightmare" farmers may all find that they are short of feasible alternatives for achieving their financial objectives with the resources available. Successful, capital-oriented managers, on the other hand, face the opposite problem of having more alternatives to consider than they can possibly use — or comprehend.

## WHERE ARE YOU AND YOUR BUSINESS HEADED?

To compete effectively in this dynamic industry, you will need to set your own goals and establish your own plans for achieving them. Otherwise, you will fall into the trap described by the adage, "If you don't know where you are going, any road will get you there." You will also need to clarify the management roles that family members will play in carrying out the new plan.

### Establishing Tentative Family and Business Goals

The first step in planning your future in farming is to set down your goals for you, your family, and your business — keeping in mind your present family and business situation as well as the demands of the industry. Both you and your spouse should take a sheet of paper and make separate lists of the things you would like to achieve next year, over the next five years, and beyond five years. If you are going into partnership with another family member (father/son, etc.), all partners should get involved in this activity. Failure to recognize divergent goals often causes severe problems along the way.

These goals should relate to both personal/family and the business:

	Soon	Our Goals	
		Within 5 Years	Beyond 5 Years
<b>Personal/Family Goals</b>			
<b>Business</b>			
<b>Production</b>			
<b>Marketing</b>			
<b>Financial</b>			

Once you have done this, compare lists and try to arrive at an agreed-upon list. Then for each of the personal and family goals you have listed, indicate what it

will cost in terms of time or money. Also, rank each of these items in terms of their importance to you — how urgent it is that the goal be achieved in the time frame indicated. Next, project the effect of achievement of these goals on family expenditures and time available to the business. You may want to make two or three estimates for several time periods, reflecting your priorities as you go.

Next, establish a set of goals for your business — taking into account its production, marketing, financial, and personnel management dimensions. What do you hope to accomplish this year, within five years and beyond five years? Then indicate what these changes would mean in terms of your investment of time and money as well as your priority on each of the goals listed.

When developing a plan for achieving your personal, family, and business goals, you will be faced with a two-fold task: (1) to convince yourself and other family members as to the direction you should go (what combination of goals you should attempt to achieve) and (2) to convince resource suppliers such as your lender and landlord to go along.

### Convincing Yourself and Other Family Members

Convincing yourself as to the merits of a given plan involves finding suitable answers to three broad questions: Where are we? Where do we want to be? How can we best get there from here?

#### *Where Are We?*

Any plan you develop or select should be consistent with your present financial position, the problems you face, or the opportunities that are realistically open to you. As one top manager has said, "When we are planning a change, we study our past performance or track record carefully. If we don't, we often tend to create problems rather than solve them!"

Therefore, you will need to determine your present position in the so-called farming ball game. In what league are you playing and what is your status in the league? Are you a successful player in the capital-oriented league or are you really a "creditor's nightmare" (see figure 2)? Are you in the labor-oriented league — doing a good job with limited resources — or are you on your way out of farming because of a lack of capital or management skills? Or are you just deciding how best to get started in farming? In any case, you should take a good look at your track record, taking stock of your financial position and demonstrated managerial ability.

#### *Where Do We Want to Be?*

Your future plan should also be consistent with where you really want to be. That is, it should properly reflect your aspirations in farming (growth or slowing down) as well as your attitude toward such things as risk vs. security; work vs. leisure.

To do this, you must first identify your realistic alternatives and then analyze their possibilities and consequences. There are generally four broad options open to you: (1) maintaining your present status in



your so-called farming league, (2) improving your status in the league or jumping to another league, (3) scaling down operations, or (4) exiting from farming.

The range of development options open to you will depend upon your present status. For example, if you are a low resource farmer, you will have fewer options than a successful operator. However, within this range of feasible alternatives, the one selected will be influenced by your aspirations and attitudes. For example, if you are wanting to provide a farming opportunity for your children at some future date, you will likely have to choose more growth-oriented, riskier alternatives than you might otherwise.

#### *How Can We Best Get There?*

Your future plan should also be consistent with your ability to get there. That is, are you in a sound enough financial position and do you have sufficient management capacity to move from where you are now to where you want to be?

Answering this question will likely involve a three-step process. First, you will have to develop a feasible production and financial plan consistent with your managerial know-how and financial position. Second, if the proposed plan requires a major change or additional resources, you will have to convince resource suppliers, such as your lender, that you should have them. Third, you will need to develop procedures for implementing and controlling the new plan.

#### **Convincing Resource Suppliers to Go Along — Your Lender**

Having convinced yourself that you have a workable plan for your future, the next step is to convince resource suppliers, such as your lender and landlord, to go along. Before approaching your lender, consider the following:

*Will Your Image or Character Pass Muster?*

Are you trustworthy, hardworking, etc.?

*Do You Have a Good Business Track Record?*

Are you in a good financial position? Do business profitability and production performance reflect good managerial ability over time? Do you exhibit sufficient management capacity to handle the new plan?

*Are Your Plans Consistent with the Lenders' Preferences?*

Is the purpose of the loan a profitable self-liquidating type, or will the rest of the business have to bail it out? Is there sufficient security for the loan?

You hope your proposed plan will be accepted. But if your lender will not go along with the plan, you have two options: (1) to reach a compromise plan that the lender will accept, or (2) to look for another lender. As one lender said, "As a lender I can only tell you whether I can loan you the money. Only you and circumstances will determine whether the plan will succeed or not."

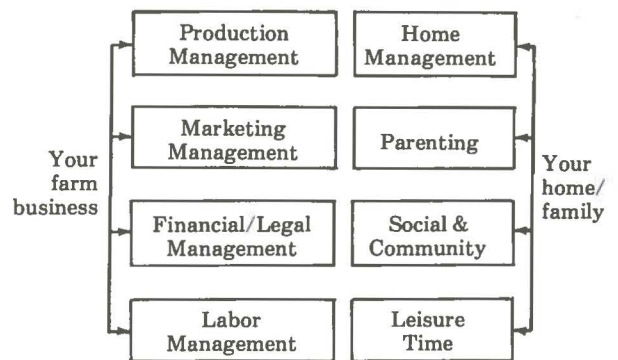
#### **Clarifying Management Roles of Family Members**

An integral part of your plan for your future in farming should be the clarification or redefinition of

management roles of family members regarding the management of the farm business and the home and family. Even under normal circumstances it is desirable that you manage together as co-partners. The rapid growth in farm business management requirements noted earlier demands it. It also makes for better relationships within the family and between the family and your creditor, etc. The creditor feels more comfortable when he senses that you are in this together — all the way! Co-management becomes even more important under abnormal circumstances. Change usually causes stress. This coupled with the uncertainties of farming suggests that things will not always go smoothly. But by managing together, you will survive the stress periods better. It also makes you more flexible and able to take over should something happen to one of you.

The key question then is: How should we share management tasks or roles in the present setting? This usually involves a two-step decision process.

1. **Step #1** — List the management tasks relating to your farm/home situation.



2. **Step #2** — Decide who can do which tasks best. If the proposed plan calls for a change in management roles, you will need to:

- (1) provide an opportunity for them (and you) to learn the new skills or roles involved;
- (2) let the player in the new role assume the responsibility;
- (3) provide considerable support — don't second-guess.

## **Farm Financial Decisionmaking: Some Basic Concepts and Tools**

The primary objective of most farm businesses is to provide the owners with some desired level of financial well-being. However, the process of securing and using resources to achieve this objective is normally carried out in a highly risky, uncertain world. Therefore, the major financial task facing farm managers is to order their decisions so as to provide a reasonable balance between the achievement of desired well-being or *profitability* objectives while insuring the continuing *financial soundness* of the business.



Since profits and risks are often closely related, a conflict can rage between desired profit levels and the degree of financial soundness desired by the manager or required by the lender. For example, investing or using capital in the business for highly profitable, relatively risky ventures may tend to increase the longer-term profitability of the business at the expense of the shorter-term liquidity position, or even the solvency of the business, should the creditor "blow the whistle" at the wrong time. On the other hand, a practice of keeping large cash reserves or a large borrowing reserve with the creditor for liquidity purposes obviously lessens the potential profitability of the business.

Similarly, in selecting *sources* of funds, the manager could select a relatively low-cost, rapid-repayment credit source to improve profitability. However, such an arrangement linked together with a high risk or slow turnover project could spell disaster from a liquidity standpoint.

Thus, the manager must set realistic financial objectives and use great care in selecting alternative methods of securing and using capital. To aid the manager in this decision process, we shall now discuss briefly some concepts and tools relating to business profitability and financial soundness.

## **BUSINESS PROFITABILITY AND RELATED CONCEPTS**

Because of inflationary pressures, industry demands, and/or individual aspirations, most farm managers have an overriding goal of improving the profitability of their business and maintaining its continued growth over time. Here we shall explore measures of business profitability, the factors underlying business growth, and the impact of time and risk on profits and decisionmaking.

### **Measures of Farm Business Profitability**

Profits are generally defined as the difference between the value of products produced and the cost of resources used in their production. The greater the difference, the more profitable the business is. Thus, profits can be measured simply as follows: Profits equal the volume of production times the difference between the price per unit and the cost per unit of production.

$$\text{Profits} = \text{Volume (Price/Unit} - \text{Cost/Unit)}$$

To be most useful in decisionmaking, however, profits need to be measured in more specific terms, such as returns to labor and management or returns per dollar invested. The following is a brief summary of several profit measures used today in the farm setting.

#### *Returns to Labor, Management, and Equity*

This measure gives the dollar return after all operating and overhead expenses are paid except for a wage to the operator and family labor and any charge for the use of the equity capital. It is often referred to as net earnings.

#### *Returns to Labor and Management*

This measure gives the dollar return after all operating overhead and use of equity capital expenses are paid. It is a prime measure of profitability for farmers in the labor-oriented league discussed earlier.

#### *Return per Dollar Invested*

This measure expresses in relative terms the return after operating and overhead expenses are paid including operator and family labor but *not* including interest on debt or equity capital. This is the prime profitability measure for farmers in the capital-oriented league.

#### *Return per Dollar of Net Worth*

This is a relative measure of the return after all operating and overhead expenses, operator and family labor, and interest on debt capital are paid but *not* interest on equity capital. This measure used with the return per dollar invested provides important insight to profitability to all operators using debt capital.

#### *Net Worth Change*

This is an absolute measure of the annual increase in that portion of the net earnings (defined above) that is retained in the business after family living and income tax demands are met. Traditionally, this measure has been used as the indicator of business growth over time. It, however, may be more significant as an indicator of business "expansion power" as it indicates growth in borrowing capacity.

The methods for calculating these profitability measures for your farm will be detailed in Chapter II.

## **Improving Business Profitability; Achieving Business Growth**

There are three broad options toward improving business profits.

- Improve the efficiency of what you are now doing by improving the net relationship between price per unit and the cost per unit of production (see above formula).

- Increase the volume of production without losing current price/cost efficiency.

- Reorganize the business. This might involve changing enterprise combination and/or size of enterprise and will likely affect all three profit factors — volume, price, and cost.

Increasing business profitability, however, does not insure business growth. Business growth, as measured in terms of net worth change, depends on how these increased profits are used. For example, the farm family that decides to allocate all of the increased profits to increased family consumption, after paying any related increase in income taxes, will not experience business growth since all excess profits have gone to pay taxes and living costs. This is in contrast to the family that decides to direct any increases in profits to increased net worth or retained earnings in the business. Thus, the formula for business growth (change in net worth) can be stated as follows:

$$\text{Growth} = \text{Profits} - \text{Taxes} - \text{Consumption}$$



The conflict between using increased profits for consumption or business growth (retained earnings) must be thoroughly understood. For example, as stated earlier, profits can be enhanced by more efficient production with existing resources. At the same time, business growth can be enhanced by cutting consumption levels and tax payments (through better tax management), with current or improved efficiencies of production. Thus, family goals, thoroughly discussed and understood, must chart the course through this conflict between business growth and increased consumption.

When using the option of increasing profitability through a reorganization and/or expansion of enterprises, acquisition of additional resources is usually necessary. These can be added through leasing, use of retained earnings, or debt financing. These resources can be added profitably as long as the returns from each added investment can be projected to more than cover the total cost of adding and using that investment.

Let's stop here to consider a couple of very different farm situations. Consider first a debt-free farming operation presently achieving good returns to investment. Here, the manager is planning to expand the business for purposes of increasing profitability by acquiring needed resources through the use of retained earnings of the business. In this situation, business growth will occur as long as the net returns to the new investment will more than cover any increases in consumption and income taxes.

In a second situation, consider a farmer investing *debt capital* to expand the business for the same purposes. Here, the resultant change in profits and net worth will depend first on whether investment returns (or profits) are greater than the added interest charge on the borrowed money and, in turn, on what happens to consumption and taxes. The important point is that the interest drain must be taken into account in achieving profit and growth goals, much as hired labor expense is taken into account in traditional farming.

Now let's push this concept one step further and consider two farming operations with a half million dollars in farm assets (see table 3). Again, one farm is debt-free while the other is heavily (80 percent) in debt. If each achieves the same rate of return on total assets (say 15 percent), each pays its respective income tax burden, and \$10,000 is taken out for family consumption, we see that the debt-free operation will have a considerably greater absolute gain in net worth or business growth (\$25,500 vs. \$14,700).

This example illustrates the drag that debt interest places on a heavily leveraged business. (This also illustrates why established, debt-free operators can bid for resources more readily.) However, it should also be noted that the manager in the heavy debt situation receives a considerably larger percentage change in net worth because of the small net worth base with which these earnings were secured (note 14.7 percent compared to 5.1 percent). This illustrates why debt capital, if efficiently used, can be of such a great benefit to the farm operator with a limited net worth base.

Conversely, it can be seen that achieving asset returns at less than debt interest rates (in table 3 we have used 0 percent) can be devastating to the operator with heavy debt, while being much less burdensome to the debt-free situation. A combination of \$36,000 interest drain plus \$10,000 for living would put the heavy debt operator in bankruptcy in about two years. The debt-free operator, on the other hand, would see his net worth decline by only 5 percent per year.

Table 3. Effect of debt levels and rates of return on business growth.

	Debt-Free		Heavy Debt	
	\$500,000	\$500,000	\$500,000	\$500,000
Total assets	\$500,000	\$500,000	\$500,000	\$500,000
Return per dollar	15%	-0%	15%	0%
Earnings before interest, taxes, and consumption	\$ 75,000	\$ 0	\$ 75,000	\$ 0
Amount of debt	0	0	400,000	400,000
Interest on debt (9%)	0	0	-36,000	-36,000
Earnings before tax	\$ 75,000	\$ -0	\$ 39,000	\$-36,000
Income tax due	39,500	0	15,300	0
After-tax income	\$ 35,500	\$ 0	\$ 24,700	\$ -0
Family consumption	-10,000	-10,000	-10,000	-10,000
Change in net worth	\$ 25,500	\$-10,000	\$ 14,700	\$-46,000
Begin net worth	\$500,000	\$500,000	\$100,000	\$100,000
% change in net worth	5.1%	-5%	14.7%	-46%

The foregoing example illustrates the concept of financial leverage. It is an extremely important concept in considering increasing the profitability and growth of the business via the use of debt capital. Table 4 illustrates the effect of variations in investment returns and levels of debt use on net worth change. For example, row one shows the effect of investment returns on net worth change when the business is debt-free. Here we see that as the return on investment increases, change in net worth increases, but always by an amount less than the rate of return on investment. This is because of the negative influence of consumption demands (\$10,000 in this case). Here we see the potential impact of careful control of family spending as a reduction in spending raises the growth rate at all levels. For example, if spending were cut to \$5,000, net worth would increase 5 percent faster (\$5,000/\$100,000).

Table 4. Effect on business growth (net worth change) of varying levels of debt and return on investment, assuming a net worth of \$100,000, a debt interest rate of 10 percent and family consumption of \$10,000, with no tax effects considered.

Debt	% in Debt	Percent Return on Investment (r)			
		-10	0	10	20
-----change in net worth (%)-----					
0	0	-20	-10	0	10
\$ 50,000	33	-30	-15	0	15
\$100,000	50	-40	-20	0	20
\$200,000	66	-60	-30	0	30
\$400,000	80	-100	-50	0	50

Notice also in column five in table 4 that the growth rate of the firm is unaffected by varying levels of debt when the interest rate on debt equals the net earnings rate. Since in this case the interest rate and



the return on investment both equal 10 percent, all earnings from additional borrowings are used to pay the interest cost. Also, the earnings on equity or net worth (\$100,000 x 10%) equal the consumption draw of \$10,000. As a result, the net worth return is zero.

It can also be seen that if the rate of return were less than the debt interest rate, the growth rate would decline at a faster rate the higher the level of debt used. On the other hand, growth rates increase more rapidly as debt increases when the rate of return exceeds the debt interest rate.

The important points in the foregoing discussion are:

- There are three broad options in most farm businesses for increasing profitability.

- Increased profits can be used for business growth or increased consumption or both, after tax obligations are taken care of.

- Interest drain is an important factor in determining actual gains in profitability and net worth when debt financing is used.

- The degree of indebtedness (leverage) greatly influences returns to net worth at various levels of return to total investment. The highly leveraged business operator can “sink” or “swim” his net worth quickly, depending on returns to total investment, compared to the debt-free or limited-debt operator.

- Finally, when considering increasing business profitability, whether for family consumption or business growth or both, the timing of such increases coupled with the associated timing of expenses and debt payments can be crucial. Likewise, the degree of risk associated with the investment path chosen must be seriously considered. These dimensions of business profitability are discussed next.

### Time and Risk Considerations

In addition to the factors that influence average level of profits, the manager must be concerned with the timing of these profits and their potential variability (riskiness). The *timing* of each inflow and outflow during the year affects the financial soundness of the business — particularly its liquidity.

The other time dimension is reflected in the adage, “A bird in the hand is worth two in the bush.” This suggests that a dollar of profits earned today or this year is worth more than one earned next year or five years from now. To reflect the impact of time on profits more accurately, the manager should use so-called present value procedures, which discount future profits for the effects of time. Even when using simpler planning procedures, the manager should take into consideration the expected timing of profits — both from a profit and liquidity standpoint.

A key paradox of the business world is the relationship between *profits* and *risk*. Two relationships tend to exist: (1) more profitable ventures tend to be more risky, and (2) the difference in profits between a more profitable and less profitable venture generally is just enough to compensate the average investor for the greater risk — a risk premium.

Since there are few “average” investors in a given industry, managers will vary in the risk premium required or their willingness to take on risky ventures. This variation may arise from their own personal attitudes toward risk as well as the ability of their business to withstand variations in earnings. The difficulty of appraising (1) the degree of risk involved, (2) the manager’s attitude toward risk, and (3) the business’s ability to withstand risk introduces a lot of “gray” into financial decisionmaking. It also introduces the need to consider the financial soundness dimensions of the business as the manager tries to resolve this profits/risk paradox.

### FINANCIAL SOUNDNESS AND RELATED CONCEPTS

The financial soundness objective has two major dimensions — the *liquidity* and the *solvency* of a business.

*Liquidity* is the ability of the farm business to meet its financial obligations in a timely fashion. These obligations may be of a current, ongoing nature such as operating expenses, debt obligations, living expenses, or taxes, or those associated with unexpected events such as disease, hail, or drought. As shown in later chapters, liquidity can be measured in such terms as the balance between current liabilities and assets, a cash flow projection for the month or year, or in terms of the years required to repay a given type of debt.

*Solvency* is the ability of the business to pay all of its debts if it were to be liquidated at a given point in time. This dimension of financial soundness is usually reflected in the firm’s balance sheet — are there sufficient assets available to meet commitments if the lender “blows the whistle”?

### The Leverage/Liquidity Conflict; Increasing Risk Principle

Earlier we discussed the profits/risk paradox — that it is difficult to have a profitable business without assuming considerable risk. Similarly, our growth model showed that a major factor in getting more rapid increases in net worth growth is the use of leverage — increased amounts of debt relative to the firm’s assets. But this brings us face-to-face with a second financial paradox — the leverage/liquidity conflict.

This conflict can be summarized as follows: To increase profits, the manager often has to expand the business. Business expansion usually requires the use of additional debt capital or leverage. Leverage brings into play an important concept known as the increasing risk principle: as borrowings or leverage increase, unfavorable events have a greater negative financial impact on the business than the positive impacts associated with positive events.

This, in turn, means that a growing, more highly leveraged firm needs greater liquidity to protect itself from these increased risks. But, ironically, an expansion program’s increased capital demands typically



reduces the firm's liquidity position — its readily salable assets and excess borrowing capacity. Thus, the paradox.

Because of its considerable potential for damaging the financial standing of a business, we shall now illustrate the increasing risk principle. The principle states that as borrowings or leverage increase, unfavorable events have a greater negative financial impact on the business than the positive financial impacts associated with favorable events. This effect is illustrated in table 5.

For example, at a given level of debt of \$100,000 a negative 10 percent return on investment causes a 40 percent reduction in net worth or equity, while a 10 percent positive return results in no increase in equity or net worth. Likewise, as debt use increases, the range in growth rates increases (see right-hand column in table 5), and the negative returns to capital increase faster than those associated with positive returns. This effect is caused by the fixed interest obligation on borrowed capital, which must be paid regardless of the rate of return, as well as continuing consumption demands.

Table 5. Effect on net worth growth rate of selected debt amounts and rates of return, assuming consumption of \$10,000 and a debt interest rate of 10 percent.

Debt	% of Debt	Percent Rate of Return			Range of Variation (a-b)
		-10(a)	0	10(b)	
		-change in net worth (%)--			
0	0	-20	-10	0	20
\$100,000	50	-40	-20	0	40
\$200,000	66	-60	-30	0	60
\$400,000	80	-100	-50	0	100

This same principle and effect apply if asset values should decline. That is, the greater the amount of debt or leverage, the greater will be the decline in equity. This is again due to the fixed debt and interest obligation involved.

### Reducing the Conflict — Credit Expansion

Credit or borrowing capacity can be used up (leverage) or held in reserve as excess borrowing capacity (liquidity). Thus, one way of reducing the conflict between leverage and liquidity is to expand the amount of credit available. Such a happening would permit increased use of leverage while retaining adequate liquidity.

Factors that typically influence your supply of credit include: (1) personal characteristics, (2) track record and plans, (3) purpose of the loan, (4) risk strategies and loan security, and (5) the lender selected.

#### Personal Characteristics

In attempting to expand your credit base, top priority should be placed on reinforcing in the creditor's mind a favorable image of you regarding such personal factors as honesty, integrity, reliability, and managerial know-how. When expansion programs are being reviewed, a creditor is particularly concerned

with your capacity to handle the operation and your capacity to handle adversity. How you manage and work with your creditor when things are going against you will markedly influence future credit availability.

