

AN INTEGRATED APPROACH TO
FINANCIAL MANAGEMENT
IN AGRICULTURE

By

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PREFACE

The purpose of this study was to develop a financial management system for agricultural lenders and farm managers. Its goals were to make lenders and farmers aware of the need for adequate financial records, financial statements, and analyses in order to retain control of the farm financial structure. Several case farms were analyzed using the Integrated Farm Financial Statements program which was developed on the microcomputer.

The author would like to thank her major adviser, Dr. Harry P. Mapp, Jr., for his encouragement and assistance throughout this study. Special thanks is expressed for his generosity with his microcomputer, without which the author would have spent many fruitless hours searching for a computer not in use.

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CHAPTER I

INTRODUCTION

The credit needs of American agriculture have been a controversial subject for decades. Questions dealing with how successful lenders have been in meeting the ever-changing needs of American farmers, consumers and society as a whole are constantly being addressed. Comments range from criticism that too much credit has been extended to farmers, forcing them into bankruptcy, to those blaming insufficient credit for the cash flow squeeze in which many farm operators have found themselves. According to Newsweek (McCormick, p. 60)

What should be the most hopeful time of year in America's biggest industry is, for many farmers, a time of desperate quests for more credit, for refinancing, for whatever it takes to avoid foreclosure and bankruptcy. Just one year after the federal government doles out a record \$18.9 billion in farm subsidies, thousands of growers wonder if they can find loans to stick this year's crop into the ground.

What are some of the causes of this dilemma and who is to blame? One explanation is that the farm economy has been in transition from being production-oriented to being more business-oriented, and many producers have been unable to make the necessary adjustments. From the 1950's and into the 1970's, both the national and regional emphasis had been to provide adequate supplies of food and fiber at reasonable prices for domestic consumption, to satisfy export demand for

agricultural products, and to have the security of surplus production. Farmers planted large acreages, increased yields with improved seed hybrids, production practices and chemicals, and tended to expand the operation to attain efficiency in size. Much of the growth was achieved with more and more credit. This reliance on credit as a tool for expansion and improvements was encouraged throughout the industry. The level of debt increased in the farming sector due to larger farm size, substitution of capital assets for labor, and higher variable costs of production. Since the 1950's, the competitive necessity for growth in farm size, as well as the apparent benefits of more and more leverage, became obvious to both lenders and borrowers.

Persistent high rates of inflation in the early 1970's had a major influence on American agriculture (Schertz). Inflation, which is defined as an increase in the money supply and in the general price level, was responsible for increases in prices, both for farm inputs and farm output. The direct effect of inflation is difficult to determine. However, the increase in the general price level had a definite effect on asset values and the relative wealth position of different groups of people in the country. Landowners benefitted from the capital gain on real estate due to inflated prices. Others, expecting the economic trends to continue, purchased land and other long term assets, often on credit, in order to share in some of these expected future gains.

Actually, the value of farm assets increased more rapidly than the rate of inflation in the early 1970's, making speculative buying of farmland even more attractive (Schertz). It made economic sense to

borrow aggressively in order to expand. In the past, expansion had taken place at more moderate rates based on profits from the business. Farmers, who have typically been heavily invested in real estate, found their net worths increasing as land values soared. In addition, increased land values were a reflection of the expected earnings of the farm sector which were generally very favorable. Commodity prices were high and the demand for farm products was growing to satisfy American consumers who were generally better-off than they had been in the past. Demand was also growing as world markets were being developed to absorb some of the surplus of American farm products.

Increases in net worth were a mixed blessing. Many farmers expanded operations, purchased larger and more efficient equipment, improved their lifestyles, and did much of this on borrowed funds made available due to their high net worths. In a sense, growth did not always occur as a result of good management and efficiency in the business. In many situations, management was not even a factor as lenders viewed the financial statement of the well established, high equity applicants.

Inflated land values had an adverse effect on those attempting to become established in farming. High rates of inflation were the major cause of rising interest rates in the late 1960's and early 1970's (figure 1).