#### Track Record and Plans

Development of a superior track record of past production and financial performance along with a careful documentation of this performance will increase credit availability. So will well-thought-out projections showing considerable repayment capacity. Selecting financing terms that best fit the repayment character of the plan will also conserve or increase your borrowing power.

#### Purpose of the Loan

Where feasible, borrowing funds for purposes that are preferred by your lender will either expand your borrowing capacity or slow down its use. All lenders have their preferences. High-risk, low-preference projects will limit your borrowing capacity severely. In general, lenders tend to prefer well-secured loans with a high degree of *reclaimable* assets (e.g., feeder cattle and land as opposed to machinery or buildings). They also prefer loans with rapid rates of turnover and that are self-liquidating (e.g., cattle, fertilizer, etc., as opposed to machinery, land, and buildings).

#### Risk Strategies and Loan Security

Judicious use of strategies that either avert or reduce risks in production, marketing, and finance, as well as providing adequate and appropriate security for loans, protects and enhances your borrowing power.

#### Selection of Lender

Selecting a lender who is knowledgeable about the current production techniques and financing requirements of modern agriculture and who places considerable emphasis on management and repayment capacity can also enhance your credit position. You may want to consider changing lenders if your existing lender appears to be hung up on security and could care less about your performance and needs.

### Reducing the Conflict — Modifying Liquidity Needs

One of the major reasons for maintaining business liquidity or financial reserves is to buffer the business from the effects of adverse happenings. Thus, one way of reducing the business' needs for liquidity is to employ risk-reducing strategies. Diversification, flexibility, marketing choices, and insurance are the broad risk-reducing alternatives. These are discussed in greater detail in Chapter II. To the extent that the costs of these strategies are less than the gains accruing through their use, the business will be better off and the leverage/liquidity dilemma reduced.

## MAJOR TOOLS USED IN FINANCIAL DECISIONMAKING

Planning and managing the finances of a farm business require considerable skill and judgment. Good financial tools are required if the available skill



and judgment of the manager is to be used most effectively. Below is a listing of the major tools used in financial decisionmaking. These tools will be used in various ways in later chapters.

#### **Financial Tools — the Big Three**

The three basic tools used in financial analysis and planning are the earnings statement, the net worth statement, and the cash flow statement.

##### *Earnings Statement*

This is designed to measure the accrual earnings of the business during a given time period — usually one year. It is also called an income statement or an operating statement.

##### *Net Worth Statement*

This includes a systematic listing of all assets and liabilities of the business at a given point in time — say, at the beginning or ending of the year. The net worth statement is also called a financial statement or a balance sheet.

##### *Cash Flow Statement*

This represents a record or projection of the cash inflows and outflows for the business for some period of time such as a month or a year.

#### **Financial Tools — Partial and Complete Budgets**

To be able to make sound business decisions, a manager generally must analyze the impact of possible changes. Partial and/or complete budgeting procedures are prime tools for this purpose. When he couples budgeting with one or more of the “big three” tools just discussed, the manager should be in a good position to evaluate the impact of alternative changes on business profits and financial soundness.

##### *Partial Budgeting*

As the name implies, partial budgeting is a short-cut method in which the manager merely measures the changes in receipts and expenses associated with a given proposal. It is particularly useful in making a quick analysis of the impact of an adjustment in one segment of the business.

##### *Complete Budgeting*

With this method of budgeting, the manager makes estimates of total receipts, expenses, and net earnings for each alternative and then compares the total result — thus the term “complete.” This procedure is most appropriate if you are considering a major change in the size or organization of your business.

## **Brief Description of Remaining Chapters**

We shall close this chapter with a brief description of the content of the two remaining chapters and three appendices in this publication, and indicate how each might aid you in analyzing, planning, implementing, and controlling the financial future of your business.

### **CHAPTER II — ANALYZING YOUR PAST FINANCIAL PERFORMANCE**

This chapter focuses on the question: “Where are we?” It is designed to aid you, the manager, in carrying out your analysis function. The analysis procedure outlined utilizes the “big three” financial tools — the net worth, earnings, and cash flow statements — in gathering information about your business and analyzes it in terms of profitability, liquidity, and solvency. Procedures for determining the strengths and weaknesses of your business and for identifying possible business adjustments are discussed.

A detailed set of instructions for completing the accompanying worksheets I and II are contained in Appendix I.

### **CHAPTER III — PLANNING AND IMPLEMENTING BUSINESS CHANGES**

This chapter focuses on the questions: “Where do we want to be?” and “How can we get there from here?” It is designed to assist you in planning business changes and effectively implementing and controlling them.

Part I lays out partial and complete budgeting as tools for use in analyzing proposed business changes. The second and third parts discuss procedures for developing workable annual and transition plans for getting from where you are to where you want to be. The last part of the chapter lists some “bases you should touch” when attempting to implement such business change and stresses the importance of developing systems of records, etc., for controlling the plan.

A detailed set of instructions for completing the accompanying Worksheets III to VI is contained in Appendices II and III.



# CHAPTER II

## Analyzing Your Past Financial Performance

The first chapter provided a perspective of the farm financial decisionmaking process, including a review of some basic concepts and tools. It raised three questions you should ask when planning your financial future.

- Where are we?
- Where do we want to be?
- How can we best get there?

This chapter will probe the first question, "Where are we?" It will discuss the process of collecting information to determine how profitable and financially sound your business is. It also will explore ways of assessing the strengths and weaknesses in your business and of identifying possible business adjustments or changes — both those of a "fine tuning" nature as well as those requiring a major change.

### Part I — Collecting Information on Your Past Performance

To determine the overall condition of your business, you will need to measure its profitability, liquidity, and solvency. This, in turn, requires that you first develop a net worth statement and an earnings statement. Next, you should check the accuracy of the information contained in these two statements and proceed to calculate various financial measures. Worksheet I is specially designed to help you carry out this collection process. Following is a brief overview of the steps required to complete the worksheet. Detailed instructions for filling out this worksheet appear in Appendix I.

#### THE NET WORTH STATEMENT — PAGES 2 AND 3, WORKSHEET I

The net worth statement (sometimes called a financial statement or balance sheet) provides a summary of how funds have been invested in the business (assets) and the financing methods used (liabilities and net worth) as of a given point in time — the day

the statement was made. The net worth statement format outlined below appears to be well-suited to the needs of the family-type farm and will be used in this publication and Worksheet I.

#### Assets (What You Own)

- |   |       |
|---|-------|
| A. Current                              | _____ |
| B. Intermediate                         | _____ |
| C. Total current and intermediate (A+B) | _____ |
| D. Long-term                            | _____ |
| E. Total assets (C+D)                   | _____ |

#### Liabilities (What You Owe) and Net Worth

- |   |       |
|---|-------|
| F. Current                              | _____ |
| G. Intermediate                         | _____ |
| H. Total current and intermediate (F+G) | _____ |
| I. Long-term                            | _____ |
| J. Total liabilities (H+I)              | _____ |
| K. Net worth (E-J)                      | _____ |

*Assets* should include only what you own or have coming to you as of the date of the statement. *Current assets* are cash and other assets that you expect to realize in cash or consume in production during one business year. *Intermediate term assets* are those resources that support production rather than go for sale. Such assets are expected to have a useful life of one to ten years. This includes machinery and equip-

ment, breeding livestock, and securities not readily marketable. *Long-term assets* include items of a more permanent nature such as farmland, buildings and improvements, and non-farm real estate.

*Liabilities* are all obligations you actually owe as of the statement date. *Current liabilities* are those due and payable on demand or within the operating year — normally a 12-month period. These include short-term notes and accounts, as well as past due rents, taxes, and interest. In addition, the portion of intermediate and longer-term debt due in 12 months should be included here. *Intermediate liabilities* include the portion of notes and accounts payable that normally can be deferred for periods of one to ten years. Loans for machinery and equipment purchases and breeding livestock fall into this class. Sometimes buildings and improvements are financed on this basis. *Longer-term liabilities* consist of the deferred portion of mortgages and land contracts owed on farm and non-farm property.

Your *net worth* or equity in the business is determined by the difference between your total assets (what you own) and your total liabilities (what you owe).

The problem of placing values on your assets is often, at best, troublesome. The values used should reflect the *purpose* for which the statement will be used. For example, if a net worth statement is made to provide information for an IRS audit, then all assets should be valued at their adjusted tax basis. On the other hand, if the statement is to be used in obtaining credit or in estate planning, the fair market value of all assets should be used.

Another valuation approach — fair market value minus selling costs and income taxes — should be considered if one wishes to evaluate investment opportunities of the farm capital in non-farm alternative uses. Further, this valuation approach can be used to measure results of investment strategies in various farm assets. This is particularly useful when comparing farm land returns with returns from other farm assets.

For management purposes, where the manager is attempting to measure only the financial performance of the business, the following valuation method would likely be more meaningful: land at cost; buildings, depreciable real estate, machinery, and equipment at adjusted tax basis; breeding livestock at conservative market value; and resale livestock, feed, seed, supplies, and other current assets at market value. Further, to make valid comparisons from year to year, breeding livestock values should not be changed materially to avoid paper profits and losses. However, current assets will change in value and as they are generally converted to cash in the next 12 months, should be valued at expected market value. By using this valuation method, changes in net worth are more a reflection of the earning capacity of the farm than investment strategies or changes in value of assets, particularly fixed assets.

For analysis purposes, two net worth statements are necessary — one for the beginning and one for the end of the business year in question. These two state-

ments, representing snapshots of the financial position of your business at these two points in time, will provide a picture of how the financial strength of your business has changed during the year. Detailed instructions for completing pages 2 and 3 of Worksheet I are contained in Appendix I.

## THE FARM EARNINGS STATEMENT — PAGE 4, WORKSHEET I

Your next step is to develop a farm earnings statement for your business. The earnings statement (sometimes called a profit and loss statement, income statement, or operating statement) presents a summary of income, related expenses, and resultant profit or loss (earnings) from operations for a given period — normally one year. The following is a brief outline of an earnings statement.

1. Total cash farm operating income	\$ _____
2. Less total cash operating expense	_____
3. Net cash (farm) operating income (1 - 2)	_____
4. Adjustments for inventory (+ or -)	_____
5. Adjusted net farm operating income (3 + / - 4)	_____
6. Adjustment for capital items (+ or -)	_____
7. Net farm earnings (return to unpaid labor, management, and net worth) (5 + / - 6)	_____

Developing an earnings statement involves recording *total cash farm operating income* and *expenses* for the year or period in question. This information can be gathered from your income tax and other farm account records. Since the farm earnings statement treats earnings on an accrual basis, *adjustments for inventory* and *capital items* must be made using information from your net worth statement. As calculated, the resultant net farm earnings is equivalent to returns to unpaid labor, management, and net worth, and provides the base from which to develop additional measures of business profitability. A detailed set of instructions for completing the earnings section appears in Appendix I.

## INFORMATION ACCURACY CHECKS/CASH GENERATED — PAGE 6, WORKSHEET I

A common saying in the present computer age is: "Garbage in; garbage out!" Therefore, before you further analyze your business, you should check the accuracy of the information you have gathered.



Space is provided on page 6 of Worksheet I for checking the accuracy of the information you have used in developing the net worth statements (pages 2 and 3) and the farm earnings statement (page 4). Three checks are provided: (1) a cash flow/living expense check, (2) a profit/net worth check, and (3) a liabilities check. The *cash flow/living expense check* is designed to test the accuracy of the inflows and outflows of cash in your business, which includes income and expenses, capital purchases, borrowings and debt repayments, living expenses, and taxes. The *profit/net worth check* allows you to see if your earnings statement (page 4), when adjusted for other income, family spending, and taxes, agrees with the change in net worth reported on your net worth statement (page 3). The *liabilities check* is designed to check whether a proper accounting has been made for borrowings, debt repayment, and beginning and ending liabilities. Space is also provided for calculating the *cash generated for non real estate debt*, which will be used later in measuring the liquidity of the past year's operations. Detailed instructions for completing the accuracy checks are found in Appendix I.

## FINANCIAL SUMMARY AND ANALYSIS — PAGE 5, WORKSHEET I

The financial summary and analysis section of Worksheet I (page 5) provides space for summarizing selected information from the net worth, earnings, and cash flow statements and for calculating various measures of business profitability, liquidity, and solvency. Determining which measures are most meaningful in analyzing a particular business situation will be discussed in Part II.

Measuring the *profitability* of a farm business is a complex matter. In many non-farm businesses the laborers, managers, and investors are distinct groups of people. Each can measure their profitability by comparing what they receive to what they contributed to the business. Most farmers, however, are simultaneously laborers, managers, and investors in their businesses — so several profitability measures are applicable. Because of this situation, the following measures are calculated on page 5, Worksheet I: (1) labor and management earnings, (2) return per \$100 farm investment, (3) return per \$100 net worth, (4) net profit margin, and (5) asset turnover.

Liquidity measures calculated on page 5, Worksheet I, include the years required to repay non-real estate debt and the current liability/asset ratio. Solvency measures include several financial ratios as well as the change in net worth. Detailed instructions for making these calculations are included in Appendix I.

## FINANCIAL AND PRODUCTION PERFORMANCE TRENDS OF OUR FARM BUSINESS — WORKSHEET II

Operating results of your farm business will fluctuate with conditions. But generally the trend observed in financial and production measures over a

period of time will strongly indicate the longer-term financial profitability and strength of your present business.

Worksheet II provides space (pages 2 and 3) for you to summarize various financial measures for a period of years from Worksheet I. It also provides space for recording selected size of business and production (and marketing) performance measures. Such measures should prove helpful in determining why your financial progress has been good or bad, as well as providing an inkling as to the quality of management available. Guides for developing these various measures are generally available from your state extension service.

Page 4 of Worksheet II provides space for you to make comments on each year's business as well as to evaluate it in terms of strengths and weaknesses and proposed changes. Part II of this chapter is designed to help you assess your present situation and identify possible areas of change.

## Part II — Assessing the Results; Looking Ahead

After collecting information regarding your past financial performance, your next step is to assess this performance — to make note of your strengths and weaknesses — and then to identify possible areas of needed or desired business change. The following discussion is designed to help. It is built around business objectives of profitability and financial soundness. Use the space provided on page 4 of Worksheet II for recording your remarks regarding your business situation.

### SIZING UP THE PROFITABILITY OF YOUR BUSINESS

To size up your present success level, you need to select measures of financial success and standards for appraising this information, and then evaluate the profitability of your business in that light.

#### Selecting Profitability Measures and Standards

On page 5 of Worksheet I you calculated several measures of business profitability. *Labor and management earnings* (line 3) is one of the best measures of success level for the labor-oriented business. This figure shows the residual earnings to pay for your labor and management. You can thus determine whether farming is paying you as well as it is other farmers and/or whether you could do better financially in a non-farm job.

In addition to this, you may wish to look at two other measures of success: *returns per hour of labor*, and *returns per dollar invested*. Look at the *return per hour of labor* measure if you're considering entering a non-farm job. *Returns per dollar invested* is meaningful if you are considering making changes in your farm and need to compete for capital.



If you are a capital-oriented farmer or are using considerable debt capital, then *percent return on investment* is your best profitability measure. Because returns on money invested tend to be more important than returns to your labor, pay attention to both your return on investment (line 10) and return on net worth (line 11). This shows you how well you can compete for funds with other farm businessmen and whether you're receiving as high a return on your investment of your equity in farming as you might in other investments of similar risk.

What causes a farm business to have a high or low return on investment? Basically, returns are affected by (1) the net profit margin on each unit of sales and (2) the value of sales made per dollar of capital invested.

The first measure, the *net profit margin* (the measure of profit made per unit of sales), was reported on line 14. If you have a low net profit margin, look behind the scenes to see if this condition was caused by low prices per unit sold, high overhead expenses, or inefficient production.

The second measure is *asset turnover* (line 13). The measure used in your analysis was the adjusted sales for the year divided by your farm investment. This measure shows how efficiently your farm has used its capital resources to generate output. A low asset turnover ratio means you should try to use your capital assets more fully or sell some of them.

Neither the net profit margin nor the turnover ratio by themselves are an adequate measure of operating efficiency. The net profit margin ignores the use of assets, and the turnover ratio ignores the profitability on sales. Also, only by comparing these profitability measures — return on investment, net profit margin and turnover with similar firms — can you judge whether the profitability of your farm is good or bad, and why.

Before selecting industry standards against which you can compare your performance, ask yourself: Has this been a normal or abnormal year? What has been the trend of our farm business? Has it been expanding? Have earnings, efficiency, and financial soundness been improving? Or, has the business been in a tailspin? To make these determinations, refer to your track record in Worksheet II.

Of course, you also should be concerned with how effectively you have been using your labor or capital in farming relative to comparable farms in your area. This will require that you contact your creditor and/or extension service for so-called industry standards against which to judge your performance.

### **Exploring Opportunities for Improving Business Profits**

After sizing up your performance, you may decide that there is a need to improve profits or that you merely have the desire to do so. The following is a brief exploration of some of the options that may be open to you.

Three broad options exist for improving farm business profits. These are: (1) doing a better job of what you are now doing, (2) doing more (or less) of what you are now doing, and (3) doing something different.

#### *Doing a Better Job of What You are Now Doing*

Three interrelated management areas of your farm business — production, marketing, and finance — are possible places for looking for opportunities to do a better job of what you are now doing. Production management improvements revolve around the question: Can production levels or yields be improved at a profit? Since modern farming requires that you buy many of your inputs and sell most of your products, a check of your marketing management may also suggest ways of improving profits. Likewise, avenues for increasing profits via improved financial management should be checked. These include (1) changing the combination of assets used and (2) changing the sources and combination of liabilities.

#### *Doing More (or Less) of What You Are Now Doing*

This alternative may involve making fuller use of existing resources or adding (or reducing) resources while continuing with present enterprises or activities.

**Making fuller use of facilities or equipment.** Often a farm has unused capacity in terms of its facilities or equipment. Failure to use this capacity means the business carries a larger overhead per dollar of sales than is desirable. As a result, an analysis of your business will show a low asset turnover ratio — adjusted sales/dollar invested. The question is: "Can we profitably make fuller use of our existing facilities and equipment?" A related and continuing problem in managing operations is that of replacing fixed assets such as machinery. This replacement process may provide an opportunity to consider reducing the amount invested without affecting sales appreciably.

**Expanding the present operation.** If your business has excess management available and is in a strong financial position, then you may find that expanding — doing more of what you're now doing — will improve profits. Before exploring alternatives in this area, you may want to reread the discussion of finance fundamentals in Chapter I. The major expansion alternative for most farmers involves expanding output of existing enterprises (more corn, hogs, etc.) or, in some cases, introducing some new farm enterprise. Whether the expansion should be in current or new production areas will depend in large part upon the amount of management available, the relative profitability of each, the risk character of the various endeavors, and your ability to handle this risk — both personally and financially.

**Reducing the size of present operations.** Some farmers have expanded so rapidly and spread their management and finances so thin that a reduction in the size of present operations would likely improve profitability. Before doing this, analyze various seg-



ments of your business to see which segments should be reduced or cut out. Also, make projections to see if such a contraction would enhance your business's success and longevity or only hasten its demise.

### *Doing Something Different*

This alternative may involve changing the combination of enterprises in the business or the shifting of at least some resources to off-farm endeavors.

**Changing the combination of enterprises.** Changing the combination of crop and livestock enterprises may permit you to make more profitable use of your resources. This may involve a recombination with existing or expanded resources. In exploring this alternative, we shall first discuss some factors to consider in selecting and combining enterprises and then lay out some general guidelines.

*Factors to consider in selecting enterprises.* The type of enterprises best suited to your situation depends on several factors:

- The comparative advantage of the enterprise in your geographic area.
- Your personal comparative advantage and preference — your managerial skills and interests in handling that enterprise.
- The financial position of the business and its ability to withstand risk, as well as your willingness to assume risk.
- The kinds and amounts of land, labor, and capital available.

*General guidelines in selecting enterprises.* The proportionate mix of the major resources — land, labor, and capital — suggests which enterprises will generally best fit a particular farm situation. For example, on relatively *small farms* — 200 acres or less in the Corn Belt, where land and capital are short relative to labor — livestock enterprises that are labor intensive should normally be selected if the operator hopes to make a living from full-time farming. Typically, dairying or feeder pig production is best suited to this situation. In planning for this size of farm, you should generally plan your livestock program first and then fit your cropping program to your feed needs.

On *large crop farms* — 400 crop acres or more — labor is the limiting factor, especially during the cropping season. In this situation, you may or may not have livestock. If you do have livestock, then livestock finishing enterprises such as finishing hogs or beef often fit well. These enterprises require very little direct labor but need large quantities of both capital and feed. In this situation, you should generally plan a high return cropping program that is consistent with good soil management. Livestock can then be added to the extent that labor, facilities, and management interest and ability are present.

On *medium-sized farms* — Corn Belt farms of 200 to 400 acres — usually require moderately intensive

livestock enterprises to provide adequate returns to a farm family. The highest return livestock on such farms will usually be a complete hog enterprise. A second enterprise that uses any forage produced is often found on these farms. Here, the crop and livestock program generally will be planned together.

**Shifting resources to off-farm.** Another alternative is to diversify vertically into the agribusiness sector. You may want to consider vertical integration in farm supply, processing, or marketing aspects of agriculture. Still another alternative is investment of both the owner's management and capital — or just capital — outside the agribusiness sector. Such an investment may become an integral part of the business operation or merely represent a place to invest excess funds — like apartment buildings in Arizona.

## **SIZING UP THE FINANCIAL SOUNDNESS OF YOUR BUSINESS**

When appraising the status of your business, you should consider its financial soundness as well as its profitability. When sizing up financial soundness, ask yourself: "What financial risks did we take to achieve our present earning levels? Can the farm continue to operate as it is presently financed?" Measures of liquidity and solvency indicate its financial soundness as described below.

### **Financial Liquidity: Measures, Standards, and Alternatives**

If you are fairly heavily in debt, you can figure your liquidity (or ability to pay debts on time) by looking at the *years required to repay existing non-real estate debt* (line 19, page 5, Worksheet I). Compare the number of years required to the repayment period that is acceptable to your creditors.

If, for instance, all of your non-real estate debt is of the current liabilities type, you should only need a year or less to pay it off. On the other hand, if you have only intermediate non-real estate debt, you should be able to pay it out in 10 or fewer years. Since you will likely have a combination of these types of liabilities, you will have to consider both time spans. In general, anything over five to seven years may mean liquidity difficulties if you don't increase the present profitability and repayment characteristics of your farm.

A better measure of your ability to pay debts would be to compare your cash available with scheduled annual non-real estate principal payments. If you then have excess cash, you can pay the debt faster than required. In many cases, however, you will not be able to develop a very precise repayment schedule — thus, the years required-to-pay approach is described.