High land values and interest rates made it very difficult for those without other sources of income to purchase farmland. Most beginning farmers discovered that the mortgage payments were

unaffordable from farm earnings. Entry into a farm business was made possible only when property was inherited or gifted, or when favorable interest rates were available through such agencies as the Farmers Home Administration at subsidized rates and terms. Liberal lending policies of the federal government made such opportunities available to beginning farmers.

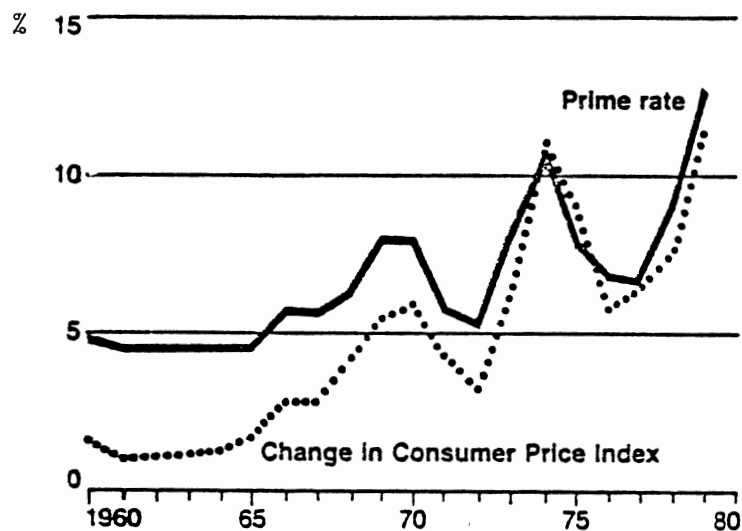


Figure 1. Prime Rate Charged by Banks and Change in the Consumer Price Index

Source: Barry, 1981

These trends did not continue into the 1980's. Farm debt continued to increase while farm income declined, land prices began to fall, interest rates soared, and export demand was seriously hampered by the United States' embargo of the Soviet Union under the Carter Administration in 1980 (USDA, 1982). The value of total assets of the farm sector decreased 2% from January 1982 to January 1983, the first

annual decrease in farm assets since 1954 (figure 2). The value of farmland decreased an average of 1% from 1981 to 1982, compared to average annual increases of 13% in the 1970's and to 9% in 1980 (figure 3). As a consequence of these events, many farmers developed serious cash flow problems as they found their incomes could not cover the interest costs and expenses for the expansions they had made. With lower land values resulting from a general economic recession, the net worth of many farmers plummeted.

Many of the better established operators have been able to reduce operating and family expenses and continue their operations, although even they have become aware that equity alone cannot pay debts and other expenses. Unfortunately, many of the highly leveraged, beginning farmers have found themselves financially vulnerable, and in situations of forced sales, and even bankruptcy. A survey by the American Bankers Association reported that from June 1981 to June 1982, 2.2% of American farmers went out of business, primarily through voluntary liquidations (USDA, 1982). The interest expense alone has put many operators in financial straits. A report released by the U.S. Department of Agriculture's Economic Research Service illustrates the difficulty farmers have had in making payments when income levels are declining (USDA, 1982). In 1970, it was shown that a 1% decrease in gross farm income would cause a 1.2% reduction in net farm income. In 1981, the same decrease in gross income would cause a 1.8% decrease in net farm income.

Changes are needed in the farm financial environment. Credit is a necessary ingredient in most businesses, but it must be managed