To assess your future financial liquidity, first look at the current ratio on line 24, page 5, Worksheet I. It is the balance of your current assets and current liabilities and shows how much of these assets would have to be liquidated to pay scheduled current debts.



Another meaningful measure of your financial liquidity is your credit rating or additional borrowing capacity. If your farm business has considerable room to maneuver financially or can borrow additional funds to meet current obligations in a timely fashion, then it is relatively liquid.

To tell more precisely how adequate your farm's future liquidity is, you need projected profit and loss, cash flow, and financial statements. You will need to shift from analyzing your past performance to forward planning, which will be discussed in detail in the next chapter.

If your business is largely debt-free, one concern you may have is keeping profits high enough for family expenses while maintaining your farm's capital and equity structure. Here, measures of *depreciable asset replacement capacity* and *annual change in net worth* are most useful. The depreciable asset replacement measure (line 21, page 5, Worksheet I) shows if your farm is generating enough cash to replace existing equipment and facility items on a timely basis. Your capital replacement capacity can vary with the size of your farm, production, efficiency, levels of family consumption, the degree that capital is substituted for labor, and depreciation rates used.

Strategies for improving the liquidity or debt-servicing capacity of the business must deal with the problem of having sufficient cash available to meet financial obligations as they come due. This problem tends to have both short- and long-run dimensions.

#### *Meeting Financial Commitments in the Longer Run*

In the longer run, a key signal of an existing or emerging liquidity problem is the projected inability of the business to meet debt-servicing requirements on a timely basis. Possible strategies for removing such a cash inflow/outflow imbalance include: (1) improving the profitability of resource use (see profitability section, page 16), (2) reducing other cash outlays, such as family consumption and income taxes, and (3) restructuring debts to reduce repayment demands.

If financial commitments still cannot be met, then you will have to make a frontal attack on the overall level of debt commitments. In some instances, getting your business back on a sound financial footing may require that you convert some of your liquid or even fixed assets to cash and thus pay down the existing debt to a workable level. Such a strategy may be feasible if you have been expanding your business too rapidly — particularly in land that has such a low cash return at present. Better use of remaining resources or lowered production costs through leasing may make it possible to service remaining debts and still meet the commitments.

**Caution:** Converting too many resources to cash may so reduce the earning power of your business that remaining earnings will not meet even the reduced commitments. In such instances, you have only hastened your exit from farming.

In some instances, the opposite approach of pouring additional outside funds into the business may be

the route to go. To make this approach work, this added capital must be used profitably enough to meet its own repayment demands with enough excess earnings to meet commitments on existing debt. Here, one should evaluate investment opportunities and management potentials carefully to insure that "good money is not following bad." Such a situation will only further jeopardize your remaining solvency or net worth position.

#### *Meeting Cash Commitments in the Shorter Run*

In dealing with short-run (within the year) liquidity problems, timing is of the essence. In attempting to reduce the extent of a potential short-run cash imbalance, you have at least two alternatives. First, try to increase the amount and speed of cash inflows by adjusting the amount and timing of sales. Second, look at ways of reducing or delaying cash outflows by delaying acquisition of or payment for inputs in the business. If it is sound from a longer run standpoint, you might also consider shifting debt to longer-term payments. Or you may have to reduce family consumption.

Strategies in this area will be discussed further in Chapter III.

#### **Financial Solvency: Measures, Standards and Alternatives**

Financial solvency reflects your ability to pay debts should the business have to be liquidated at the time of the statement date. A traditional measure of overall business solvency is the relationship between total assets and liabilities. The ratio of *total farm liabilities to total farm assets* (line 38, page 5, Worksheet I), shows how much your farm is in debt. A normal standard is .5 to 1, or 50 percent loaned up, where the owner puts in as much equity capital as the lender. However, this standard is often "violated" where management capacity, profitability, and debt-servicing capacity warrant.

If you find your farm in a strong overall financial solvency position, this may be the result of high profits and good debt repayment ability. But it may merely reflect your desire to operate on a pay-as-you-go basis. Even if your farm is sound financially, is it profitable enough to maintain your present equity position over time? At the other extreme, a farm business may appear to be approaching *insolvency*, either because of poor profits or a tendency to use a lot of poorly managed credit, or both.

With rising land values due to inflation, many farms look financially solvent. But if you look at the balance between current and intermediate assets and liabilities, you may discover a situation tending toward insolvency. For example, if your farm is relatively unprofitable and/or has poorly matched financing methods with large purchases of depreciable-type assets, your farm's current and intermediate solvency position could show serious signs of deterioration. If you can no longer get financed for operating expenses and working tools, you are essentially insolvent, even though you have a sizeable equity in land.



Therefore, probably the best measure of solvency of your farm business under today's farm conditions is the relationship of the total of current and intermediate *liabilities* to the total of current and intermediate *assets* (line 36, page 5, Worksheet I). Here, a standard of .6:1 or .7:1 is normally acceptable, though you can move this ratio up or down depending on the profitability and risk characteristics of your business.

When it comes to appraising the financial soundness of a farm, external standards are not as meaningful as checking your profitability and soundness measures over the past years. Have high farm earnings been generated through use of exorbitant amounts of credit, leaving your farm in a marginal solvency position? Or, have liquidity or debt repayment problems been the result of a lack of profits or due to poor financing? Or, do you have a financially sound business?

Over time, a profitable business will tend to improve its solvency position. So, unless your present solvency position is unacceptable to the creditor, concentrate on insuring continued profits. However, if your present solvency position is untenable, then you may need to sell off assets to adjust the ratio of assets to liabilities or the level of creditor involvement.

Creditors usually finance either real estate or non-real estate assets and so are particularly concerned about the solvency of that portion of the business they are financing. In many instances, farmers have had a total solvency position that was sound but were insolvent on a non-real estate liability/asset basis. Such a situation may require refinancing or selling off longer-term assets to improve the business's shorter-term position.

## SIZING UP YOUR RISK-BEARING ABILITY AND THAT OF YOUR BUSINESS

As indicated in Chapter I, one of the conflicts facing you as a farm manager is the fact that added risks tend to be one of the costs associated with increased profitability. Therefore, you will likely need also to explore alternatives for improving the risk-bearing ability of your business, or of keeping risks in bounds so that you can live with them personally. Such strategies may permit you to (1) increase business profits without unduly jeopardizing the financial soundness of the business or (2) increase the financial soundness of the business without a marked reduction in profits. Here, we shall merely relate some of the risk-bearing strategies that might be considered.

- *Production and yield risks* can be reduced through such practices as selecting lower risk production practices or enterprises, diversifying, crop insurance, extra machine capacity, and maintenance of feed reserves.

- *Marketing and price risks* can be reduced through hedging, forward contracting, spreading sales, and selecting enterprises with less price fluctuation.

- *Business and financial risks* can be reduced by maintaining adequate cash or credit reserves, keeping loan payments in line with expected earnings and possibly using leasing arrangements in place of ownership.

- *Casualty and legal risks* normally can be best managed with an adequate property and liability insurance program and, in some cases, through the form of business organization used (corporation or limited partnership).

- *Human risks* can be reduced by providing safe working conditions; training backup labor and management (spouse, child, hired worker); adequate health, disability, and life insurance; and a good estate plan.

Strategies that buffer or reduce the effects of risk always come at a cost because they reduce the chances of making a "killing" when investment returns and leverage use are high. However, they may provide the basis for the longer-term survival and successful development of many farm businesses.

## ADDING UP THE SCORE; TAKING ACTION

After you have reviewed the past and present profitability and financial soundness of your business, compared your farm to others, and identified possible future changes, you are ready to choose one of three broad courses of action. First, you may decide you should liquidate the business, invest your equity capital elsewhere, and seek non-farm work. If so, the rest of this publication may not be useful to you.

Second, you may decide the present profitability status and soundness of your business is desirable and that you will continue the farming business as you are — with some possible fine-tuning as needed. In this case the discussion of partial budgeting and annual planning in Chapter III will be most relevant to your needs.

Third, you may decide you want to remain in farming but that you need to make some relatively major adjustments, either to improve your profits or financial soundness. If so, you should keep the following three tests in mind as you select the most promising alternatives to be analyzed, using the complete budgeting, annual cash flow, and transition planning procedures discussed in Chapter III.

*Test #1* — Is the alternative consistent with your analysis of your past financial and production performance? (Where are we?)

If the business is not financially sound because of a high level of indebtedness, then alternatives that call for large additional borrowings would not be feasible or relevant. Similarly, if the business has good levels of production efficiency, then alternatives calling for improved efficiency to improve profits may be unrealistic because they are not consistent with the underlying causes of the problems.

*Test #2* — Is the alternative consistent with your aspirations and attitudes? (Where do we want to be?)

This involves the size and complexity of the endeavor. For instance, labor demands should be consistent with the effort you are willing to devote to the business or your willingness to manage hired labor. Likewise, production and financial risk characteristics of various programs should be consistent with your willingness to assume risk.

*Test #3* — Is the alternative consistent with the realities of your present management skills, financial position, and the competitive demands of the industry? (Can we get there?)

Because of the wide differences in management skills and financial position among farmers, the range of development options open to any given farm family varies considerably. A brief review of portions of Chapter I illustrates the importance of this third test on your selection of alternatives. For example, the *low resource* farmer is often faced with two options — to get better or to get out of farming. To avoid exit, a farmer in this situation needs to explore ways of improving production efficiency and/or increasing levels of employment without incurring considerable debt. This may include off-farm employment.

The range of options open to *skilled labor* farmers are considerably broader. If their units are large and productive, they can maintain the status quo, particularly if age and family demands are right. They can also improve their present status in the labor-oriented league or jump to the capital-oriented league. Likewise, exit from farming is possible. However, if they leave farming, they should plan to replace part of their farm earnings through employment of their labor skills rather than depend solely on earnings from redeployment of their generally limited capital resource base.

“*Creditor’s nightmare*” farmers are typically capital-oriented minor league players who are trying to play in the majors. They must take positive and immediate action to remedy their situation. A combination of retrenchment and getting better at what they are doing is probably their only option, short of disposal of the unit.

Successful *capital-oriented* farm managers generally have a broad range of options open to them. They can maintain the status quo. They can get better or bigger, or both. They can retrench, lower their status in the capital-oriented league, or join the labor-oriented league. Or, they can leave farming and employ their management skills and capital resources elsewhere.



# CHAPTER III

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## Planning and Implementing Farm Business Changes

Chapter II contained procedures for helping you, the manager, appraise your past and present business performance and identify possible areas of needed or desired change in your business. This chapter is designed to help you plan and implement such changes.

Part I focuses on the procedures for analyzing various proposed changes in the business and deciding on the future course of your business. Parts II and III discuss considerations and procedures for developing a workable annual and transition plan for moving from where you are to where you want to be — your new plan. Part IV discusses some of the important additional steps that need to be taken if you are to implement and control your plan successfully.

After completing the analysis of your business discussed in Chapter II, you may have decided that you are going to continue farming and that only modest changes in the business are needed. In this case, you should focus on the discussion of partial budgeting in Part I and the process of developing a workable plan for the coming year (Part II). If a major change was called for in your earlier analysis, then you should focus on the discussion of complete budgeting in Part I. Parts II-IV should also be studied.

### Part I — Analyzing Proposed Business Changes

Your first step in the planning process is to decide what changes you will be making in your business. To do this you need to: (1) gather and analyze the information and (2) interpret the results in terms of the impact of alternatives on profitability and financial soundness.

There are three budgeting procedures that can be used in analyzing proposed changes — partial, com-

plete, and capital budgeting.\* Partial and complete budgeting are featured in this chapter.

### THE PARTIAL BUDGET: WORKSHEET III

Many decisions made by farm managers do not involve a major change in the farm business, but instead involve only fine-tuning one or more parts of the business. The partial budget technique is useful in testing the profitability and debt repayment characteristics of such changes. It is particularly useful in making a relatively quick analysis of the impact of a specific adjustment, such as adding an enterprise, purchasing a new machine, or deciding the best alternative between two courses of action, such as custom hiring combining vs. owning your own equipment. This approach may be used to analyze some major adjustments in the business, provided you exercise extreme caution in making sure the analysis has considered all the relevant changes. For most major changes in the business, the complete budget is generally a better tool to use.

The partial budget procedure considers only those costs and returns that change as a result of the proposed change. It may be viewed as a balance scale where the manager weighs the dollar value of credits associated with a proposed change against the dollar value of debits. Credits may be added returns and/or reduced costs. Debits can be added costs and/or reduced returns (see Worksheet III).

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\*The *capital budgeting approach* uses discounting procedures. It is particularly useful in cases where alternatives vary in the timing and duration of investments and income. If you are considering using this approach, see the booklet "Capital Investment Analysis Using Discounted Cash Flows" by Alpin and Casler, 2nd edition, Grid Publishers, Columbus, Ohio.



The partial budgeting format contained in Worksheet III permits you to analyze the profitability and repayment capacity of a proposed change. The profitability analysis looks at the income generating ability of the change on the *accrual* basis, while the repayment capacity analysis deals only with *cash* generating ability of the change.

Once you have decided the proposed plan is desirable from a profitability and repayment capacity standpoint, determine if the plan fits your personal goals and objectives. The plan must then be implemented, monitored, and evaluated. This often involves the development of an annual plan as discussed in Part II. Detailed instructions for completing Worksheet III are contained in Appendix II.

## COMPLETE BUDGETING — WORKSHEET IV

The *complete budgeting procedure* is more appropriate when you are considering making a major change in the size or organization of your business. It allows you to compare your present farming program with projections of all receipts, expenses, and net earnings for each alternative you consider. The format of a complete farm budget in its simplest form follows:

	Present Farm Program	Proposed Program
Total farm receipts	_____	_____
Total farm expenses	=====	=====
Net farm earnings	_____	_____

Worksheet IV is designed for analyzing major changes in your business, using the complete budgeting method of analysis. The *first step* in the process involves a projection of your present farming operation into the future. This projection should include the income and expenses that you expect will occur in a typical year over, say, the next 3 to 5 years. Such a projection serves two purposes: (1) it indicates how closely the present farming program might come to meeting the family's longer-term objectives, and (2) it provides a benchmark for comparing other farming alternatives.

You have completed a projection of your present operations; the question is, are you satisfied with the results? Is this where you want to be over, say, the next 3 to 5 years? Is the business showing the kinds of labor or investment returns that you would like to see? Are debts likely to be paid back as rapidly as you would like?

If you are satisfied with what you see, then you probably will not want to project other alternatives. You can go about the business of fine-tuning present operations and developing a plan for the coming year (see Part II).

However, if you are not completely satisfied and wish to look at other alternatives, space is provided in Worksheet IV for analyzing at least two more alternatives. This involves projecting the revised crop and livestock programs, projecting investments, debt-servicing and overhead expenses, and an analysis of the resultant financial information.

A detailed set of instructions for completing Worksheet IV is contained in Appendix II. As you begin the process of completing these steps, it is important to have yourself in a "long-range planning frame of mind."

Each alternative plan considered should be thought of in terms of how it will appear when it is fully operational and running at capacity in some unspecified year. Changes in inventory of crops and livestock should not be considered since it is assumed that there would be no change from one year to the next in the longer run.

Projected yields, production levels, prices, and costs should represent expected average levels over, say, the next 3 to 5 years. In developing budgets for selected enterprises, production, price, or cost, be careful that you don't build in biases that will make certain enterprises unduly profitable or unprofitable.

## WEIGHING THE EVIDENCE AND DECIDING

Eventually you must make a decision regarding the future course of your business. Are you making just modest changes or are you going to change direction and, if so, how?

To make a sound decision, you must weigh both the measurable as well as the unmeasurable, highly judgmental aspects of proposed changes.

### Weighing the Measurable Evidence

The preceding analysis has dealt primarily with the measurable factors: the amounts of land, labor, capital, and management required for each alternative and its profit, debt repayment, and solvency characteristics. Recognizing that a margin of error normally exists in any estimates involving the future, you should have arrived at reasonable estimates of investment costs, operating expenses, and sales.

In evaluating this evidence, you can begin by comparing the relative profitability of each alternative. For example, labor and management earnings, as reported on line 7, page 5, of Worksheet IV, will indicate whether alternatives 2 or 3 will provide greater or smaller returns for your efforts as a manager. However, if a major increase in investment is involved, you will want to look at returns per dollar invested to determine the relative return on resources. If the returns per dollar on the second or third alternative are considerably higher than the base plan, then you know the investment change itself is quite profitable.

If profits do increase, the question then is, "What has happened to operational and financial risks." (You will recall from Chapter I that there tends to be a close association between profits and risks.) Have production and/or marketing risks increased with



alternatives 2 and 3? If so, do increased profits seem large enough to justify the risk — has your risk premium been covered?

What has happened to the financial soundness of your business? Remember the leverage/liquidity conflict discussion in Chapter I. Has increased use of debt reduced your borrowing capacity to a very low level? Or have increased profits and an improved repayment picture made it possible to retain sufficient borrowing capacity for emergencies? Can debts be serviced on a timely basis? Is the degree of indebtedness reasonable? What will be the likely rate of net worth change, or rate of improvement in your solvency position, should the business appear to be on shaky ground at the start? Finally, it may be that none of the alternative plans considered so far “measure up” satisfactorily at this point. This necessitates seeking new alternatives to analyze in the same fashion.

### Weighing the Unmeasurable Evidence

For most situations, however, there are important factors that are not measurable. So spend some time identifying these and appraising their potential impact on the profitability, soundness, and overall desirability of each alternative. A major direction to look is at yourself as the manager. For the alternatives under consideration, can you handle the tactical aspects of planning and carrying out the day-to-day details and labor of the operation? Is there enough time in each day, week, or year to do the day-to-day managing as well as the labor? Can you manage and direct hired labor effectively? Can you and others closely involved handle the time aspects, the risks, the level of debt, the presence of hired labor, etc., without creating stresses that will hamper or actually prevent success?

Such careful introspection of oneself and those closely involved is difficult but necessary and probably requires time and consultation with able advisers that you trust.

### Making the Decision

Having once gathered and analyzed information regarding the measurable and unmeasurable factors associated with each of the alternatives under study, you must finally decide “where do we want to be?” It is important to remember three things when making the final decision. First, it is easy to underestimate the importance of the unmeasurable factors. One unmeasurable negative factor could easily override a whole page of favorable statistics. Expanding the business to make room for a son who hasn’t really decided whether he wants to farm is a case in point.

Second, the *number* of arguments for or against a given proposal is not as important as the *weight* or *importance* of each argument.

Third, despite the uncertainties surrounding any situation, you — the manager — should finally make a decision. Postponing action is the same as deciding to perpetuate the existing situation, which may well be the worst possible decision. Make a conscious

decision to either stay with the present business operation (your base plan), make a change to one of the alternatives under study, or study other alternatives that may better fit your previous or revised aspirations.

## Part II — Developing a Workable Production and Financial Plan for the Coming Year

Once you have analyzed proposed adjustments in your present operation, the next step is to develop a workable production and financial plan for the coming year. Worksheet V (Annual Farm Plan) is designed to aid you in this process.

Whether a major change or merely a fine-tuning of the present business is in order, planning for the coming year must be done. The first-year plan should fully allow for the fact that any large or small change in business operations carries a time dimension in successfully completing it. If a major change in the business is necessary, the first-year plan may represent just the first step of a transition plan (see Part III of this chapter).

Developing an annual plan involves many of the same techniques and thought processes used in the complete budget long-range planning process. The following is a brief discussion of the steps you must go through in developing such an annual plan.

The first step in the process is to detail a crop and livestock production plan for the coming year. Next, list any new investments that must be made and indicate their impact on your debt commitments. With this information you will be in a position to develop a monthly cash flow projection for the coming year. This will help you determine when the cash will be coming in and going out, how large your credit demands will be, and when they will occur. Space is also provided for projecting net worth and earnings statements for the coming year. Detailed instructions for completing these steps in Worksheet V are contained in Appendix III.

Once you have completed a plan for the coming year, it should then be studied in terms of its overall feasibility. The following four tests should be helpful in making this analysis.

*Test #1* — Is the plan technically feasible and desirable? Is it desirable from the standpoint of facility development, inventory management, and overall timing?

*Test #2* — Are the management requirements consistent with your managerial capacity? Does it fit your capacity in terms of production efficiency levels to be attained, labor requirements and skills, and current marketing potential?

*Test #3* — Does the plan exhibit sufficient potential in the coming year? If not, is there a buildup in inventories approximately equal to the cash flow deficit?



*Test #4* — Are the risks of the plan consistent with the risk-bearing ability of the business and within the stress-bearing ability of the management?

If the plan fails any of the above tests, it likely will be best to make adjustments in the plan. The timing of the plan may also offer opportunities to correct deficiencies. This includes changing the projected time of purchases and sales and the introduction of new technologies.

If the plan passes all of the above tests and involves only the fine-tuning of the business, see the discussion on implementing and controlling the plan, section 1 of Part IV.

If the plan passes all of the above tests but is only one step toward accomplishing a major change in the business, proceed with Part III of this chapter, which discusses the steps in developing a transition plan for years 2 and 3.

### **Part III — Developing a Workable Transition Production and Financial Plan for Years 2 and 3**

In cases where the long-range plan needs more than one year to be fully installed and running at capacity, the manager should develop plans for the rest of the transition period at this time. Both the manager and the involved creditors need to be able to see what the full transition period looks like before committing themselves to it.

Transitional planning for years 2 and 3 is much the same as first-year planning. Worksheet VI provides the space and framework for up to 2 years of additional planning. As with annual planning, production and investment plans must be developed, followed by financial plans that, again, zero in mostly on the liquidity of the business but also map progress toward long-range profitability and solvency goals.

Detailed instructions for completing Worksheet VI are contained in Appendix III. Once you have completed the worksheet, the proposed plans should be subjected to the same tests as were applied to the plans for the coming year in Part II. However, two additional tests should also be applied here.

*Test #5* — Will the desired major business change be accomplished within the span of time planned?

*Test #6* — Can the creditors involved be convinced or reasonably assured that investments to enable the major business change are now repayable in an orderly fashion?

If these additional tests can be answered “yes,” turn next to section 2 of Part IV, which discusses the process of implementing and controlling plans involving major business changes.

### **Part IV — Implementing and Controlling Business Changes**

Once you have analyzed proposed changes in your business and developed workable annual plan(s), you will need to take several additional steps to ensure that the plan is implemented and controlled effectively.

#### **IMPLEMENTING AND CONTROLLING PLANS INVOLVING MODEST BUSINESS ADJUSTMENTS**

Your first step after completing your detailed production and financial plan should be to check it carefully with your lender to see if he/she will go along with your plan and will provide the resources when needed.

Once your plan has been firmed up and financed, you should then review the plan in terms of what changes the plan calls for and when they should be initiated. Changes may occur in several areas such as how you will go about producing products, as well as how and when you will market them. It may also call for a change in the way you handle your finances or the legal structure under which you will be operating. Or it may call for a change in the management of your personnel and/or the way you manage your own efforts.

Controlling the plan requires managerial follow-up once the plan is implemented. This involves making timely adjustments in the plan or performance to keep them attuned to objectives and conditions. Your production and financial plan — discussed above — should represent a reflection of your objectives for the business. Thus, you should look at it and decide what records you will need to keep to monitor the effectiveness with which you are carrying out this plan.

For a one-man operation, this may involve a cash flow planned vs. actual record system plus selected enterprise or sector budgets relating to performance of important segments of the business. In larger operations, you will likely need to not only know how well the sector is performing but also how well those with responsibility are performing.

But the manager must be careful not to evaluate performance or progress strictly on the basis of its adherence or deviation from the plan or your business objectives. Agriculture is such a dynamic industry that the situation may in fact be calling for a change of plans or business objectives rather than a change in management performance. Thus, you must not only develop a system for monitoring your business, you must spend time monitoring the environment in which you are operating.

#### **IMPLEMENTING AND CONTROLLING PLAN INVOLVING MAJOR BUSINESS CHANGES**

Major changes in the business often require touching base with several people or institutions.



These include: the lender, accountant and attorney, and the business's labor and management team.

### Selecting and Working with Your Lender

Since a major change often requires additional outside resources, you have to convince your lender to go along — or at least arrive at a compromise plan that both can live with. (The same basic techniques used in selling your plan to your lender will also apply in convincing landlords and other resource suppliers.)

Three basic questions to ask yourself are: when, where and how to sell the lender. In deciding *when* to contact your lender regarding your ideas, remember to plan ahead. First, your plan should be well developed and documented. Then the lender must have time to reflect on your proposal and to make necessary investigations and arrangements. For sizeable loans, as occur in expansion programs, start your request well in advance of your signing a purchase order.

*Where* and how do you sell your plan? If possible, invite your creditor to visit the farm to review your proposal. If the creditor does come to the farm, give him a thumbnail summary of your plan and then a tour of your facilities showing how the new plan will fit into the ongoing business. After the farm tour, you can discuss the details of the plan and the loan request.

In discussing the details, be prepared to provide a summary of your past production and financial performance as well as a detailed plan of your proposal. Your plans and your ability to explain your reasons for wanting this loan may determine whether you are granted the loan. Be prepared to explain how the loan purpose will permit you to achieve your goals, the length of loan desired, the source of the payment, and the timing of payments.

Once the loan is made and the plan is implemented, keep your lender completely informed. Be punctual with payments. If you encounter difficulty, let the lender know immediately. Discuss any changes in your farm program with him. Keep him up to date on plans and accomplishments. Meet with him at least once a year for a credit review, showing him the year's results and plans for next year's credit needs.

Sometimes you will find yourself in a position where your present lender is unwilling or unable to service your needs. In selecting another lender, keep these questions in mind: (1) Is the lender knowledgeable about financial matters and able to act as a dependable consultant to you in financial and business related matters? (2) Is the lender knowledgeable about agriculture and does that person have a good understanding of the peculiar characteristics of farming? (3) Does the lending institution that this lender represents extend the type of credit needed and have loan policies consistent with your present financial position and future financial needs?

### Working with Your Accountant, Attorney, and Management Consultants

Major changes in the business also often have tax, legal, and family implications. Therefore, you should review your situation with your accountant, attorney, and management consultants.

These advisers can be helpful in reviewing the tax implications — income, estate, and gift — of any acquisition or transfer of assets. When adding resources, questions as to who should buy them should be explored. If assets are being transferred, the questions are what price, how, etc. If a change in business organization is being considered, explore carefully whether you should be in a partnership, corporation, or a combination of arrangements.

This is often a good time to revisit or revise your estate plans. Do you need to change your will? Should you have a trust? How should new property be titled? Should we be selling or giving away property? Do we need more insurance? Both your accountant and attorney need to be involved in these discussions. The attorney should also be involved in reviewing other transactions with legal considerations such as buying or leasing property or setting up a partnership or corporation.

### Working with Family Members/Labor Force

As indicated in Chapter I, deciding on which roles family members will play in the farm household/business complex is an important task of management. Major changes in the business often put stress on family relationships because adequate attention was not placed on redefining family roles at the time of such a change. Therefore, take the time to sort things out and decide who is responsible for what and to whom.

If hired workers are involved, careful planning and supervision is needed. Manpower planning involves a four-step process: (1) an assessment of personnel needs, (2) development of job descriptions for work to be done, (3) a careful rematching of your present staff with the jobs available, and (4) hiring new people as needed to fill coming jobs.

Once the staff is in place, you will need to provide for their (1) training and development, (2) supervision and motivation, (3) wages and benefits, and (4) evaluation. A record system that adequately meets business management, tax, and regulatory requirements also will be needed.

### Selecting What Records to Keep

Procedures for monitoring a development plan once it is implemented should be specified as part of the planning process. Segments of the business to be monitored might include: (1) the overall financial performance of the business, (2) production and marketing (enterprise or unit budgets), and (3) labor and other resource records.



### *Financial Records*

To keep track of the results of the total business, you can use the details of the development plan as a standard to see how closely the firm is following a prescribed course of action. Use the transition and annual production and financial projections of Part II as the *control tools* for your operation.

The major use of these plans for control is through variance analysis in which any significant variation in actual performance from planned performance is subject to scrutiny. Then you can decide either to alter the plan or to make an adjustment in operations so that they conform more closely to your plan.

As farm businesses get larger, it is necessary to delegate responsibility. Under these circumstances, total business budgets may need to be supported for control purposes by more detailed breakdowns of

income and expense by business sector. Items in each "sub-budget" are the responsibility of different management elements so that when variance does occur it can be spotted immediately and acted upon.

### *Production and Marketing Records*

Production and marketing records for individual crop, livestock, and other enterprises are essential if you are to evaluate your performance. So look at your plan and decide what records are needed to monitor your operation adequately.

### *Labor and Other Resource Records*

If you hire labor, you will need records of labor performance as well as those records required for social security, workmen's compensation, W-2 forms, etc. Other resource records, such as machinery, should be kept if they are important to your business.

Remember, keep only those records you will use and will keep well enough for them to be useful to you.



# APPENDIX I

## Instructions for Completing Worksheet I — *Financial Performance Report of Your Business* and Worksheet II — *Financial and Production Performance Trends of Your Farm Business*

### Completing the Net Worth Statement, Worksheet I, Page 2 and 3.

A beginning and ending net worth statement for the time period being analyzed is essential. If you have a previously developed net worth statement for the beginning of the year, merely insert the information in the proper categories on Worksheet I, page 2. If you do not have such a statement, you may find it easier to complete the end-of-year statement (page 3) and then estimate your beginning balances as best you can. The following instructions, as well as the supporting schedules contained in Worksheet IA, should prove helpful as you develop your net worth statement.

#### ASSETS

##### Current Assets

###### Line 1

Add up cash on hand, checking and savings account balances, certificates of deposit, and other forms of savings in schedule A in Worksheet IA, and insert totals on line 1, page 2 or 3, Worksheet I.

###### Line 2

This category includes money due that you plan to collect within 12 months of the statement date. Also include receipts due from sale of grain and feed crops, milk, livestock custom work done, collectable rent, etc. You can list and total these items in supporting schedule B, Worksheet IA, before transferring the total to line 2, page 2 or 3.

###### Line 3

This asset item should include the value of all market livestock, excluding breeding livestock. In supporting schedule C, itemize the description, number, unit value, and total value of each type of market livestock on hand as of the statement date. Base livestock values on weights and market prices existing on the statement date. The total value of the livestock should then be entered in line 3, page 2 or 3. (Breeding

livestock are also inventoried in schedule B. Since they are to be categorized as intermediate assets, they will be discussed later — see line 11.)

###### Line 4

List crops held for sale and feed by crop, amount, and value at unit market prices as of the statement date in schedule D. *Special note:* Sealed grain should be valued and listed with crops held for sale and offset by the loan against it in the liability section of this form.

To value currently growing crops or inputs applied to land for future crops, show your cash investment for seed, fertilizer, fuel, and other expenses applied on that cropland. Or, if you're close to harvest, use a conservative market value less the cost of harvest. Transfer the totals of all items in schedule D to line 4, page 2 or 3.

###### Line 5

Include here such items as fertilizer, seed, pesticides, fuel, etc., which are in the inventory but have not been applied yet. Also include such items as cash rent paid for the coming year, prepaid insurance on farm assets, etc. Schedule E can be used to document each of these items; transfer the total amount to line 5, page 2 or 3.

###### Line 6

Include all other farm current assets on this line. These come from schedule F of Worksheet IA.

###### Line 7

This is the total of all farm current assets.

###### Line 8

Total here all nonfarm current assets from schedules G, H, and I. List in schedule G each of your life insurance policies and the amount you could realize by taking out a loan or by surrender of the policies as of the statement date. List the total market value of readily marketable securities in schedule H. Stocks and bonds you can dispose of with no waiting period, such as those listed on securities exchange, qualify as



current assets. List in schedule I any current assets used in any nonfarm business and other nonfarm current assets not listed in schedules G and H. Transfer the total of schedules G, H, and I to line 8, page 2 or 3. This is the total of nonfarm current assets.

**Line 9**

Total lines 7 and 8 to determine the total current assets on hand as of the statement date (farm and nonfarm).

**Intermediate Assets**

**Line 10**

Enter the description, date purchased, original cost, adjusted tax basis (depreciated value) and/or market value of machinery, equipment, and vehicles in schedule J. A complete listing is not generally necessary. In many cases, your detailed machinery depreciation schedule can serve as this supporting schedule. You may wish to itemize major items and group minor ones. The total of either the depreciated or market value columns should be brought forward to line 10, page 2 or 3. If you are applying for credit or want to know your present sell-out value or are doing estate planning, then transfer the market value total. If you are trying to measure your management performance for your own use, then the depreciated value total would normally be used.

**Line 11**

List in schedule C the description, number, unit value, and total value for each type of breeding and dairy livestock. In valuing breeding livestock, first decide the use that is to be made of the net worth statement. As with machinery, if you are applying for credit or planning an estate, use market values. If you are measuring management performance, use a conservative market value when the animal enters the production herd. Maintain this value over the life of the animal unless its productive value is altered. Transfer the total value of breeding livestock to line 11, page 2 or 3.

**Line 12**

Include in schedule K the description, date acquired, cost, adjusted tax basis (depreciated value), and/or market value of other intermediate farm assets. Carry the total depreciated value forward to line 12, page 2 or 3, when measuring management performance. Transfer the market value total when dealing with your credit agency or estate planner. Market value should reflect the amount an improvement adds to the sale price of the farm. In some cases, it may be less than the depreciated value.

**Line 13**

This is the total of all farm intermediate assets.

**Line 14**

Itemize securities not readily marketable in schedule H at their true marketable value. Local stocks, PCA and FLB stock, etc., are examples of securities that have value but are not readily marketable (not marketable within a given year's time). Show the value of household furnishings and other nonfarm equipment in supporting schedule L. Complete listing

is not necessary, but list major items and group minor items. Transfer the total value of schedules H and L to line 14, page 2 or 3. This is a total of all nonfarm intermediate assets.

**Line 15**

This is a total of lines 13 and 14 and shows the total intermediate assets (farm and nonfarm).

**Line 16**

Add lines 9 and 15 together to determine total current and intermediate assets (farm and nonfarm).

**Long-Term Assets**

**Line 17**

List in schedule M the pieces of farmland that you own, their purchase price, and present market value. (Buildings and improvements should be listed separately in schedule N.) Transfer the total value of farmland owned to line 17, page 2 or 3.

**Line 18**

Include in schedule N a description, cost, adjusted tax basis (depreciated), and/or market value of any buildings and improvements financed with long-term credit. This would include buildings on the farm when it was purchased plus any remodeling or additions financed with long-term credit. In many cases, your detailed building depreciation schedule can serve as a supporting schedule. Transfer the total (depreciated or market value, depending upon the purpose of the financial statement) to line 18, page 2 or 3.

**Line 19**

Enter all other long-term farm assets from schedule O.

**Line 20**

Add lines 17 through 19 for a total of farm long-term assets.

**Line 21**

Include in schedule P a listing of nonfarm real estate items, including their purchase cost and market value. Include the farm house if it is a personal residence and it is not owned by a business entity such as a corporation. Transfer the total to line 21, page 2 or 3.

**Line 22**

Add lines 20 and 21 together to determine the total long-term assets (farm and nonfarm).

**Line 23**

Add lines 7, 13, and 20 (current and intermediate plus long-term) to determine your total farm assets.

**Line 24**

Add lines 16 and 22 to determine your total assets (farm and nonfarm).

**LIABILITIES**

**Current Liabilities**

**Lines 25 and 26**

All farm notes payable to the primary lender and to others should be first listed in schedule Q. The portion due within 12 months should then be recorded



in the column provided and the total transferred to the appropriate categories on line 25 of page 2 or 3.

Mortgage debts owed on farm real estate should be listed in schedule R. Again, the principal amount due in 12 months should be noted and transferred to line 25c on page 2 or 3.

Accounts payable in 12 months and all rents, taxes, and interest on borrowed money past due as of the date of the statement should be included in schedule Q and entered on line 26, page 2 or 3.

*Line 27*

Loans on life insurance can be listed in schedule G and totaled and entered on line 27, page 2 or 3. Since these loans are seldom subject to scheduled repayment, you may wish to list them as intermediate or even long-term liabilities rather than current.

*Line 28*

This is a total of all farm current liabilities.

*Line 29*

All nonfarm principal payments and accounts payable should be listed in the appropriate sections of schedules Q, R, and G. The portion due within 12 months should then be transferred to line 29, page 2 or 3.

*Line 30*

Add lines 28 and 29 to determine the total current liabilities you owe (farm and nonfarm).

### Intermediate Liabilities

*Line 31*

The deferred portion of farm principal payments owed primary lenders and others, as well as farm accounts payable, should have been recorded already in schedule Q (see discussion in lines 25 and 26). Transfer the total of these deferred amounts to line 31 of page 2 or 3.

*Line 32*

This is the total of farm intermediate liabilities.

*Line 33*

The deferred nonfarm portion of principal payments and amounts payable should have been recorded earlier in schedule Q. Transfer the total of these deferred amounts to line 33, page 2 or 3.

*Line 34*

Add lines 32 and 33 to arrive at total intermediate liabilities (farm and nonfarm).

*Line 35*

Add lines 30 and 34 to determine current and intermediate liabilities (farm and nonfarm).

### Long-Term Liabilities

*Line 36*

These amounts should have been reported earlier in schedule R. Transfer the totals to lines 36a or 36b.

*Line 37*

This is the total of long-term farm liabilities.

*Line 38*

Insert nonfarm long-term liabilities from schedule R-6.

*Line 39*

This is the total of long-term liabilities.

*Line 40*

Add together lines 28, 32, and 37 to determine total farm liabilities.

*Line 41*

Add together total current and intermediate liabilities (line 35) to long-term liabilities (line 39) to determine your total liabilities.

### Net Worth Calculation

*Lines 42 to 46*

These lines are self-explanatory.

### Other Important Notations/Signatures

You should also record other *assets* and *contingent liabilities*, such as guarantees of the obligations of others in the financial statement. Be sure to indicate any existing long-term lease arrangements. You may show these on both the asset and liabilities side of the financial statement, but they are best handled as an information footnote.

Finally, to be valid your signature should appear on the dated net worth statement. It can then be presented to your creditor so that a copy can be made for the creditor's file.

## Completing the Farm Earnings Statement — Worksheet I, Page 4

The information necessary to complete the farm earnings statement comes from your farm records and/or farm income tax schedule and the completed beginning and end-of-year net worth statement.

### INCOME AND EXPENSE

*Lines 1 through 4*

Enter all sales of livestock and livestock products, showing the number of units sold and the total cash received. Include the cash value of sales of breeding livestock.

*Line 5*

Total the value of livestock sales.

*Lines 6 through 8*

Enter all crop sales, showing quantity and cash value.

*Line 9*

Total the value of crop sales.

*Lines 10 through 12*

Enter the cash income from any other farm sources, such as custom work, gas tax refunds, coop dividends, etc.

*Line 13*

Total the value of other farm income.

*Line 14*

Total lines 5, 9, and 13 for the total cash farm operating income.



*Lines 15 through 37*

List all operating expenses paid during the business year. Do not include items purchased on account but not yet paid for. Items paid for but not used during the year should be included.

*Line 38*

Total the cash farm operating expenses for the year.

*Line 39*

Subtract line 38 from line 14 to determine your net cash farm operating income for the year.

## INVENTORY ADJUSTMENTS

*Line 40*

From the completed net worth statement on page 3, list the ending inventory value of the feed and grain, market livestock, supplies and prepaid expenses, and accounts receivable. List the beginning amount of accounts payable from that liability category on page 2 (both current and deferred amounts).

*Line 41*

List the beginning inventories of the above asset items from page 2 and the ending accounts payable from the liabilities section on page 3.

*Line 42*

Subtract line 41 from 40 in all categories, putting the net adjustment on line 42, being careful to use plus and minus for positive and negative adjustments. Total these category subtotals to get the total net inventory adjustment in the far right blank of line 42.

*Line 43*

Add line 42 to the total of line 39 if line 42 is positive. Subtract line 42 from line 39 if the total inventory adjustment is negative. The resultant figure is your net farm operating income.

## ADJUSTMENTS FOR CAPITAL ITEMS

*Line 44*

Using the same technique as in inventory adjustments, use the asset section of page 3 to fill in the selected ending inventory items on line 44.

*Line 45*

Enter the cash value received for any sales of machinery, equipment, buildings, improvements, and land during the year.

*Line 46*

Subtotal lines 44 and 45.

*Line 47*

Enter the value of beginning inventories of the items shown from the asset categories on page 2.

*Line 48*

Enter the cash value of any purchases in these categories during the year.

*Line 49*

Subtotal lines 47 and 48.

*Line 50*

Subtract line 49 from line 46 to get the net adjustment in each category. Then total all the categories to

get the total net capital adjustment in the far right blank on line 50. Again, be careful to distinguish between positive and negative adjustments in each category and in the total.

*Line 51*

Add lines 43 and 50, being careful to observe the negative or positive status of line 50. The results are your return to unpaid labor, unpaid management and net worth.

*Line 52*

To complete page 4 of Worksheet I, show the tax depreciation taken for the year on line 52 as it appears on your income tax schedule F.

## ACCURACY CHECKS/CASH GENERATED

Before further analyzing your data on page 5 of Worksheet I, check it for accuracy on page 6, using information from pages 2, 3, and 4 of this worksheet and the following methods.

### Cash Flow/Family Living Check

*Line 1*

Enter the cash beginning balance from that asset category on page 2.

*Line 2*

Enter the cash operating income from page 4, line 14.

*Line 3*

Total the capital sales shown on page 4, line 45, and enter it here.

*Line 4*

Enter the total of all *new* money borrowed during the year being analyzed. This figure must come from your record of credit transactions or from your creditors. Be careful *not to include* credit renewed from previous years.

*Line 5*

Enter under a, b, c, and d any cash received from nonfarm sources, including income tax refunds received during the year.

*Line 6*

Total all cash inflows on lines 1 through 5d.

*Line 7*

Enter the cash ending balance from that asset category on page 3.

*Line 8*

Enter the total cash farm operating expense from page 4, line 38.

*Line 9*

Total the capital purchases shown on page 4, line 48, and enter it here.

*Line 10*

Enter the total of the principal payments made on debt during the year. This figure must come from your record of credit transactions or from your creditors. Be careful *not to include* any interest payment — only principal.



*Line 11*

Under a, b, and c, enter any cash used for nonfarm business expenses or capital purchases and any household capital purchases.

*Line 12*

Show the total income tax and social security you paid during this year as a result of the previous year's operation.

*Line 13*

Subtotal lines 7 through 12.

*Line 14*

Calculate family living expense by subtracting line 13 from line 6. The result must be a positive and reasonable number, or the information used is inaccurate.

*Line 15*

If you have kept accurate family living expense records, place the total of those expenses here.

*Line 16*

Subtract line 15 from line 14 to find any discrepancy between calculated and reported family living expense. Such discrepancies can be from inaccurate family living records or farm records. Reconcile major differences before proceeding.

**Profit/Net Worth Check**

*Line 17*

Enter your net farm earnings from page 4, line 51.

*Line 18*

Calculate and enter your net nonfarm income by subtracting line 11b from line 5a, b, c, and d on this page.

*Line 19*

Enter total net earnings, line 17 plus line 18.

*Line 20*

Enter the total of the family living expense and income tax and social security paid from lines 12 and 14.

*Line 21*

Subtract line 20 from line 19 to get your calculated change in net worth.

*Line 22*

Enter the total net worth change reported on page 3, line 46.

*Line 23*

Subtract line 22 from line 21. Any answer other than zero indicates either errors in the amount used for family living, and/or unaccounted-for changes in non-farm assets.

**Liabilities Check**

*Line 24*

Enter the total beginning liabilities from page 2, line 41.

*Line 25*

Enter the total new money borrowed during the year from line 4 of this page.

*Line 26*

Total lines 24 and 25.

*Line 27*

Enter the total principal payments made this year from line 10 on this page.

*Line 28*

Subtract line 27 from line 26.

*Line 29*

Enter the change in accounts payable from page 4, line 42e. Therefore, change the sign before proceeding to line 30. Note: a plus balance on line 42e means accounts payable were reduced, and a minus sign indicates they have risen.

*Line 30*

Calculate ending liabilities by adding lines 28 and 29 if accounts payable have risen or by subtracting line 29 from line 28 if accounts payable have been reduced from the beginning to the end of the year.

*Line 31*

Enter ending liabilities as reported on page 3, line 41.

*Line 32*

Subtract line 31 from line 30. Any answer other than zero indicates that errors have occurred either in the money borrowed or paid back figures or that debts have been inaccurately stated on pages 2 and 3. If this discrepancy is greater than \$1,000, it should be resolved before continuing Worksheet I.

**Cash Generated for Non Real Estate Debt or Capital Purchases**

*Line 33*

Enter the net cash farm operating income from page 4, line 39.

*Line 34*

Enter the total of farm capital sales from line 3, this page.

*Line 35*

Enter net nonfarm income from line 18, this page.

*Line 36*

Total lines 33, 34, and 35: total net cash income.

*Line 37*

Enter family living expense from line 14, this page.