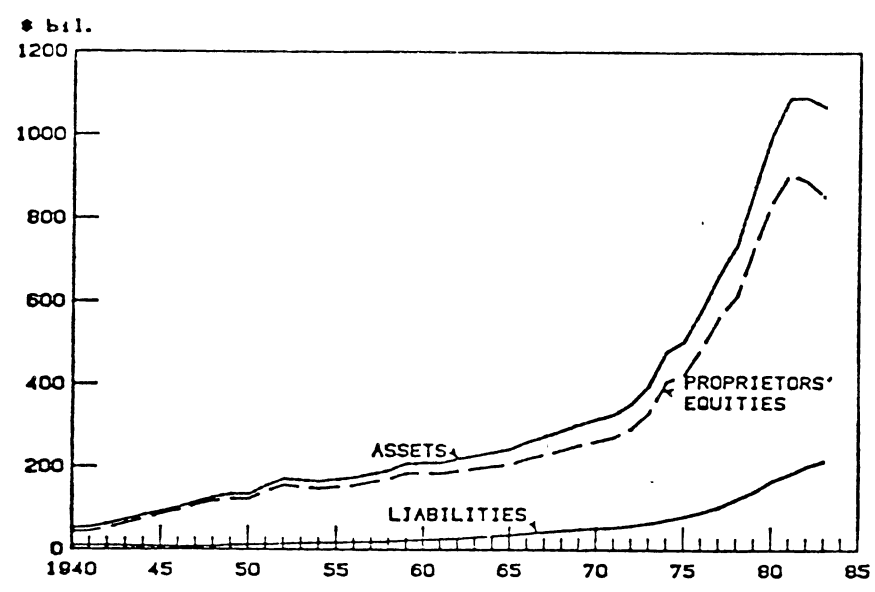


Figure 2. Balance Sheet of the Farming Sector

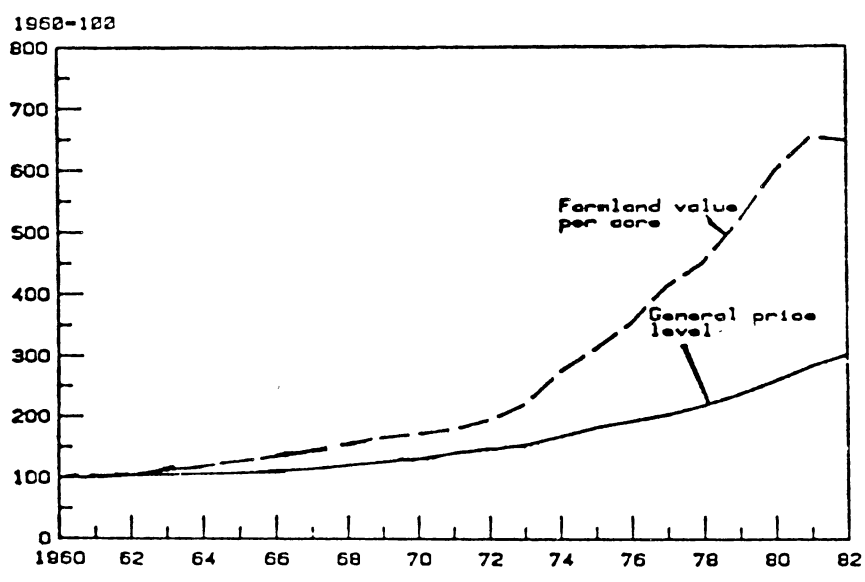


Figure 3. Farmland Value Per Acre Compared with the General Price Level

properly. It is important to determine whether increased debt is a means of alleviating current financial problems of inadequate cash flow, or is a means of increasing the productive capacity of the farm business and increasing earnings. In the former, the real problem is essentially being delayed to the future as increased borrowing leads to higher debt service and a repayment burden is carried into the future. Higher debt is often accompanied by greater risks, both for the borrower and for the lender. The higher the debt in relation to available net income, the greater the risk of a delinquency which would impact both parties. The risk position of the lender is restricted to the repayment of the loan through principal and interest payments. The risk position of the borrower includes the profits and losses from the business.

Lenders have approached these problems of declining farm income and decreasing levels of equity, both partly the result of higher interest rates, in different ways. Lenders have reacted differently to these situations depending on the characteristics of their borrowers as well. To the new applicants, who are typically young, beginning farmers, credit has become harder and harder to obtain. First of all, the lender is disadvantaged in the case of a new applicant, without prior knowledge and experience with the individual. Many of the loan review and eligibility decisions are based on unknowns and conjecture about the individual's management ability. These estimates are in addition to those on prices, yields, costs and other variables. The amount of investment required to begin farming has increase 50% every five years since the 1940's, thus increasing

substantially the requirements for credit (LaDue).