*Line 38*

Enter income tax and social security payments from line 12, this page.

*Line 39*

Enter the total of real estate principal payments made during the year. This figure must come from your record of credit transactions or from your creditors.

*Line 40*

Total lines 37, 38, and 39.

*Line 41*

Subtract line 40 from line 36. The result is the cash that the business has generated for non real estate debt payment and for additional capital purchases.



## Completing the Financial Summary and Analysis — Worksheet I, Page 5

### MEASURING BUSINESS PROFITABILITY

#### Line 1

Enter the returns to unpaid labor and management and net worth from page 4, line 51.

#### Line 2

Calculate and enter the interest on your average net worth for the year. To do this, average beginning and ending net worth shown on lines 44 and 45 of page 3. Multiply the results by a suitable interest rate that could be attained if the net worth were to be invested conservatively (5 to 7 percent currently).

#### Line 3a

Subtract line 2 from line 1 to obtain the labor and management earnings for the farm.

#### Line 3b

If you wish to calculate earnings per operator, divide line 3a by the number of unpaid operators involved in the business.

#### Line 4

Enter the value of unpaid labor and management in your business. This figure is generally calculated by using a typical hired farm wage plus a percentage of the adjusted gross receipts, line 12, this page (5 to 8 percent currently).

#### Line 5

Subtract line 4 from line 1 to get returns to farm net worth.

#### Line 6

Enter the farm interest paid during the year from page 4, line 19.

#### Line 7

Calculate the returns to farm investment by adding lines 5 and 6.

#### Line 8

Calculate and enter the average farm investment for the year, using line 23 on pages 2 and 3.

#### Line 9

Enter the average farm net worth already calculated on line 2, this page.

#### Line 10

Calculate and enter the return per \$100 of farm investment by dividing line 7 by line 8, this page, and multiplying the result by 100.

#### Line 11

Calculate and enter the return per \$100 of farm net worth by dividing line 5 by line 9, this page, and multiplying the result by 100.

#### Line 12

Calculate and enter the adjusted gross receipts for the year by subtracting line 36, page 4, from line 14, page 4, and then adjusting the results by the plus or minus changes on lines 42a, 42b, 42d, and 50a on page 4.

#### Line 13

Calculate the asset turnover by dividing line 12,

this page, by line 8, this page, and multiplying the result by 100.

#### Line 14

Calculate the net profit margin by dividing line 7, this page, by line 12 and multiplying the result by 100.

### DEBT SERVICING AND CAPITAL REPLACEMENT CAPACITY

#### Line 15

Enter the cash generated amount from page 6, line 41.

#### Line 16

Enter the net inventory adjustment from page 4, line 42.

#### Line 17

Calculate and enter the cash generated for non real estate debt payment on the accrual basis by adjusting line 15, this page, by the plus or minus figure on line 16, this page.

#### Line 18

Calculate and enter the average non real estate debt using the totals on line 35 of pages 2 and 3.

#### Line 19

Calculate and enter the years required to pay non real estate debt by dividing line 18 by line 17.

#### Line 20

Enter the depreciation, using either the total of lines 50b and 50c, page 4, or the total on line 52, page 4.

#### Line 21

Calculate and enter the excess replacement capacity by subtracting line 20, this page, from line 17, this page.

#### Line 22

Enter the ending current liabilities from line 30, page 3.

#### Line 23

Enter the ending current assets from line 9, page 3.

#### Line 24

Calculate the current ratio by dividing line 22 by line 23 and multiplying the answer by 100.

#### Line 25a

Calculate and enter the percentage of expense without interest is of income by subtracting line 19, page 4, from line 38, page 4, and then dividing the result by line 14, page 4. Multiply the answer by 100.

#### Line 25b

Calculate and enter the percentage total expense is of income by dividing line 38, page 4, by line 14, page 4, and multiplying the result by 100.

#### Line 26

Enter the net cash farm operating income from line 39, page 4.

#### Line 27

Calculate and enter the net cash income by subtracting line 48, page 4, from line 26, this page, plus line 45, page 4.



## FINANCIAL SOLVENCY

### *Line 28 through 34*

Transfer the following totals in order from page 2 to the beginning column here: lines 35, 16, 39, 22, 41, 24, and 44. Transfer the following totals in order from page 3 to the ending column here: lines 35, 16, 39, 22, 41, 24, and 44.

### *Line 35*

Enter the change in net worth from line 46, page 3.

### *Line 36*

Calculate and enter the current intermediate liability/asset ratio by dividing line 28, this page, by 29, this page, for both the beginning and ending columns.

### *Line 37*

Calculate and enter the long-term liability/asset ratio by dividing line 30, this page, by line 31, this page, for both the beginning and ending columns.

### *Line 38*

Calculate and enter the total liability/asset ratio by dividing line 32, this page, by line 33, this page, for both beginning and ending columns.

## Worksheet II

### BUSINESS DESCRIPTION

#### *Line 1*

Enter the total tillable acres operated for the year under study.

#### *Line 2*

Enter the kind and number of major livestock for the year.

#### *Line 3*

Estimate the total labor hours required by the operation for the year, using labor requirements adjusted for size of unit and type of system used.

#### *Line 4*

Transfer from line 23, page 3, Worksheet I, the total farm investment for the end of year.

#### *Line 5*

Transfer from line 12, page 5, the adjusted gross receipts for the year.

### BUSINESS PROFITABILITY

Transfer from page 5, Worksheet I, the selected profitability measures.

### BUSINESS LIQUIDITY

Transfer from pages 5 and 6 the selected measures of business liquidity.

### BUSINESS SOLVENCY

Transfer from pages 3 and 5 selected asset and liability amounts and ratios for the end of the year.

### PRODUCTION EFFICIENCY — CROPS AND LIVESTOCK

Space is provided for recording selected measures of production efficiency for crops and livestock.

### PAGE 4 — COMMENTS AND EVALUATION OF YEAR'S RESULTS; PROPOSED CHANGES

After reviewing the results in Worksheets II and III and reading Part II of Chapter II, record your comments on the past year's performance — especially happenings such as droughts, disease, embargoes, etc. Then record strengths and weaknesses observed and proposed changes in operations.



## APPENDIX II

### Instructions for Completing Worksheet III — *The Partial Budget* and Worksheet IV — *Your Long-Range Farm Plan*

#### Worksheet III — The Partial Budget

The main body of the partial budget is divided into two sections: credits (+ on the left) and debits (- on the right). Each of these sections is further divided into two vertical columns: profitability (accrual basis) and repayment capacity (cash basis). In addition, the credit side has two horizontal subdivisions: added returns and reduced costs. Similarly, the debit side has two subdivisions: added costs and reduced returns. The credit and debit sides can be viewed as a balance scale in which the dollar values of the credits and debits are weighed or balanced against each other.

First let's go through the profitability analysis of the credits and debits. *Caution:* in the profitability analysis be sure to enter *all* costs and returns, both cash and noncash. Use the numbered lines ending in "a." The added returns are entered on the lines entitled "added income from proposed plan." These would include such items as additional crop or livestock income as well as other types of income (cash and noncash) that would be generated as the result of the proposed plan. The total of these additional returns is entered on line 1a.

The reduced costs are entered on the line entitled "reduction in costs from proposed plan." The reduced costs might include such operating or variable costs as fertilizer, fuel, seed, pesticide, feed, livestock insurance, etc., and such fixed costs that may result from the disposition of fixed assets. The total of these reduced costs is entered on line 2a. The total credits are entered on line 3a by adding lines 1a and 2a.

Switching to the debit (right) side, we look at the added fixed or ownership costs that are entered on the lines called "new investment and added annual investment costs from proposed plan." These may include depreciation, interest, repairs, taxes, and insurance. The total of these additional costs is added and entered on line 4a. Next consider the variable or operating costs. These would include such items as

fertilizer, seed, fuel, electricity, supplies, feed (purchased and home-grown, priced at its opportunity cost or farm gate price), labor (hired or operator), etc. Enter the total of these costs on line 5a.

Next look at any reduced returns due to the proposed plan. These are entered on the lines entitled "reduced income from proposed plan." Some items which may appear here would include the loss of sales from crop or livestock enterprises that were reduced, changed, or terminated, or any other loss of cash or noncash income resulting from the proposed change. Enter this total on line 6a.

Then add lines 4a, 5a, and 6a, and enter these total debits on line 7a. Transfer the sum on line 7a in the debit "profitability" column to line 7a under line 3a on the "credit" side of the budget and subtract that line 7a from line 3a and enter the result on line 8a. If this is a positive number, the proposed change will likely increase profits over time.

You can also calculate the relative profitability of the change by dividing this change in net income (line 8a) by the total added investment (line 9). Multiply this amount by 100 and report it on line 10.

The repayment capacity (cash basis) is done on the "b" lines of the repayment capacity columns. It is done strictly on a *cash only* basis. Therefore, be careful and enter *only actual cash inflows and outflows* on these "b" lines.

Under the added returns of the credit (left) side, you should determine if any of these returns on the "a" lines would be noncash returns. For example, some unpaid operator labor might have been saved by the proposed change. In the profitability analysis that amount would have to be credited as a reduced cost, but as it was not a cash cost it is omitted from the repayment capacity column. Similarly, homegrown feed costs saved in the reduced cost section would have been priced in at their opportunity cost in the profitability analysis but should only be adjusted by their actual cash production cost in the repayment capacity column.



The debit side is considered next. Caution must be used here to obtain the appropriate values.

The added annual investment costs may or may not be cash or only partially cash. Depreciation would not be a cash cost, so do not include this in the repayment capacity column. Interest, however, may or may not be a cash outlay, depending on how much of the investment money you had to borrow. Further, actual cash interest cost decreases as the debt is repaid. One alternative would be to use the average annual *cash* interest cost, recognizing that this would be somewhat higher in the earlier years and somewhat lower in the later years. Most repair costs would be cash costs. Taxes and insurance on the fixed assets are cash costs. Enter the total on line 4b.

Then add lines 4b, 5b, and 6b, and enter the total on line 7b. Transfer the sum on line 7b on the "debit" side to line 7b under line 3b on the "credit" side and subtract that line 7b from line 3b; then enter the result on line 8b. A positive result indicates the change analyzed will generate additional cash flow for business and/or family use. You can also check to see how readily any added debt would be serviced by dividing the change in net income (line 8b) into the total added debt (line 11). Record the resultant years required to pay back the debt on line 12.

## Worksheet IV — Our Long-Range Farm Plan

### STEP 1 — ESTABLISH A BASE PLAN; ANALYZE THE RESULTS

The first step in the complete budgeting process involves a projection of your present farming operation into the future. This projection should include the income and expense items that you expect will occur in a typical year over, say, the next 3 to 5 years.

#### Project Your Base Plan (Page 2 — Worksheet IV)

In the top half of page 2 of Worksheet IV, project your *present crop and livestock program* — your planning base. This involves projecting yields for present acreages, as well as production levels and feed needs for present livestock numbers. Because you are projecting into the future, it will be best to handle acreages as if no government programs existed. The effects of introducing such programs can then be easily tested against your initial projections.

The *balance between feed needs and feed supplies* should then be checked and any excess crops sold. To simplify this process, a system of converting feeds to corn and hay equivalents is suggested in the bottom left corner of page 2. Typical feed requirements for various types of livestock can be secured from your local extension office. Normal or longer-term planning prices should be used in determining income from both crops and livestock. If grain or forage must be purchased, list the expense of these purchases on the appropriate line in the lower right-hand corner of the page.

Calculate *selected crop and livestock cash expenses* that are easily determined on a per-acre or per-head basis, and record them in the upper half of page 2. Also, record approximate labor hours by enterprise. Then total the appropriate columns in the upper half of page 2. *Cash operating expenses* for the above stated production plan should be estimated and totaled in the lower right-hand corner of page 2. But first bring all expenses totaled above down into this section. Using cash operating expenses for the present farm business as a guide, estimate remaining listed expenses. Your most recent tax return (Schedule F) should be helpful here.

The *total farm interest* amount should be added to other cash operating expenses to arrive at *total cash operating expenses*. The entry *interest on operating expense* should be calculated as follows: (1) estimate the amount of capital you normally will borrow for operating purposes during a production year; (2) multiply this amount by the interest rate, adjusted for the portion of the year the loan will be outstanding. Space for making an estimate of the amount of *interest on other farm debt* in a typical year is provided at the top of page 6. First, list the various real estate and non real estate debts outstanding, the present balance, the interest rate and the years remaining on each loan. Then, using the table at the middle of page 6, calculate the annual principal and interest payments for each loan. The payments noted in the table center on the third year of a five-year planning horizon.

In the lower left portion of page 2, insert the *farm investment, real and non real estate debt* associated with your base plan. To do this, check the amounts shown on your net worth statement, Worksheet I. If your base plan differs from your present operation to some degree, reflect any related changes in assets or debts in the totals used on page 2. The *base plan depreciation* should reflect the amount you will need to spend to maintain your present supply of capital assets.

#### Summarize and Analyze the Results (Page 5)

Next, on page 5, summarize the information for your base plan and analyze the expected financial results. First, provide a brief identification of the plan and record the labor hours required by the plan. Next, transfer the starred items from page 2. Then determine the projected profitability, debt-servicing capacity, and solvency position of the business under the base plan as follows.

#### Projected Profitability of the Plan

When measuring the projected profitability of *labor and management earnings* for your base plan (line 7), you need first to transfer operator's sales (line 1), from the top portion of page 2 and total cash operating expenses (line 2) and depreciation allowance (line 4) from the bottom portion of page 2. Then, make the necessary calculations to determine net cash operating income (line 3) and return to labor, management, and equity (line 5). Next, determine a charge for the use of the operator's net worth (line 6). This amount is determined by multiplying the present



net worth or equity in the business by what the manager terms to be a suitable interest return (usually 5 to 7 percent) for the equity tied up in the business. (If there is a sizeable nonfarm net worth, subtract this amount first so that interest is calculated on the farm portion only.) Subtract this amount (line 6) from line 5 to obtain labor and management earnings.

To obtain *returns on farm investment* (line 11), add the amount of farm interest paid (line 8) to returns to labor, management, and equity (line 5) and then subtract the estimated value of operator's labor and management (line 10). The farm interest paid item is obtained from the lower right-hand corner of page 2. You, the manager, need to provide the estimated value of operator's labor and management. One method of arriving at this figure is to estimate the wage for a good hired person and add 5 to 8 percent of the adjusted operator's sales (sales less feeder animal purchases).

*Returns per dollar of farm investment* (line 13) can then be determined by dividing return on farm investment (line 11) by the operator's estimate of total farm investment (line 12). Obtain the investment amount from the lower left portion of page 2.

#### *Projected Debt Servicing — Payback Basis*

The ability of a business to repay debt can be analyzed in several ways. In this analysis two approaches are used: (1) on a *payback basis* and (2) on a *scheduled debt repayment basis*. With the payback method, the goal is to determine how rapidly the business could pay back non real estate debt. Make this calculation by first adding any net nonfarm income (line 16) to *net cash operating income* (line 15) and then subtracting estimated outlays for *family living* (line 18) and *income tax* (line 19) and *annual principal payments on existing and new real estate debt* (line 22). These calculations determine the *cash available for non real estate debt servicing* (line 23). By dividing this amount into the *non real estate debt to be serviced* (line 24), you can determine the *years required to repay this debt* (line 25).

In the above calculation you will need to estimate the value of net nonfarm income and family living expenses. The income tax can be calculated on page 6. The annual principal payment on real estate is determined on page 6. The amount of non real estate debt is shown in the lower left corner of page 2.

#### *Projected Debt Servicing — Scheduled Basis*

With this approach, the total scheduled principal payments from page 6 (line 26) are subtracted from the cash available for principal payments (line 21) to determine whether scheduled debt payments can be met (line 27).

#### *Solvency Position*

The final step is to calculate the solvency or leverage position of the business at the beginning of the plan. First, carry over from page 2 the total debt (line 28) and total assets (line 29). Determine the percent in debt (line 30) by dividing line 28 by line 29. Finally, calculate the expected annual change in net worth by adding lines 5 and 16 and then subtracting line 20. This will indicate the likely directional change in the

debt/asset ratio as well as how rapidly it will likely improve or deteriorate over time.

### **Interpret the Results**

You have now completed a projection of your present operation into the future. The question is, are you satisfied with the results? Is this where you want to be over, say, the next 3 to 5 years? Is the business showing the kind of labor or investment returns that you would like to see? Are debts likely to be paid back as rapidly as you would like?

If you are satisfied with what you see, then you probably will not want to project other alternatives. You can go on about the business of fine tuning present operations and developing a plan for the coming year (see Appendix III).

## **STEP #2 — PROJECT OTHER PROMISING ALTERNATIVES**

If you are not completely satisfied and wish to look at other alternatives, space is provided in the form for analyzing at least two more alternatives. The following is a brief discussion of this process.

### **Project Your Crop and Livestock Programs (Pages 3 and 4)**

Space is provided at the top of pages 3 and 4 of Worksheet IV for projecting crop and livestock programs for the other alternatives under study. When setting up these alternative programs, remember the enterprise selection guidelines discussed in Chapter II. Operators of small farms normally should set up a livestock program first and raise the types of crops needed for the livestock. On larger farms, set up a crop rotation based on the most profitable crops. If excess management, labor, and capital are available, livestock may be added. Use the feed balance section of the form in this balancing process.

Once you have established your new crop and livestock programs, then follow the same procedure as for your base plan, calculating sales, variable expenses, and labor requirements in the space provided.

### **Project Investments, Debt, and Overhead Expenses**

One of the most difficult jobs in projecting changes in a business is estimating what is likely to happen to investments, debt, and overhead expenses. First, project expected *changes in investments* such as breeding livestock, machinery, buildings, or land in the space in the lower left-hand corner of pages 3 and 4. Add or subtract the change in investment to the total for the base plan (page 2) to arrive at the total investment for the alternative. Then indicate how this will be financed — whether as *real estate or non real estate debt* — and add it to present debt to arrive at a total. *Changes in depreciation* should be added to the base plan total to arrive at total depreciation.

Next project the overhead expenses for the new alternatives in the space provided in the lower right corner of pages 3 and 4. *Interest expense* on other farm



debt can be estimated on page 6 and inserted in the appropriate space on pages 3 and 4. Then total the expense column to arrive at total cash operating expense.

### **Summarize and Analyze the Results**

The final step involves the financial summary and analysis of the alternatives on page 5. Transfer the starred items from pages 3 and 4, and complete the re-

maining calculations of profitability, debt servicing, and solvency, as described earlier for your base plan.

### **STEP #3 – WEIGH THE EVIDENCE AND DECIDE**

Eventually you must make a decision regarding the longer-run future course of your business. Are you going to change direction and, if so, how? Therefore, you will need to weigh the evidence — both measurable and unmeasurable factors — and then decide on your longer-term direction.



## APPENDIX III

### Instructions for Completing Worksheet V — *Your Annual Farm Plan* and Worksheet VI — *Your Transition Farm Plan — Years 2 and 3*

#### Developing an Annual Farm Plan — Worksheet V

##### PRODUCTION PLANNING (PAGES 5-6)

The first step in developing a plan for the coming year's operations is to detail a production and investment plan and check its technical feasibility. Using pages 5 and 6 of Worksheet V, we shall first discuss procedures for establishing production plans for livestock- and crop-oriented farms. Next, procedures for making investment projections and for determining debt commitments to lenders other than your primary lender will be discussed.

##### Production Projections for Livestock-Oriented Farms

Managers of livestock-oriented farms should first plan the livestock operation for the year and then design a crop plan that provides sufficient high quality feed to meet the needs of those livestock. Additional crop land can then be used for high return cash crops or for building feed inventories for future planned livestock expansion.

##### *Step 1 — Livestock Production Plans — Schedule A & C*

The first-year livestock plan should be developed using schedule A, page 5. First, list the existing inventory of all classes of livestock from the net worth statement showing numbers and value. Then keeping in mind the long-range plan, think through each livestock enterprise for the first year, detailing transfer in and out (such as replacement animals to the breeding herd), purchases, numbers raised, sales, and finally ending inventories. Values for purchases and sales will be used in the cash flow budget. The ending inventory value will be used in constructing a projected ending net worth statement. Next, determine the feed needs for the livestock program for the year, and breaking them into amounts needed before harvest and after

harvest. (Use corn and hay equivalent procedures as shown in Worksheet IV, page 2).

Proceed now to develop a livestock plan for the second year on schedule C. The prime concern here is to determine feed needs before second-year harvest, which may influence the cropping program, purchases, and sales. Remember that schedule A ending inventories become schedule C beginning inventories.

##### *Step 2 — Crop Production Plans — Schedules B, D, E, and F*

With feed needs determined until second-year harvest, the first-year cropping plan can be developed now in schedule B. First, enter beginning crop inventory amounts and values and feed needs before harvest for first-year livestock (from schedule A). Determine the balance (balance 1) between inventories and these feed needs to see if additional feed purchases are necessary before harvest or if some crop sales are possible before harvest. Record remaining balances of crops under balance 2. Next, plan the first-year crop production, showing acres, projected yield, and production. The production then can be added to existing amounts (balance 2) to determine available supplies in balance 3. List feed needs to year end (from schedule A) and subtract from the available supplies (balance 3) to arrive at balance 4. At this point, if feed purchases are necessary to meet this year's feed needs or it seems desirable to buy feed this year to meet before harvest needs next year (schedule C), then show the purchased amount and value and strike a new balance (balance 5) of crop supplies.

Using schedule D, determine how much of the available crop supplies (balance 5) are needed for feed before the second or next year's harvest, and how much might be available for sale this year (balance 6). Then estimate the amounts, if any, you will sell after harvest, and record the remaining amount as ending inventory.

Finally, record the estimated livestock and crop expense and labor hours for the plan in schedules E and F on page 6.



## Production Projections for Crop-Oriented Farms

With farm plans that involve little or no livestock in the first year, the planning process begins with entering beginning crop inventories and values in Worksheet V, schedule B. Then, proceed to plan crops to be raised and sales before and after harvest. If some livestock is involved, complete schedules A and C to determine feed needs and then determine ending inventories for crops in schedule D. Then complete the crop and livestock expense and estimated labor hours in schedules E and F on page 6.

## DEVELOP AN INVESTMENT AND DEBT-SERVICING PLAN

### *Step 1 — Investment Changes — Schedules G and H*

Record any new investments to be made this year in schedule G, page 6. If assets are to be sold, enter the sales value as a minus or negative number so that they will be subtracted when totaling.

If you have completed the current net worth statement in Worksheet I, bring the totals over to the beginning net worth statement on page 4 of this worksheet. If you do not have a current net worth statement, develop one here. Then insert the appropriate values from this statement under present investment in schedule H, page 6.

Using this beginning investment plus new investments from schedule G, calculate your end-of-year investment on schedule H, taking into consideration depreciation on existing and new items.

### *Step 2 — Debt Service Plan — Schedule I*

Transfer from your net worth statement (page 4) to schedule I (page 6) your present debt commitments to those lenders other than your primary lender. (*Note:* your primary lender is defined here as the one who services your operating credit needs — the one you look to when cash flows get out of balance.) To this present amount, add any new borrowings planned on existing notes during the year. Then subtract principal payments due to determine ending debt balance. Also, record the amount of interest due on these loans this year. Next, record any new notes from other than your primary lender planned during the year and project the ending balance and interest in the same fashion. Use the categories of current, intermediate, and long-term in schedule I in designating the type of loans involved so that you can transfer the ending balances to the net worth statement.

## DEVELOP CASH FLOW PROJECTIONS (PAGES 2 AND 3)

The next step is to develop a cash flow projection for the year (see pages 2 and 3, Worksheet V). Cash flow projections will help you determine when the cash will be coming in and going out and how well they will balance out. It will also signal to your major or primary lender how large your credit demands are going to be during the year. The following instructions will help in completing this form.

First, transfer the value of sales from crops and livestock (schedules A, B, and D) to lines 1 and 2 of the

cash flow form. Then spread these amounts out into the month or months according to when sales will likely occur. Next, enter any sales of capital items from schedule G. If there will be any other farm income that has not yet been considered (such as custom work done), enter these amounts on line 4. Total these items to arrive at the farm income for the year and by months on line 5.

Now enter any other business or personal income expected during the year. Examples of such are off-farm wages, proceeds from seed corn business, etc. Adding line 5 and line 6 together gives projected income total for the year and by months. On line 8 enter the beginning cash on hand from the net worth statement. To complete the cash inflow section, refer to schedule I and enter the total of new borrowings from other than your primary lender and distribute the total into the months in which they are planned to occur. The inflow section can be totaled now to arrive at the total cash available for the year and by months on line 10.

The same general procedure is used to complete the cash outflow section, lines 11 through 35. Many of the crop and livestock expenses, lines 11 through 20, can be found in production schedules A, B, E, and F. Machinery and building repairs on lines 21 and 22 will have to be estimated, based on your previous experience, your knowledge of the current condition of these assets, and what assets you plan to replace or add during the year. Taxes and insurance (line 23) should reflect last year's rates plus changes expected due to additional assets planned and possible changes in tax rates. Hired labor (line 24) can be approximated with the use of labor hour projections from schedules E and F, last year's labor situation, and the manager's "feel" of labor needs during the coming year. Scheduled cash rents, if any, should be entered on line 25, followed by estimates of utilities and miscellaneous expense, lines 26 and 27. Again, last year's records and a knowledge of expected changes should be used in making these estimates. Interest due on other lender debt should be transferred from schedule I to line 28.

Now total lines 11 through 28, placing the total on line 29. After transferring capital purchases from schedule G to line 30, insert expected family living needs on line 31 and income tax and social security payments due on last year's business on line 32. Now, transfer scheduled principal payments to other lenders from schedule I to line 33 and enter your desired cash ending balance for the year and each month on line 34. Finally, total your expected cash outflows on line 35.

At this point you have estimated all monies available to you during the year (line 10) and all outflows that appear necessary and/or desirable (line 35). The extent that inflows and outflows do not balance indicates your need for operating credit from your primary lender and/or your projected ability to make principal payments to that creditor. It is on these results that much of your lender's loan decision to support your business change will be made.

To make these calculations, subtract line 35 from line 10 for the year and for each month. If your answer for any period is positive, enter it on line 37, labeled



projected surplus. Negative answers for any period should be entered on line 36 — a cash deficit.

You are now ready to calculate the primary lender borrowings, repayment, and interest for each month. There are three simple rules to follow in these calculations:

**Rule 1:** All new borrowings and all loan repayments are considered to happen on the last day of each month.

**Rule 2:** Because of rule 1, all interest must be accumulated until the last of each month.

**Rule 3:** When cash is available for loan reduction, accumulated interest must be paid before principal is reduced.

To make these calculations, first put your beginning primary lender loan balance (a total of all notes to this lender from the net worth statement) on line 40 under the total and January columns. Then enter any accrued interest from last year on line 42 under total for the year only.

The accrued interest for January is then calculated by taking the beginning loan balance times the interest rate and dividing the answer by 12. This interest is added to the beginning accrued interest and entered on line 42 under January.

If a projected deficit is shown for January on line 36, this amount is added to the beginning loan balance on line 40 and the result entered under January on line 41. In this situation, zeroes are then placed on lines 37, 38, and 39 for January.

If a projected surplus is shown for January, first subtract any accrued interest on line 42 under January. Enter this amount on line 38 (interest paid). The remainder of the above subtraction is placed on line 39 (principal that could be paid) under January and is subtracted from the amount on line 40, with the results entered on line 41, as the ending loan balance for January, and on line 40 as the beginning loan balance for February.

Proceed through each month using these techniques. You now have identified projected borrowings and payback, peak loan needs, and ending loan balance with your major lender. All of these items are critical to the lender's decision framework.

## **DEVELOP NET WORTH AND EARNINGS PROJECTIONS (PAGE 4)**

By combining information from your current net worth statement, your cash flow projection and schedules A, D, H, and I, a projected net worth statement for the end of the coming year can be obtained.

Start by entering your desired ending cash balance from line 34 (December) of your cash flow statement. Then using schedules A and D, enter your yearend crop and livestock inventories, being careful to separate market (held for sale) livestock and breeding (capital) livestock properly. Obtain the rest of the necessary asset and liability information from schedules H and I, again being careful to use proper

categories. Add to your liability categories the outstanding projected loan balance due your primary lender as shown under December on line 41 of the projected cash flow. Finally, subtract line 8 on the net worth statement from line 4. The result is the projected end of first year net worth on line 9.

The projected earnings for the first year are then calculated using cash farm income (line 5) and total cash operating expense from the cash flow statement. Adjustments are then made for changes in inventory values (from the beginning and ending net worth statements) and for depreciation (from schedule H).

## **Developing a Transition Farm Plan — Worksheet VI**

### **SECOND- AND THIRD-YEAR PRODUCTION PROJECTIONS**

Develop detailed crop and livestock plans for years 2 and 3. Schedules A through I of Worksheet VI provide workspace for this purpose. Again, your approach will vary depending on whether livestock or crops are dominant.

#### **Projections for Livestock-Oriented Farms**

Using the second-year livestock projection from Worksheet V, plan the livestock program for year 3 in schedule B. Then design a second- and third-year cropping plan around the feed needs of those livestock (schedules E and H). Follow the same methods or steps used in annual planning on Worksheet V.

#### **Projections for Crop-Oriented Farms**

If your plan involves little or no livestock, begin by projecting crop plans for the second year on schedule E. If some livestock are involved, complete schedule A to determine feed needs before proceeding to schedule F to determine ending inventories of crops. Then proceed to complete schedules H, B, and I for year 3, using the same methods used in the annual plan in Worksheet V.

### **INVESTMENT AND LIABILITY PROJECTIONS**

In your first-year plan (Worksheet V) you included those investments from your long-range plan that were critical to your needs. You should now consider your goals and objectives for years 2 and 3 and list on schedule K those investments necessary to reach those goals. Again, enter capital sales as negative amounts.

Next, complete schedule K by first recording for year 2 the beginning present value of machinery, land, and buildings. These amounts can be secured from Worksheet V, schedule H, your end-of-year investments in these items. Then add any new investments for the year, subtract the annual depreciation charge, and calculate the end-of-year investment in these items. Do the same for year 3.

Finally, list on schedule L the debt amounts owed to other than your primary lender as of the beginning of year 2. These amounts were reported earlier in Worksheet V in your end-of-year net worth statement.



Then project new borrowings, principal payments, ending balances, and interest payments on these debts. Now add any new notes projected for these years and calculate payments, ending balances, and interest in the same manner.

### **PROJECTED CASH FLOW STATEMENTS — YEARS 2 AND 3**

You have already completed a cash flow for the first year. Now, using the same methods, project cash flows for years 2 and 3. The only change here is that the format is set on a quarterly basis for the second

year and on an annual basis for the third. As before, use the crop, livestock, and investment plans you have just completed for years 2 and 3 in developing the projected cash flows. Refer to page 40 to review cash flow methodology.

### **NET WORTH AND EARNINGS PROJECTIONS — YEARS 2 AND 3**

Net worth and earnings projections can be made now for years 2 and 3 in the same fashion used to project them for the first year on Worksheet V.







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Produced at the University of Minnesota.

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## Financial Performance Report of Your Business

For the Business Year \_\_\_\_\_

- Net Worth Statements
- Farm Earnings Statement
- Business Analysis

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ Major Enterprise: \_\_\_\_\_

(See Worksheet IA for supporting schedules)



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**NET WORTH STATEMENT – Beginning of Year \_\_\_\_\_**  
**(Financial Statement or Balance Sheet)**

<b>ASSETS</b>		<b>LIABILITIES</b>	
<b>Current</b>		<b>Current</b>	
1. Cash on hand, checking account, savings (Schedule A)	\$ _____	25. Principal payments due in 12 months	
2. Farm notes and accounts receivable (Schedule B)	_____	a. to primary lender (Schedule Q-1)	\$ _____
3. Livestock held for sale (Schedule C)	_____	b. to others (Schedule Q-5 and R-3)	\$ _____
4. Feed and grain held for sale and feed; value in growing crops (Schedule D)	_____	c. on real estate mortgages (Schedule R-1)	_____
5. Farm supplies and prepaid expenses, etc. (Schedule E)	_____	26. Farm accounts payable in 12 months (Schedule Q-9)	_____
6. Other current farm assets (Schedule F)	=====	27. Other current farm liabilities (Schedule G)	=====
7. Farm Current Assets (1 + 2 + 3 + 4 + 5 + 6)	\$ _____	28. Farm current liabilities (25a + 25b + 25c + 26 + 27)	_____
8. Nonfarm current assets (Schedule G, H, & I)	\$ _____	29. Nonfarm current liabilities (Schedules Q-3, 7, 11, R-5 and Schedule G)	=====
9. TOTAL CURRENT ASSETS (7 + 8)	\$ _____	30. TOTAL CURRENT LIABILITIES (28 + 29)	\$ _____
<b>Intermediate</b>		<b>Intermediate</b>	
10. Machinery, equipment, and vehicles (Schedule J)	\$ _____	31. Deferred principal owed	
11. Breeding and dairy livestock (Schedule C)	_____	a. to primary lender (Schedule Q-2)	\$ _____
12. Other intermediate farm assets (Schedule K)	=====	b. to others (Schedule Q-6)	_____
13. Farm intermediate assets (10 + 11 + 12)	\$ _____	c. deferred accounts payable (Schedule Q-10)	=====
14. Nonfarm intermediate assets (Schedule H & L)	=====	32. Farm intermediate liabilities (31a + 31b + 31c)	\$ _____
15. TOTAL INTERMEDIATE ASSETS (13 + 14)	\$ _____	33. Nonfarm intermediate liabilities (Schedule Q-4, 8, 12)	=====
16. TOTAL CURRENT AND INTERMEDIATE ASSETS (9 + 15)	\$ _____	34. TOTAL INTERMEDIATE LIABILITIES (32 + 33)	\$ _____
<b>Long-Term</b>		35. TOTAL CURRENT AND INTERMEDIATE LIABILITIES (30 + 34)	\$ _____
17. Farmland and nondepreciable improvements (Schedule M)	\$ _____	<b>Long-Term</b>	
18. Farm building and improvements (Schedule N)	_____	36. Deferred principal owed	
19. Other long-term farm assets (Schedule O)	=====	a. on-farm real estate (Schedule R-2)	\$ _____
20. Farm long-term assets (17 + 18 + 19)	\$ _____	b. other long-term liabilities (Schedule R-4)	=====
21. Nonfarm long-term assets (Schedule P)	\$ _____	37. Farm long-term liabilities (36a + 36b)	\$ _____
22. TOTAL LONG-TERM ASSETS (20 + 21)	\$ _____	38. Nonfarm long-term liabilities (Schedule R-6)	=====
23. TOTAL FARM ASSETS (7 + 13 + 20)	\$ _____	39. TOTAL LONG-TERM LIABILITIES (37 + 38)	\$ _____
24. TOTAL ASSETS (16 + 22)	\$ _____	40. TOTAL FARM LIABILITIES (28 + 32 + 37)	\$ _____
		41. TOTAL LIABILITIES (35 + 39)	\$ _____

**NET WORTH**

	(a) Farm	(b) Nonfarm	(c) Total
42. Beginning assets (farm = line 23; total = line 24)	\$ _____	\$ _____	\$ _____
43. Beginning liabilities (farm = line 40; total = line 41)	\$ _____	\$ _____	\$ _____
44. Beginning net worth (42 – 43)	\$ _____	\$ _____	\$ _____



**NET WORTH STATEMENT – End of Year \_\_\_\_\_**  
**(Financial Statement or Balance Sheet)**

ASSETS	LIABILITIES
<b>Current</b>	<b>Current</b>
1. Cash on hand, checking account, savings (Schedule A) \$ _____	25. Principal payments due in 12 months
2. Farm notes and accounts receivable (Schedule B) _____	a. to primary lender (Schedule Q-1) \$ _____
3. Livestock held for sale (Schedule C) _____	b. to others (Schedule Q-5 and R-3) \$ _____
4. Feed and grain held for sale and feed; value in growing crops (Schedule D) _____	c. on real estate mortgages (Schedule R-1) _____
5. Farm supplies and prepaid expenses, etc. (Schedule E) _____	26. Farm accounts payable in 12 months (Schedule Q-9) _____
6. Other current farm assets (Schedule F) _____	27. Other current farm liabilities (Schedule G) _____
7. Farm Current Assets (1 + 2 + 3 + 4 + 5 + 6) \$ _____	28. Farm current liabilities (25a + 25b + 25c + 26 + 27) _____
8. Nonfarm current assets (Schedule G, H, & I) \$ _____	29. Nonfarm current liabilities (Schedules Q-3, 7, 11, R-5 and Schedule G) _____
9. TOTAL CURRENT ASSETS (7 + 8) \$ _____	30. TOTAL CURRENT LIABILITIES (28 + 29) \$ _____
<b>Intermediate</b>	<b>Intermediate</b>
10. Machinery, equipment, and vehicles (Schedule J) \$ _____	31. Deferred principal owed
11. Breeding and dairy livestock (Schedule C) _____	a. to primary lender (Schedule Q-2) \$ _____
12. Other intermediate farm assets (Schedule K) _____	b. to others (Schedule Q-6) _____
13. Farm intermediate assets (10 + 11 + 12) \$ _____	c. deferred accounts payable (Schedule Q-10) _____
14. Nonfarm intermediate assets (Schedule H & L) _____	32. Farm intermediate liabilities (31a + 31b + 31c) \$ _____
15. TOTAL INTERMEDIATE ASSETS (13 + 14) \$ _____	33. Nonfarm intermediate liabilities (Schedule Q-4, 8, 12) _____
16. TOTAL CURRENT AND INTERMEDIATE ASSETS (9 + 15) \$ _____	34. TOTAL INTERMEDIATE LIABILITIES (32 + 33) \$ _____
<b>Long-Term</b>	<b>Long-Term</b>
17. Farmland and nondepreciable improvements (Schedule M) \$ _____	36. Deferred principal owed
18. Farm building and improvements (Schedule N) _____	a. on-farm real estate (Schedule R-2) \$ _____
19. Other long-term farm assets (Schedule O) _____	b. other long-term liabilities (Schedule R-4) _____
20. Farm long-term assets (17 + 18 + 19) \$ _____	37. Farm long-term liabilities (36a + 36b) \$ _____
21. Nonfarm long-term assets (Schedule P) \$ _____	38. Nonfarm long-term liabilities (Schedule R-6) _____
22. TOTAL LONG-TERM ASSETS (20 + 21) \$ _____	39. TOTAL LONG-TERM LIABILITIES (37 + 38) \$ _____
23. TOTAL FARM ASSETS (7 + 13 + 20) \$ _____	40. TOTAL FARM LIABILITIES (28 + 32 + 37) \$ _____
24. TOTAL ASSETS (16 + 22) \$ _____	41. TOTAL LIABILITIES (35 + 39) \$ _____

**NET WORTH**

	(a) Farm	(b) Nonfarm	(c) Total
42. Ending assets (farm = line 23; total = line 24) . . . . .	\$ _____	\$ _____	\$ _____
43. Ending liabilities (farm = line 40; total = line 41) . . . . .	\$ _____	\$ _____	\$ _____
44. End net worth (this year) (42 – 43). . . . .	\$ _____	\$ _____	\$ _____
45. Begin net worth (from Line 44, Page 2) . . . . .	\$ _____	\$ _____	\$ _____
46. Change in net worth this year (44 – 45) . . . . .	\$ _____	\$ _____	\$ _____

**OTHER NOTATIONS**

47. \_\_\_\_\_  
 \_\_\_\_\_

I hereby certify that the above information is a true and accurate statement of my financial condition as of this date.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_



# FARM EARNINGS STATEMENT

## (Farm Profit and Loss Statement or Operating Statement)

Period Covered: \_\_\_\_\_, 19\_\_\_\_ to \_\_\_\_\_, 19\_\_\_\_

### I. CASH OPERATING STATEMENT

Gross Income	Cash Expenses	Amount
A. Livestock and Livestock Products (Include Breeding Livestock Sales)	15. Labor paid — all costs	\$ _____
Units	16. Machinery repair — field	_____
1. _____	17. Machinery repair — livestock	_____
2. _____	18. Building and fence repair	_____
3. _____	19. Interest — farm share	_____
4. _____	20. Rent — farm share	_____
5. Subtotal (1 + 2 + 3 + 4)	21. Feed purchased	_____
\$ _____ (5)	22. Seeds and plants purchased	_____
	23. Fertilizer and lime	_____
	24. Other crop expenses	_____
	25. Machine hire	_____
B. Crops Sales	26. Breeding fees	_____
6. _____	27. Veterinary and medicine	_____
7. _____	28. Other livestock expenses	_____
8. _____	29. Gas, fuel, oil — farm share	_____
9. Subtotal (6 + 7 + 8)	30. Storage and warehousing	_____
\$ _____ (9)	31. Taxes — real estate and personal property — farm share	_____
	32. Insurance — farm share	_____
C. Other Farm Income	33. Utilities — farm share	_____
10. _____	34. Freight and trucking	_____
11. _____	35. Auto expense — farm share	_____
12. _____	36. Resale items — purchased this year	_____
13. Subtotal (10 + 11 + 12)	37. Miscellaneous expense	_____
\$ _____ (13)	38. TOTAL CASH FARM OPERATING EXPENSE (Sum of Lines 15 through 37)	\$ _____ (38)
14. TOTAL CASH FARM OPERATING INCOME (5 + 9 + 13)	39. NET CASH FARM OPERATING INCOME (14 minus 38)	\$ _____ (39)

### II. ADJUSTMENT FOR INVENTORY

	Feed and Grain (a)	Market Livestock (b)	Supplies and Prepaid Expenses (c)	Accounts Receivable (d)	Accounts Payable (e)	
40. Ending Inventory (p. 3)	_____	_____	_____	_____	Begin _____	
41. Beginning Inventory (p. 2)	_____	_____	_____	_____	Ending _____	
42. Net Adjustment (40-41)	_____	_____	_____	_____	_____	\$ _____ (42)
43. Adjusted Net Farm Operating Income (39 ± 42)						\$ _____ (43)

### III. ADJUSTMENTS FOR CAPITAL ITEMS

	Breeding & Dairy Livestock (a)	Machinery and Equipment (b)	Buildings and Improvements (c)	Land and Improvements (d)	
44. Ending Inventory	_____	_____	_____	_____	
45. Plus Sales	In cash operating income above	_____	_____	_____	
46. Subtotal (44 + 45)	_____	_____	_____	_____	
47. Beginning Inventory	_____	_____	_____	_____	
48. Plus Purchases	_____	_____	_____	_____	
49. Subtotal (47 + 48)	_____	_____	_____	_____	
50. Net Capital Adjustment (46-49)	_____ (a)	_____ (b)	_____ (c)	_____ (d)	_____ (50)
51. Net Farm Earnings (43 ± 50) (Return to Unpaid Labor, Unpaid Management, and Net Worth)					_____ (51)
52. Income Tax Depreciation Claimed This Year					\$ _____



## FINANCIAL SUMMARY AND ANALYSIS

### PROFITABILITY

1. Return to unpaid labor, unpaid management, and net worth (Page 4, Line 51)	(1)	\$	
2. Interest on average farm net worth (\$ _____ x _____ %) (Lines 44 and 45, Page 3)	(2)	\$	
3. Labor and management earnings			
3a. Per farm (1 - 2)	(3a)	\$	
3b. Per operator (3a ÷ number of unpaid operators)	(3b)	\$	
4. Value of unpaid labor and unpaid management (typical wage + management charge)	(4)	\$	
5. Returns to farm net worth (1 - 4)	(5)	\$	
6. Farm interest paid (Page 4, Line 19)	(6)	\$	
7. Returns to farm investment (5 + 6)	(7)	\$	
8. Average farm investment (Line 23, Pages 2 & 3)	(8)	\$	
9. Average farm net worth (See Line 2, above)	(9)	\$	
10. Return per \$100 farm investment (7 ÷ 8) x (100)	(10)		%
11. Return per \$100 farm net worth (5 ÷ 9) x (100)	(11)		%
12. Adjusted gross receipts (Page 4, Line 14, minus 36 ± 42a ± 42b ± 42d ± 50a)	(12)	\$	
13. Asset turnover (12 ÷ 8) x (100)	(13)		%
14. Net profit margin (7 ÷ 12) x (100)	(14)		%

### DEBT SERVICING AND CAPITAL REPLACEMENT CAPACITY

15. Cash generated for non-real estate debt or capital replacement (Page 6, Line 41)	(15)	\$	
16. Net inventory adjustment (Page 4, Line 42)	(16)	\$	
17. Cash generated for non-real estate debt payment, accrual basis (Line 15 ± 16)	(17)	\$	
18. Average non-real estate debt (Line 35, Pages 2 & 3)	(18)	\$	
19. Years required to pay off non-real estate debt, accrual basis (Line 18 ÷ 17)	(19)		years
20. Machinery, buildings, improvements depreciation (Page 4, Line 50b + 50c; or Page 4, Line 52)	(20)	\$	
21. Excess depreciable asset replacement capacity (Line 17 - Line 20)	(21)	\$	
22. Ending current liabilities (Page 3, Line 30)	(22)	\$	
23. Ending current assets (Page 3, Line 9)	(23)	\$	
24. Current liability/asset ratio (22 ÷ 23) x (100)	(24)		%
25. Cash operating expense/cash operating income ratio			
25a. Without interest			
Page 4 [(Line 38 - Line 19) ÷ Line 14] x (100)	(25a)		%
25b. With interest			
Page 4, (Line 38 ÷ Line 14) x (100)	(25b)		%
26. Net cash farm operating income (Page 4, Line 39)	(26)	\$	
27. Net cash farm income (Line 26 above plus Line 45, Page 4, minus Line 48, Page 4)	(27)	\$	