With existing borrowers, there are often feelings of a joint effort or partnership between borrower and lender. Knowledge of the operator and past performance of the business is valuable in assessing a loan request. However, one of the most difficult and most important tasks of the lender is to determine when loaning additional funds will be a detriment rather than a needed assistance to an individual farmer. In examining the current condition of many heavily indebted farmers, it might appear that this point had been passed.

It is evident that many of those farmers who became heavily indebted during the inflationary 1970's are now experiencing a greater cost-price squeeze than lower leveraged operations. Table 1 shows the effect of different levels of debt and interest payments on profitability. Higher losses are apparent in the higher leveraged situations, 30% and over, with high interest rates adding to the problem.

From the lenders' standpoint, agricultural loan losses in the 1980's have become a serious problem. Based on information from the Federal Reserve System, there was a significant worsening in the financial structure of agricultural banks in the early 1980's with loan losses increasing from .3% of outstanding loans in 1970 to .7% in 1982 (Melichar).

Lenders have relied on increasing land values as a means of refinancing debts to lessen the cost-price squeeze facing the farm manager, and to reduce potential losses from delinquency and forced sales. A major improvement in agricultural lending would be for

Table 1. Effect of Alternative Debt Leverage and Cost on Profitability of a Farm in 1982

DEBT/ASSET RATIO (PERCENT)	INTEREST RATE ON OUTSTANDING DEBT (PERCENT)		
	7	11	17
RETURN TO EQUITY CAPITAL IN 1982 (PERCENT)			
0	3.3	3.3	3.3
10	2.9	2.4	1.8
20	2.4	1.4	0
30	1.7	0	-2.6
40	0.8	-1.8	-5.8
50	-0.4	-4.4	-10.4
60	-2.2	-8.2	-17.2
70	-5.3	-14.7	-28.7
80	-11.5	-27.5	-51.5
90	-30.0	-66.0	-120.0

Source: Melichar

lenders to pay less attention in their analyses to net worth and appraised values, and more attention to the repayment capacity, liquidity, and management ability of the farm business. Too many operations have expanded, and others started, with sufficient collateral for security purposes, but with insufficient cash flow. Insufficient cash flow makes it difficult for a farmer to remain solvent without recourse to equity financing which is essentially a short-term solution to long-term problems. Eventually, the equity will be depleted to such an extent that continuation of the business becomes less and less plausible.

Operating and longer term loans should be structured with repayment schedules commensurate with the borrower's ability to repay. Timing of payments as well as the rates and terms of each loan are important. To insure proper timing, it is essential that lenders have good financial information from their clientele. Attention should be paid to the cash flow of the business, to income projections, and to carefully planned and realistic budgets for the future. Lenders have learned that farm managers must have expertise in money management and business matters as well as knowledge of their particular operation. Record-keeping has traditionally been a major problem in agricultural businesses. Lenders should provide the incentive to their borrowers to develop management strategies by making accurate records a prerequisite for loan approval. This should become a norm for the financial industry. Otherwise, bankers will be hesitant about imposing such requirements, particularly if they fear losing their better customers to other institutions which require only minimal

amounts of information from their borrowers.

Objectives

The primary goals of this project are to develop an integrated financial program on a microcomputer and to use the program to illustrate how financial management in the farm sector could be improved. The program is intended for distribution to agricultural lenders, farm operators and others involved in farm management in Oklahoma. For this reason, thorough documentation of the program, which will also be available for public distribution, is another objective of this project.

The Integrated Farm Financial Statements program was developed on a microcomputer because many innovative farm managers and most agricultural lenders in the State have access to these relatively inexpensive computers. The microcomputer has become an important tool to lenders in analyzing the financial condition of their borrowers and new loan applicants. To the farm manager, the microcomputer has been used to improve record-keeping systems, production records, crop and livestock budgets, and financial monitoring of the business.