### FINANCIAL SOLVENCY

	Beginning		Ending	
28. Total current and intermediate liabilities (Pages 2 & 3, Line 35)	\$		\$	
29. Total current and intermediate assets (Pages 2 & 3, Line 16)	\$		\$	
30. Total long-term liabilities (Pages 2 & 3, Line 39)	\$		\$	
31. Total long-term assets (Pages 2 & 3, Line 22)	\$		\$	
32. Total liabilities (Pages 2 & 3, Line 41)	\$		\$	
33. Total assets (Pages 2 & 3, Line 24)	\$		\$	
34. Net worth (Pages 2 & 3, Line 44)	\$		\$	
35. Change in net worth during year (Page 3, Line 46c)		\$		
36. Current plus intermediate liability/asset ratio (28 ÷ 29) x (100)		%		%
37. Long-term liability/asset ratio (30 ÷ 31) x (100)		%		%
38. Total liability/asset ratio (32 ÷ 33) x (100)		%		%



## INFORMATION ACCURACY CHECKS

### I. CASH FLOW – FAMILY LIVING CHECK

#### Inflow

1. Cash on hand, checking and savings, beginning balance (Page 2, Line 1)	(1)	\$	
2. Cash farm operating income (Page 4, Line 14)	(2)	\$	
3. Farm capital sales (Page 4, Line 45)	(3)	\$	
4. New money borrowed this year (Credit Record)	(4)	\$	
5. Other inflows, nonfarm (nonfarm family and business records)			
a. Income from nonfarm business	(5a)	\$	
b. Income from salaries, wages, etc.	(5b)	\$	
c. Gifts, inheritance	(5c)	\$	
d. Other income, tax refunds, etc.	(5d)	\$	
6. Total cash inflows (1 + 2 + 3 + 4 + 5a + 5b + 5c + 5d)	(6)	\$	

#### Outflow

7. Cash on hand, checking and savings, ending balance (Page 3, Line 1)	(7)	\$	
8. Cash farm operating expenses (Page 4, Line 38)	(8)	\$	
9. Capital purchases, boot money paid (Page 4, total of Line 48)	(9)	\$	
10. Principal payments made on debt (Credit Record)	(10)	\$	
11. Other outflows, nonfarm (family and nonfarm business records)			
a. Nonfarm capital purchases, including securities	(11a)	\$	
b. Nonfarm business expenses	(11b)	\$	
c. Nonfarm other (include household capital purchases)	(11c)	\$	
12. Income tax and social security tax paid this year	(12)	\$	
13. Subtotal (7 + 8 + 9 + 10 + 11a + 11b + 11c + 12)	(13)	\$	
14. Family living expense and savings, calculated (Line 6 – 13)	(14)	\$	
15. Family living expense and savings, reported (from household records)	(15)	\$	
16. Unaccounted-for difference (Line 14 – 15)	(16)	\$	

### II. PROFIT/NET WORTH CHECK

17. Net farm earnings (Page 4, Line 51)	(17)	\$	
18. Net nonfarm earnings (Lines 5a, b, c, d, – Line 11b)	(18)	\$	
19. Total net earnings (Line 17 + 18)	(19)	\$	
20. Calculated family living expense, savings and taxes paid (Line 12 + 14)	(20)	\$	
21. Net worth change, calculated (Line 19 – 20)	(21)	\$	
22. Net worth change, reported (Page 3, Line 46c)	(22)	\$	
23. Difference (Line 21 – 22)	(23)	\$	

### III. LIABILITIES CHECK

24. Beginning liabilities (Page 2, Line 41)	(24)	\$	
25. New money borrowed during year (Line 4, above)	(25)	\$	
26. Total liabilities to account for (Line 24 + 25)	(26)	\$	
27. Principal payment made (Line 10, above)	(27)	\$	
28. Subtotal (Line 26 – 27)	(28)	\$	
29. Change in accounts payable (Page 4, Line 42e)	(29)	\$	
30. End total liabilities, calculated (Line 28 ± 29)	(30)	\$	
31. End total liabilities, reported (Page 3, Line 41)	(31)	\$	
32. Discrepancy (line 30 – 31)	(32)	\$	

### IV. CASH GENERATED FOR NON-REAL ESTATE DEBT OR CAPITAL PURCHASES (Page 3, Line 18)

33. Net cash farm operating income (Page 4, Line 39)	(33)	\$	
34. Farm capital sales (Line 3, above)	(34)	\$	
35. Net nonfarm income (Line 18, above)	(35)	\$	
36. Total net cash income (Line 33 + 34 + 35)	(36)	\$	
37. Family living expense (Line 14, above)	(37)	\$	
38. Income tax and social security tax paid (Line 12, above)	(38)	\$	
39. Real estate principal payment (from credit record)	(39)	\$	
40. Subtotal (other commitments) (Line 37 + 38 + 39)	(40)	\$	
41. Cash generated for non-real estate debt and capital replacement (Line 36 – 40)	(41)	\$	



## Supporting Schedules for Net Worth Statement

Name \_\_\_\_\_ Date \_\_\_\_\_

**SCHEDULE A Cash on Hand, Checking Account, Savings**

Type	Amount	Type	Amount	Type	Amount
<b>TOTAL</b>					

(to Line 1)

**SCHEDULE B Farm Notes and Accounts Receivable**

Type	From Whom	Original Amount	Rate and Terms	Present Amount	Date Due	Collateral
<b>TOTAL</b>						

(to Line 2)

**SCHEDULE C Livestock Inventory**

Livestock Held for Sale				Breeding and Dairy Livestock			
Description	No.	Value/Unit	Total	Description	No.	Value/Unit	Total
<b>TOTAL</b>				<b>TOTAL</b>			

(to Line 3) (to Line 11)

**SCHEDULE D Crops Inventory**

Crops Held for Sale				Crops Held for Feed				Value/Growing Crops	
Crop	Units	Value/Unit	Total	Crop	Units	Value/Unit	Total	Item	Value
<b>TOTAL (1)</b>				<b>TOTAL (2)</b>				<b>TOTAL (3)</b>	

**TOTAL (1 + 2 + 3)** \_\_\_\_\_  
(to Line 4)

**SCHEDULE E Farm Supplies and Prepaid Expenses**

Description	Units	Cost	Description	Units	Cost
<b>TOTALS (1)</b>			<b>TOTAL (1 + 2)</b>		

(to Line 5)

**SCHEDULE F Other Current Farm Assets**

Description	Value
<b>TOTAL (1)</b>	

Description	Value
<b>TOTALS</b>	

(to Line 6)



**SCHEDULE G Life Insurance**

Insured	Owner	Beneficiary	Company	Face Value	Cash Value	Loans Outstanding
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
				<b>TOTAL</b>	_____	_____
					(to Line 8)	(to Line 27 or 29) (depending on purpose)

**SCHEDULE H Securities**

Readily Marketable			Not Readily Marketable		
Description	Original Value	Market Value	Description	Original Value	Market Value
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>TOTALS</b>	_____	_____	<b>TOTALS</b>	_____	_____
		(to Line 8)			(to Line 14)

**SCHEDULE I Other Nonfarm Current Assets**

Description	Value	Description	Value
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>TOTAL (1)</b>	_____	<b>TOTAL (2)</b>	_____
		<b>TOTAL (1 + 2)</b>	_____
		(to Line 8)	

**SCHEDULE J Machinery, Equipment, Vehicles**

Description (Make, Kind, Size)	Date Purchased	Original Cost	Adjusted Tax Basis or Depreciated Value	Market Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>TOTALS</b>			_____	_____
			(to Line 10)	(to Line 10)



**SCHEDULE K Other Intermediate Farm Assets**

Description	Date Purchased	Original Cost	Adjusted Tax Basis or Depreciated Value	Market Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>TOTALS</b>			_____	_____
			(to Line 12)	(to Line 12)

**SCHEDULE L Nonfarm Intermediate Assets (Include Household)**

Description	Date Purchased	Original Cost	Adjusted Tax Basis or Depreciated Value	Market Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>TOTALS</b>			_____	_____
			(to Line 14)	(to Line 14)

**SCHEDULE M Farmland and Nondepreciable Improvements**

Description	Total Acres	Tillable Acres	Title Held By	Date Purchased	Original Cost	Market Value
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
<b>TOTALS</b>		_____	_____	_____	_____	_____
					(to Line 17)	(to Line 17)

**SCHEDULE N Farm Buildings and Improvements**

Description	Date Purchased	Original Cost	Adjusted Tax Basis or Depreciated Value	Market Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>TOTALS</b>			_____	_____
			(to Line 18)	(to Line 18)

**SCHEDULE O Other Long-term Farm Assets**

Description	Title Held By	Year Purchased	Original Cost	Adjusted Tax Basis or Depreciated Value	Market Value
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>TOTALS</b>				_____	_____
				(to Line 19)	(to Line 19)

**SCHEDULE P Nonfarm Long-term Assets (Include Farmhouse)**

Description	Title Held By	Date Purchased	Original Cost	Market Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>TOTALS</b>			_____	_____
			(to Line 21)	(to Line 21)



**SCHEDULE Q Current and Intermediate Liabilities**

**Notes Payable to Primary Lender**

Holder	Purpose	Principal Owed	Farm		Nonfarm	
			Principal Due in 12 Months	Principal Deferred	Principal Due in 12 Months	Principal Deferred
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
		<b>TOTALS</b>	(1) _____	(2) _____	(3) _____	(4) _____
			(to Line 25a)	(to Line 31a)	(to Line 29)	(to Line 33)

**Notes Payable to Others**

Holder	Purpose	Principal Owed	Farm		Nonfarm	
			Principal Due in 12 Months	Principal Deferred	Principal Due in 12 Months	Principal Deferred
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
		<b>TOTALS</b>	(5) _____	(6) _____	(7) _____	(8) _____
			(to Line 25b)	(to Line 31b)	(to Line 29)	(to Line 33)

**Accounts Payable -- Including Accrued Interest and Past Due Rent and Taxes**

Payable to	Purpose	Amount Owed	Farm		Nonfarm	
			Amount Due in 12 Months	Amount Deferred	Amount Due in 12 Months	Amount Deferred
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
		<b>TOTALS</b>	(9) _____	(10) _____	(11) _____	(12) _____
			(to Line 26)	(to Line 31c)	(to Line 29)	(to Line 33)

**SCHEDULE R Long-term Liabilities -- Real Estate**

**Farm**

Holder	Purpose	Date Originated	Original Amount	Interest Rate	Principal Balance	Principal Due in 12 Months	Principal Deferred
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
					<b>TOTALS</b>	(1) _____	(2) _____
						(to Line 25c)	(to Line 36a)

**Long-term Liabilities -- Other Farm**

Holder	Purpose	Date Originated	Original Amount	Interest Rate	Principal Balance	Principal Due in 12 Months	Principal Deferred
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
					<b>TOTALS</b>	(3) _____	(4) _____
						(to Line 25b)	(to Line 36b)

**Nonfarm**

_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
					<b>TOTALS</b>	(5) _____	(6) _____
						(to Line 29)	(to Line 38)



## Financial and Production Performance Trends of Your Farm Business

Period Covered: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_ Major Enterprise: \_\_\_\_\_



Sponsored by the Extension services of Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin, in cooperation with SEA-Extension, USDA.

*In cooperation with NCR Educational Materials Project.*

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## FINANCIAL AND PRODUCTION PERFORMANCE TRENDS OF YOUR FARM BUSINESS

(Make comments and explanations on Page 4)

	19__	19__	19__	19__	19__
<b>I. BUSINESS DESCRIPTION</b>					
1. Total tillable acres	_____	_____	_____	_____	_____
2. Kind and number of major livestock ( _____ )	_____	_____	_____	_____	_____
3. Total hours of labor	_____	_____	_____	_____	_____
4. Total farm investment	_____	_____	_____	_____	_____
5. Adjusted gross receipts	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
<b>II. BUSINESS PROFITABILITY</b>					
7. Net farm earnings	_____	_____	_____	_____	_____
8. Labor and management earnings	_____	_____	_____	_____	_____
a. Per farm	_____	_____	_____	_____	_____
b. Per operator	_____	_____	_____	_____	_____
9. Return per \$100 farm investment (percent)	_____	_____	_____	_____	_____
10. Return per \$100 farm net worth (percent)	_____	_____	_____	_____	_____
11. Asset turnover ratio (percent)	_____	_____	_____	_____	_____
12. Net profit margin (percent)	_____	_____	_____	_____	_____
<b>III. BUSINESS FINANCIAL SOUNDNESS-LIQUIDITY AND CASH FLOW</b>					
13. Family living expense	_____	_____	_____	_____	_____
14. Cash generated for non-real estate debt	_____	_____	_____	_____	_____
15. Net inventory adjustment	_____	_____	_____	_____	_____
16. Years to pay non-real estate debt (accrual)	_____	_____	_____	_____	_____
17. Excess depreciable asset replacement capacity	_____	_____	_____	_____	_____
18. Current liability/asset ratio (percent)	_____	_____	_____	_____	_____
19. Cash operating expense/cash operating income	_____	_____	_____	_____	_____
a. Without interest (percent)	_____	_____	_____	_____	_____
b. With interest (percent)	_____	_____	_____	_____	_____
20. Net cash farm operating income	_____	_____	_____	_____	_____
21. Net cash farm income	_____	_____	_____	_____	_____



19 \_\_\_\_

19 \_\_\_\_

19 \_\_\_\_

19 \_\_\_\_

19 \_\_\_\_

**IV. BUSINESS FINANCIAL  
SOUNDNESS-SOLVENCY  
(End of Year)**

22. Current liabilities	_____	_____	_____	_____	_____
23. Intermediate liabilities	_____	_____	_____	_____	_____
24. Long-term liabilities	_____	_____	_____	_____	_____
25. Current assets	_____	_____	_____	_____	_____
26. Intermediate assets	_____	_____	_____	_____	_____
27. Long-term assets	_____	_____	_____	_____	_____
28. Total assets	_____	_____	_____	_____	_____
29. Total liabilities	_____	_____	_____	_____	_____
30. Total net worth	_____	_____	_____	_____	_____
31. Change in net worth	_____				
32. Intermediate liability/asset ratio (percent)	_____	_____	_____	_____	_____
33. Current + intermediate liability/asset ratio (percent)	_____	_____	_____	_____	_____
34. Long-term liability/asset ratio (percent)	_____	_____	_____	_____	_____
35. Total liability/asset ratio (percent)	_____	_____	_____	_____	_____

**V. PRODUCTION EFFICIENCY –  
CROPS**

36. Percent of land tilled	_____	_____	_____	_____	_____
37. Crop value per crop acre	_____	_____	_____	_____	_____
38. Yield _____ (major crop)	_____	_____	_____	_____	_____
39. Yield _____ (major crop)	_____	_____	_____	_____	_____
40. _____	_____	_____	_____	_____	_____
41. _____	_____	_____	_____	_____	_____

**VI. PRODUCTION EFFICIENCY –  
LIVESTOCK**

42. Pounds of milk sold per cow	_____	_____	_____	_____	_____
43. _____	_____	_____	_____	_____	_____
44. _____	_____	_____	_____	_____	_____
45. Returns per \$100 feed fed	_____	_____	_____	_____	_____
46. _____	_____	_____	_____	_____	_____
47. _____	_____	_____	_____	_____	_____
48. _____	_____	_____	_____	_____	_____



COMMENTS AND EVALUATION OF YEAR'S RESULTS; PROPOSED CHANGES

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Year

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Year

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Year

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Year

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Year

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## The Partial Budget

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_



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PARTIAL BUDGET FOR \_\_\_\_\_  
(Proposed Plan)

CREDIT			DEBIT		
Added Return and/or Reduced Cost			Added Cost and/or Reduced Return		
Added Return	Profitability	Repayment Capacity	Added Cost	Profitability	Repayment Capacity
Added Income From Proposed Plan			New Investment and Added Annual Investment Costs from Proposed Plan		
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	Interest on Added Debt	\$ XXX	\$ _____
Total Annual Added Returns (1a) \$ _____ (1b) \$ _____			Total Added Annual Investment Cost (4a) \$ _____ (4b) \$ _____		
Reduced Costs			Added Annual Operating Costs From Proposed Change		
Reduction in Costs From Proposed Plan			_____		
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
_____	\$ _____	\$ _____	_____	\$ _____	\$ _____
Interest on Reduced Debt	\$ XXX	\$ _____	_____	\$ _____	\$ _____
Total Annual Reduced Cost (2a) \$ _____ (2b) \$ _____			Total Added Annual Operating Costs (5a) \$ _____ (5b) \$ _____		
TOTAL CREDITS (1 + 2) (3a) \$ _____ (3b) \$ _____			Reduced Return		
TOTAL DEBITS (From 7a and 7b) (7a) \$ _____ (7b) \$ _____			Reduced Income from Proposed Plan		
CHANGE IN NET INCOME (3 - 7) (8a) \$ _____ (8b) \$ _____			_____	\$ _____	\$ _____
Total Added Investment (9) \$ _____			_____	\$ _____	\$ _____
Return/\$ Added Investment (8a ÷ 9) x 100 (10) _____ %			Total Annual Reduced Return (6a) \$ _____ (6b) \$ _____		
Total Added Debt (11) \$ _____			TOTAL DEBITS (4+5+6) (7a) \$ _____ (7b) \$ _____		
Years to Pay Back Added Debt (11 ÷ 8b) (12) _____ Yrs.					

\$ \$ TOTAL \$ \$  
 \$ \$ CREDITS \$ \$

\$ \$ TOTAL \$ \$  
 \$ \$ DEBITS \$ \$





## Your Long-Range Farm Plan

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_



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## SUMMARY AND ANALYSIS OF LONG-RANGE PLANS

	Base Plan Alt. #1	Alt. #2	Alt. #3
Plan Identification			
Labor Hours			

### PROJECTED PROFITABILITY

*1.	Operator's Sales	(1) \$	\$	\$
*2.	Cash Operating Expenses	(2) \$	\$	\$
3.	Net Cash Operating Income (1 - 2)	(3) \$	\$	\$
*4.	Depreciation Allowance	(4) \$	\$	\$
5.	Return to Labor, Management, Equity (3 - 4)	(5) \$	\$	\$
6.	Interest on Base Net Worth (\$ _____ x _____ %)	(6) \$	\$	\$
7.	Labor and Management Earnings (5 - 6)	(7) \$	\$	\$
*8.	Farm Interest Paid	(8) \$	\$	\$
9.	Sub-Total (5 + 8)	(9) \$	\$	\$
10.	Value Operator's Labor and Management	(10) \$	\$	\$
11.	Return on Farm Investment (9 - 10)	(11) \$	\$	\$
*12.	Total Farm Investment	(12) \$	\$	\$
13.	Return/\$ Farm Investment (11 ÷ 12)	(13)	%	%
14.	Net Cash Operating Income/\$ Sales (3 ÷ 1)	(14) \$	•	•

### PROJECTED DEBT SERVICING

15.	Net Cash Operating Income (line 3, above)	(15) \$	\$	\$
16.	Net Nonfarm Income (estimated)	(16) \$	\$	\$
17.	Net Cash Income Available (15 + 16)	(17) \$	\$	\$
18.	Family Living (estimated)	(18) \$	\$	\$
19.	Income Tax and Social Security (page 6)	(19) \$	\$	\$
20.	Sub Total (18 + 19)	(20) \$	\$	\$
21.	Cash Available for Principal Payments (17 - 20)	(21) \$	\$	\$

### PAYBACK BASIS

22.	Annual R.E. Principal Payments (page 6)	(22) \$	\$	\$
23.	Cash Available for Non R.E. Debt (21 - 22)	(23) \$	\$	\$
*24.	Non R.E. Debt to be Serviced	(24) \$	\$	\$
25.	Years to Payback Non R.E. Debt (24 ÷ 23)	(25)	Yrs.	Yrs.

### SCHEDULED BASIS

26.	Total Scheduled Principal Payments (page 6)	(26) \$	\$	\$
27.	Cash Surplus or Deficit (21 - 26)	(27) \$	\$	\$

### SOLVENCY POSITION (Beginning of Plan)

*28.	Total Debt	(28) \$	\$	\$
*29.	Total Assets	(29) \$	\$	\$
30.	Percent in Debt (28 ÷ 29)	(30)	%	%
31.	Annual Net Worth Change (5 + 16 - 20)	(31) \$	\$	\$

\*See pages 2, 3, or 4 for totals for starred items.



## ANNUAL PRINCIPAL AND INTEREST PAYMENTS\*

Current And Intermediate	Loan Amount	Int. Rate	Years Remain.	Base Plan		Alternative #2		Alternative #3	
				Princ.	Inter.	Princ.	Inter.	Princ.	Inter.
	\$			\$	\$	\$	\$	\$	\$
<b>TOTAL</b>	\$			\$	\$	\$	\$	\$	\$
<b>Real Estate</b>	\$			\$	\$	\$	\$	\$	\$
<b>TOTAL</b>	\$			\$	\$	\$	\$	\$	\$
<b>GRAND TOTAL</b>	\$			\$	\$	\$	\$	\$	\$

\*Principal and Interest Payments per Thousand Dollars of Debt Remaining, Three Years from Present

Years Presently Remaining	----- Interest Rate -----											
	8%		10%		12%		14%		16%			
	Prin.	Int.	Prin.	Int.	Prin.	Int.	Prin.	Int.	Prin.	Int.		
5	\$198	\$52	\$198	\$66	\$198	\$80	\$196	\$95	\$195	\$110		
7	131	61	127	78	123	96	121	112	118	130		
10	80	69	76	87	72	105	67	124	63	144		
15	43	73	38	93	33	113	30	133	26	153		
20	26	76	21	96	17	116	14	137	12	157		
30	10	79	7	99	4	120	4	139	3	159		
40	5	79	3	99	1	120	1	140	1	160		

## INCOME AND SOCIAL SECURITY TAX WORKSHEET (procedures and rates as of 1980)

	Base Plan	Alt. #2	Alt. #3	Taxable Income			
				Over —	But not over —	Federal* Tax	of the amount over —
1. Net Cash Available (line 17, page 5)							
2. Depreciation (pages 2, 3, 4)							
3. 60% Capital Sales (Breed Livestock)				\$3,400	\$5,500	14%	\$3,400
4. Sub Total (2 + 3)				\$5,500	\$7,600	\$294 + 16%	\$5,500
5. Federal Adjusted Gross Income (1 - 4)				\$7,600	\$11,900	\$630 + 18%	\$7,600
6. Less Exemptions (\$1000 x No.)				\$11,900	\$16,000	\$1,404 + 21%	\$11,900
7. Federal Taxable Income (5 - 6)				\$16,000	\$20,200	\$2,265 + 24%	\$16,000
8. Gross Federal Tax (see table)				\$20,200	\$24,600	\$3,273 + 28%	\$20,200
9. Investment Credit (Depreciation x 10%)				\$24,600	\$29,900	\$4,505 + 32%	\$24,600
10. Federal Tax (8 - 9)				\$29,900	\$35,200	\$6,201 + 37%	\$29,900
11. Social Security Income (line 1 less total capital sales and depreciation)*				\$35,200	\$45,800	\$8,162 + 43%	\$35,200
12. Social Security Tax (line 11 x _____ %)*				\$45,800	\$60,000	\$12,720 + 49%	\$45,800
13. State Taxable Income				\$60,000	\$85,600	\$19,678 + 54%	\$60,000
14. State Tax				\$85,600	\$109,400	\$33,502 + 59%	\$85,600
15. Total Tax (10 + 12 + 14)							

\* Married, filing jointly; \$3,400 standard deduction.

\* For 1981, maximum social security income is \$29,700; tax rate = 9.3%.



## Your Annual Farm Plan

### Cash Flow Projections Financial Statements and Supporting Schedules

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_



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## PROJECTED CASH FLOW STATEMENT – FIRST YEAR

	Total	January	February	March
<b>CASH INFLOWS</b>				
( 1) Crop sales (schedules B & D)	(1) _____	_____	_____	_____
( 2) Market and breed livestock sales (schedule A)	(2) _____	_____	_____	_____
( 3) Sale of other capital items (schedule G)	(3) _____	_____	_____	_____
( 4) Other farm income	(4) _____	_____	_____	_____
( 5) Total cash farm income (1 + 2 + 3 + 4)	(5) _____	_____	_____	_____
( 6) Other business or personal income	(6) _____	_____	_____	_____
( 7) Total cash income (5 + 6)	(7) _____	_____	_____	_____
( 8) Beginning cash balance (page 4)	(8) _____	_____	_____	_____
( 9) New loans, other than primary lender (schedule I)	(9) _____	_____	_____	_____
(10) Total cash available (7 + 8 + 9)	(10) _____	_____	_____	_____
<b>CASH OUTFLOWS</b>				
(11) Seed	(11) _____	_____	_____	_____
(12) Fertilizer	(12) _____	_____	_____	_____
(13) Chemicals and supplies	(13) _____	_____	_____	_____
(14) Machine hire, storage	(14) _____	_____	_____	_____
(15) Feeder livestock (schedule A)	(15) _____	_____	_____	_____
(16) Feed purchased (schedule B & F)	(16) _____	_____	_____	_____
(17) Breeding and veterinarian (schedule F)	(17) _____	_____	_____	_____
(18) Fuel and oil	(18) _____	_____	_____	_____
(19) Livestock supplies (schedule F)	(19) _____	_____	_____	_____
(20) Marketing expense, truck (schedule E & F)	(20) _____	_____	_____	_____
(21) Machinery repairs	(21) _____	_____	_____	_____
(22) Building and improvement repairs	(22) _____	_____	_____	_____
(23) Taxes and insurance	(23) _____	_____	_____	_____
(24) Hired labor	(24) _____	_____	_____	_____
(25) Cash rent	(25) _____	_____	_____	_____
(26) Utilities	(26) _____	_____	_____	_____
(27) Miscellaneous	(27) _____	_____	_____	_____
(28) Interest on other lender debt (schedule I)	(28) _____	_____	_____	_____
(29) Subtotal (add 11 through 28)	(29) _____	_____	_____	_____
(30) Total net capital purchases (schedule G)	(30) _____	_____	_____	_____
(31) Living expense	(31) _____	_____	_____	_____
(32) Income tax and social security previous year	(32) _____	_____	_____	_____
(33) Scheduled principal pay. – other lenders (schedule I)	(33) _____	_____	_____	_____
(34) Desired ending cash balance	(34) _____	_____	_____	_____
(35) Total cash required (add 29 through 34)	(35) _____	_____	_____	_____
(36) Projected deficit (10 – 35)	(36) _____	_____	_____	_____
(37) Projected surplus (10 – 35)	(37) _____	_____	_____	_____
(38) Interest paid (primary lender)	(38) _____	_____	_____	_____
(39) Amount of principal could be paid (37 – 38)	(39) _____	_____	_____	_____
(40) Primary lender loan balance, beginning mo./yr.	(40) _____	_____	_____	_____
(41) Primary lender loan balance, ending mo./yr. If projected deficit (line 36 + 40) If projected surplus (line 40 – 39)	(41) _____	_____	_____	_____
(42) Accrued interest on primary lender debt, ending yr./mo.	(42) _____	_____	_____	_____







## NET WORTH STATEMENT

ASSETS	Date _____	Date _____
Cash, checking account, savings	_____	_____
Livestock held for sale (Schedule A)	_____	_____
Crops held for sale and feed (Schedules B & D)	_____	_____
Farm supplies and prepaid expenses	_____	_____
Other current assets	_____	_____
(1) TOTAL CURRENT	=====	=====
Machinery, equipment and vehicles (Schedule H)	_____	_____
Breeding livestock (Schedule A)	_____	_____
Other intermediate assets	_____	_____
(2) TOTAL CURRENT AND INTERMEDIATE	=====	=====
Farmland (Schedule H)	_____	_____
Farm buildings and improvements (long-term) (Schedule H)	_____	_____
Nonfarm real estate	_____	_____
(3) TOTAL LONG-TERM	=====	=====
(4) TOTAL ASSETS (2 + 3)	=====	=====
<b>LIABILITIES</b>		
Principal payments due in 12 months:		
a. to primary lender (lines 40 & 41, page 2)	_____	_____
b. to others (Schedule I)	_____	_____
Accounts payable in 12 months	_____	_____
Other current liabilities	_____	_____
(5) TOTAL CURRENT	=====	=====
Deferred intermediate principal owned:		
a. to primary lender (lines 40 & 41, page 2)	_____	_____
b. to others (Schedule I)	_____	_____
Deferred accounts payable	_____	_____
Other intermediate liabilities	_____	_____
(6) TOTAL CURRENT AND INTERMEDIATE	=====	=====
Deferred long-term principal owed:		
a. on farm real estate (Schedule I)	_____	_____
b. on nonfarm real estate (Schedule I)	_____	_____
(7) TOTAL LONG-TERM	=====	=====
(8) TOTAL LIABILITIES (6 + 7)	=====	=====
(9) NET WORTH (4 - 8)	=====	=====

## FARM EARNINGS STATEMENT

	Year 1
1. Total cash farm income (line 5, page 2)	_____
2. Total cash farm operating expense (lines 29 + 38, page 2)	=====
3. Net cash farm income (1 - 2)	_____
4. Adjustment for inventory change*	_____
5. Adjustment for depreciation (schedule H)	=====
6. Sub-total (4 ± 5)	_____
7. Return to labor, management and equity (3 ± 6)	_____

\*Calculate change below using information from Net Worth Statement

	Crops	Livestock	Supplies		Payables
Ending	_____	_____	_____		(beg) _____
- Beginning	=====	=====	=====		(end) _____
Change	_____	_____	_____		_____



**SCHEDULE A – FIRST YEAR LIVESTOCK**

Description	Beg. Inv.		Transfers		Purchases		Net Raised No.	Sold		End. Inv.		Feed Needs Before Harvest			Feed Needs Harvest to Year End		
	No.	Value	In	Out	No.	Value		No.	Value	No.	Value	Corn Eq.	Hay	Silage	Corn Eq.	Hay	Silage
<b>TOTALS</b>	XX		XX		XX		XX	XX		XX							

**SCHEDULE B – FIRST YEAR CROPS**

Crop	Beg. Inv.		Amt. Fed Before Harvest	Bal. 1	Purchased Before Harvest		Sales Before Harvest		Bal. 2	Raised			Bal. 3	Amount Fed To Year End Amount	Bal. 4	Purchased After Harvest		Bal. 5
	Amt.	Value			Amt.	Value	Amt.	Value		Acres	Yield	Product				Amt.	Value	
<b>TOTALS</b>	XX		XX	XX	XX		XX		XX			XX	XX	XX	XX	XX		XX

**SCHEDULE C – SECOND YEAR LIVESTOCK NUMBERS AND FEED NEEDS**

Description	Beg. No.	No. Raised	Purch./ Trans. In	Sold/ Trans. Out	End No.	Feed Needs Before Harvest		
						Corn Eq.	Hay	Silage
<b>TOTALS</b>	XX	XX	XX	XX	XX			

**SCHEDULE D – PROJECTED FIRST YEAR CROP ENDING INVENTORY**

Crop	Bal. 5 From Above	Feed Needs To Next Harvest	Bal. 6	Sales After Harvest		End. Inventory	
				Amt.	Value	Amt.	Value
<b>TOTALS</b>	XX	XX	XX	XX		XX	



**SCHEDULE E – CROP EXPENSE AND LABOR**

Crop	Seed		Fertilizer		Chemicals		Other		Labor Hours
	Amt.	Value	Amt.	Value	Amt.	Value	Amt.	Value	
<b>TOTALS</b>	XX		XX		XX		XX		

**SCHEDULE F – LIVESTOCK EXPENSE AND LABOR**

Description	Suppl.		Health	Breed	Mktg.	Other	Labor Hours
	Amt.	Value					
<b>TOTALS</b>	XX						

**SCHEDULE G – INVESTMENT CHANGES  
(ENTER SALES AS NEGATIVES)**

	Description	Value
Machinery and Equipment		
	<b>TOTAL</b>	
Buildings and Improvements		
	<b>TOTAL</b>	
Land		
	<b>TOTAL</b>	

**SCHEDULE I – DEBT COMMITMENTS TO OTHER THAN PRIMARY LENDER**

Description	Year 1					
	Begin Balance	New Borrow	Principal Payments	End Balance	Interest	
					Rate	Amount Due
Current						
Sub-Total		XX	XX		XX	
Intermediate						
Sub-Total		XX	XX		XX	
Long-Term						
Sub-Total		XX	XX		XX	
<b>GRAND TOTAL</b>		XX			XX	

**SCHEDULE H – ASSET ENDING INVENTORY**

Investment Items	Present Investment	Plus Net Cap. Purch.	Less Annual Deprec.	Invest. End of Year
Machinery				
Bldg. & Imp.				
Land				
<b>TOTAL</b>	XX			XX



## Your Transition Farm Plan — Years 2 and 3

### Cash Flow Projections Financial Statements and Supporting Schedules

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_



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**SCHEDULE F – PROJECTED SECOND YEAR  
CROP ENDING INVENTORY**

**SCHEDULE G – SECOND YEAR CROP EXPENSE  
AND LABOR**

Crop	Bal. 5 From Above	Feed Needs To Harvest Amount	Bal. 6	Sales After Harvest		End. Inventory	
				Amt.	Value	Amt.	Value
<b>TOTALS</b>	XX	XX	XX	XX		XX	

Crop	Seed		Fertilizer		Chemicals		Other		Labor Hours
	Amt.	Value	Amt.	Value	Amt.	Value	Amt.	Value	
<b>TOTALS</b>	XX		XX		XX		XX		

**SCHEDULE H – THIRD YEAR CROPS**

Crop	Beg. Inv.		Amt. Fed Before Harvest	Bal. 1	Purchased Before Harvest		Sales Before Harvest		Bal. 2	Raised			Bal. 3	Amount Fed To Year End	Bal. 4	After Harvest		Bal. 5
	Amt.	Value			Amt.	Value	Amt.	Value		Acres	Yield	Product				Amt.	Value	
<b>TOTALS</b>	XX		XX	XX	XX		XX		XX		XX	XX	XX	XX	XX	XX		XX

**SCHEDULE I – PROJECTED THIRD YEAR  
CROP ENDING INVENTORY**

**SCHEDULE J – THIRD YEAR CROP EXPENSE  
AND LABOR**

Crop	Bal. 5 From Above	Feed Needs To Harvest Amount	Bal. 6	Sales After Harvest		End. Inventory	
				Amt.	Value	Amt.	Value
<b>TOTALS</b>	XX	XX	XX	XX		XX	

Crop	Seed		Fertilizer		Chemicals		Other		Labor Hours
	Amt.	Value	Amt.	Value	Amt.	Value	Amt.	Value	
<b>TOTALS</b>	XX		XX		XX		XX		



**SCHEDULE K – INVESTMENT CHANGES AND ASSET INVENTORIES**

	Present Value	2nd Year				3rd Year			
		Description	Value	Less Annual Depreciation	Invest End of Year	Description	Value	Less Annual Depreciation	Invest End of Year
Machinery and Equipment		XX	XX			XX	XX		
	XX								
	XX								
	XX								
<b>TOTAL</b>	XX	XX			XX				
Buildings and Improvements		XX	XX			XX	XX		
	XX								
	XX								
	XX								
<b>TOTAL</b>	XX	XX			XX				
Land		XX	XX			XX	XX		
	XX								
	XX								
	XX								
<b>TOTAL</b>	XX	XX			XX				

**SCHEDULE L – DEBT COMMITMENTS TO OTHER THAN PRIMARY LENDER:  
DEBT BALANCE, PRINCIPAL, AND INTEREST PAYMENTS**

Description	Year 2						Year 3					
	Begin Balance	New Borrow	Principal Payments	End Balance	Interest		Begin Balance	New Borrow	Principal Payments	End Balance	Interest	
					Rate	Paid					Rate	Paid
Current												
Sub-Total		XX	XX			XX		XX	XX		XX	
Intermediate												
Sub-Total		XX	XX			XX		XX	XX		XX	
Long-Term												
Sub-Total		XX	XX			XX		XX	XX		XX	
<b>GRAND TOTAL</b>	XX			XX			XX			XX		



## PROJECTED CASH FLOW STATEMENT

		Second Year				Third Year
	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
<b>CASH INFLOWS</b>						
( 1) Crop sales (schedules E, F, H, & I)	_____	_____	_____	_____	_____	_____
( 2) Market and breed livestock sales (schedules A & B)	_____	_____	_____	_____	_____	_____
( 3) Sale of other capital items (schedule K)	_____	_____	_____	_____	_____	_____
( 4) Other farm income	_____	_____	_____	_____	_____	_____
( 5) Total cash farm income (1 + 2 + 3 + 4)	_____	_____	_____	_____	_____	_____
( 6) Other business or personal income	_____	_____	_____	_____	_____	_____
( 7) Total cash income (5 + 6)	_____	_____	_____	_____	_____	_____
( 8) Beginning cash balance (page 6)	_____	_____	_____	_____	_____	_____
( 9) New loans, other than primary lender (schedule L)	_____	_____	_____	_____	_____	_____
(10) Total cash available (7 + 8 + 9)	_____	_____	_____	_____	_____	_____
<b>CASH OUTFLOWS</b>						
(11) Seed	_____	_____	_____	_____	_____	_____
(12) Fertilizer	_____	_____	_____	_____	_____	_____
(13) Chemicals and supplies	_____	_____	_____	_____	_____	_____
(14) Machine hire, storage	_____	_____	_____	_____	_____	_____
(15) Feeder livestock (schedules A & B)	_____	_____	_____	_____	_____	_____
(16) Feed purchased (schedules C, D, E, & H)	_____	_____	_____	_____	_____	_____
(17) Breeding and veterinarian (schedules C, & D)	_____	_____	_____	_____	_____	_____
(18) Fuel and oil	_____	_____	_____	_____	_____	_____
(19) Livestock supplies (schedules C & D)	_____	_____	_____	_____	_____	_____
(20) Marketing expense (schedules C, D & Crops)	_____	_____	_____	_____	_____	_____
(21) Machinery repairs	_____	_____	_____	_____	_____	_____
(22) Building and improvement repairs	_____	_____	_____	_____	_____	_____
(23) Taxes and insurance	_____	_____	_____	_____	_____	_____
(24) Hired labor	_____	_____	_____	_____	_____	_____
(25) Cash rent	_____	_____	_____	_____	_____	_____
(26) Utilities	_____	_____	_____	_____	_____	_____
(27) Miscellaneous	_____	_____	_____	_____	_____	_____
(28) Interest on other lender debt (schedule L)	_____	_____	_____	_____	_____	_____
(29) Subtotal (add 11 through 18)	_____	_____	_____	_____	_____	_____
(30) Total net capital purchases (schedule K)	_____	_____	_____	_____	_____	_____
(31) Living expense	_____	_____	_____	_____	_____	_____
(32) Income tax and social security previous year (page 6)	_____	_____	_____	_____	_____	_____
(33) Scheduled principal payment – other lenders (schedule L)	_____	_____	_____	_____	_____	_____
(34) Desired ending cash balance	_____	_____	_____	_____	_____	_____
(35) Total cash required (add 29 through 34)	_____	_____	_____	_____	_____	_____
(36) Projected deficit (10 – 35)	_____	_____	_____	_____	_____	_____
(37) Projected surplus (10 – 35)	_____	_____	_____	_____	_____	_____
(38) Interest paid primary lender, if any	_____	_____	_____	_____	_____	_____
(39) Amount of principal could be paid (37 – 38)	_____	_____	_____	_____	_____	_____
(40) Primary lender loan balance, beginning qtr./yr.	_____	_____	_____	_____	_____	_____
(41) Primary lender loan balance, ending qtr./yr.	_____	_____	_____	_____	_____	_____
If projected deficit (line 36 + 40)	_____	_____	_____	_____	_____	_____
If projected surplus (line 40 – 39)	_____	_____	_____	_____	_____	_____



## NET WORTH STATEMENT

ASSETS	Date _____	Date _____	Date _____
Cash, checking account, savings	_____	_____	_____
Livestock held for sale (schedules A & B)	_____	_____	_____
Crops held for sale and feed (schedules E, H, I)	_____	_____	_____
Farm supplies and prepaid expenses	_____	_____	_____
Other current assets	_____	_____	_____
(1) TOTAL CURRENT	_____	_____	_____
Machinery, equipment and vehicles (schedule K)	_____	_____	_____
Breeding livestock (schedules A & B)	_____	_____	_____
Other intermediate assets	_____	_____	_____
(2) TOTAL CURRENT AND INTERMEDIATE	_____	_____	_____
Farmland (schedule K)	_____	_____	_____
Farm buildings and improvements (long-term) (schedule K)	_____	_____	_____
Nonfarm real estate	_____	_____	_____
(3) TOTAL LONG-TERM	_____	_____	_____
(4) TOTAL ASSETS (2 + 3)	_____	_____	_____
LIABILITIES			
Principal payments due in 12 months:			
a. to primary lender (lines 40 & 41, page 5)	_____	_____	_____
b. to others (schedule L)	_____	_____	_____
Accounts payable in 12 months	_____	_____	_____
Other current liabilities	_____	_____	_____
(5) TOTAL CURRENT	_____	_____	_____
Deferred intermediate principal owed:			
a. to primary lender (lines 40 & 41, page 5)	_____	_____	_____
b. to others (schedule L)	_____	_____	_____
Deferred accounts payable	_____	_____	_____
Other intermediate liabilities	_____	_____	_____
(6) TOTAL CURRENT AND INTERMEDIATE	_____	_____	_____
Deferred long-term principal owed:			
a. on farm real estate (schedule L)	_____	_____	_____
b. on nonfarm real estate	_____	_____	_____
(7) TOTAL LONG-TERM	_____	_____	_____
(8) TOTAL LIABILITIES (6 + 7)	_____	_____	_____
(9) NET WORTH (4 - 8)	_____	_____	_____

## FARM EARNINGS STATEMENT

	Year 2	Year 3
1. Total cash farm operating income (line 5, page 5)	_____	_____
2. Total cash farm operating expense (line 29 + line 38, page 5)	_____	_____
3. Net cash farm operating income (1 - 2)	_____	_____
4. Adjustment for inventory change*	_____	_____
5. Adjustment for depreciation (schedule K)	_____	_____
6. Sub-total (4 ± 5)	_____	_____
7. Return to unpaid labor, management and net worth (3 ± 6)	_____	_____

\* Calculate change below using information from net worth statement.

	Crops	Livestock	Supplies	(beginning)	Payables
Ending	_____	_____	_____	_____	_____
- Beginning	_____	_____	_____	_____	_____
Change	_____	_____	_____	(end)	_____

## INCOME AND SOCIAL SECURITY TAX WORKSHEET (procedures and rates as of 1980)

	Year 1	Year 2	Taxable Income		Federal*	of the
			Over —	But not over —	Tax	amount over —
1. Net Cash Available	_____	_____				
2. Depreciation	_____	_____				
3. 60% Capital Sales (Breed Livestock)	_____	_____				
4. Sub Total (2 + 3)	_____	_____	\$3,400	\$5,500	14%	\$3,400
5. Federal Adjusted Gross Income (1 - 4)	_____	_____	\$5,500	\$7,600	\$294 + 16%	\$5,500
6. Less Exemptions (\$1000 x No.)	_____	_____	\$7,600	\$11,900	\$630 + 18%	\$7,600
7. Federal Taxable Income (5 - 6)	_____	_____	\$11,900	\$16,000	\$1,404 + 21%	\$11,900
8. Gross Federal Tax (see table)	_____	_____	\$16,000	\$20,200	\$2,265 + 24%	\$16,000
9. Investment Credit (Depreciation x 10%)	_____	_____	\$20,200	\$24,600	\$3,273 + 28%	\$20,200
10. Federal Tax (8 - 9)	_____	_____	\$24,600	\$29,900	\$4,505 + 32%	\$24,600
11. Social Security Income (line 1 less total capital sales and depreciation)*	_____	_____	\$29,900	\$35,200	\$6,201 + 37%	\$29,900
12. Social Security Tax (line 11 x _____%)*	_____	_____	\$35,200	\$45,800	\$8,162 + 43%	\$35,200
13. State Taxable Income	_____	_____	\$45,800	\$60,000	\$12,720 + 49%	\$45,800
14. State Tax	_____	_____	\$60,000	\$85,600	\$19,678 + 54%	\$60,000
15. Total Tax (10 + 12 + 14)	_____	_____	\$85,600	\$109,400	\$33,502 + 59%	\$85,600

\* For 1981, maximum social security income is \$29,700; tax rate = 9.3%.

\* Married, filing jointly; \$3,400 standard deduction.