The Integrated Farm Financial Statements program includes crop and livestock enterprise budgets, a Cash Flow Statement, Net Worth Statement and Supporting Schedules, Income Statement, Financial Ratios, Monitor Worksheet, and a Spread Sheet. The statements can be used individually, or in conjunction with the enterprise budgets, supporting schedules and other statements. All of the worksheets are developed in a spreadsheet format using VisiCalc, a popular software

program available on most microcomputers. Some of the benefits of using the spreadsheet format are in its adaptability to large worksheets, lack of computer programming requirements, and its editing features. Being able to modify worksheets so they are suited to individual situations is a feature which many of the more structured computer programs do not have.

Secondary objectives of this study are:

1. To use the Integrated Farm Financial Statements to analyze the financial condition of five Oklahoma farm situations. The farm situations are developed with different levels of equity and cash flows and different debt structures to illustrate how these variables affect the allocation of credit.
2. To show how variations in the financial structure of the business within a year could affect the allocation of credit.
3. To determine if agricultural lenders could provide better service to their farm borrowers by emphasizing cash flow and repayment ability in their loan reviews.

The Lending Environment

There are three main agricultural lenders in the United States: commercial banks, the Farm Credit System and the Farmers Home Administration. These lenders have all reacted differently to the changing financial environment in the farm sector.

Farm Credit System

The Farm Credit Administration has played an increasingly significant, albeit sporadic, role in financing American agriculture.

The agency has experienced several internal and legislative changes which, in addition to a volatile farm economy, have caused a number of adjustments in their financing structure. During the late 1960's, the cost of the Federal Land Bank bonds, issued to finance mortgage loans, was rising faster than the rates being paid on new loans (Robison and Love). The new loans were generally long-term, with fixed interest rates, while the bonds were short-term and with requirements for refinancing at market rates prior to loan maturity. As a consequence, FLB's adopted variable interest rate loans, as did the Production Credit Associations, to reflect changes in the cost of their bonds due to general swings in the economy. This system was believed to be more equitable between existing borrowers and new borrowers than it had been when the burden of rising interest rates was supported entirely by the new borrowers. Under the new system, costs were essentially equalized between all borrowers.

The second major change affecting the Farm Credit System was a result of the 1971 Farm Credit Act (Baker and Dunn). This law increased the amount of credit the Federal Land Bank could extend, from 65% of the appraised value of real estate security, to 85%. In addition, it was publicly announced that cash flow, rather than security or collateral requirements, would be used as the basis for loan-making in the future. This did not cause a major upheaval in their lending practices however, since appraisals were based on the agricultural value of land rather than its market value. This is a practice which tends to link loans to the earnings potential of the property being financed.

The delinquency rate for Farm Credit System loans has remained

fairly constant at .18% of outstanding loans since the mid 1960's (Farm Credit Administration). The number of loans refinanced, however, and those in the process of foreclosure increased significantly from 1966 to 1977. In 1982, 50% of credit advanced was for refinancing purposes, indicating the need for present borrowers to strengthen their financial positions (figure 4).

The lending agency has encouraged refinancing as a means of avoiding delinquent accounts for those borrowers with sufficient equity to cover the indebtedness. High levels of equity are typical in the well-established, older businesses. For new borrowers, the agency has had to rely on increases in farmland values in order to continue with many operators.

Commercial Banks

Commercial banks have maintained a relatively minor role in farm mortgage lending with their share of the total outstanding real estate farm debt decreasing from 16.7% in 1950 to 10.5% in 1980 (figure 5). Their share in the non-real estate credit market is significant, totaling 41.3% in 1980, although it has experienced a downward trend since 1975 (Figure 6). Their financial involvement in the farm sector has fluctuated a great deal since 1960, reflecting their sensitivity to monetary conditions in the economy. An inverse relationship exists between the commercial bank share of overall debt and the Farmers Home Administration's share, which would be expected due to the Farmers Home Administration's role as "lender of last resort". The variables affecting bank loans are primarily from the supply side, and include such factors as the individual bank's liquidity position,

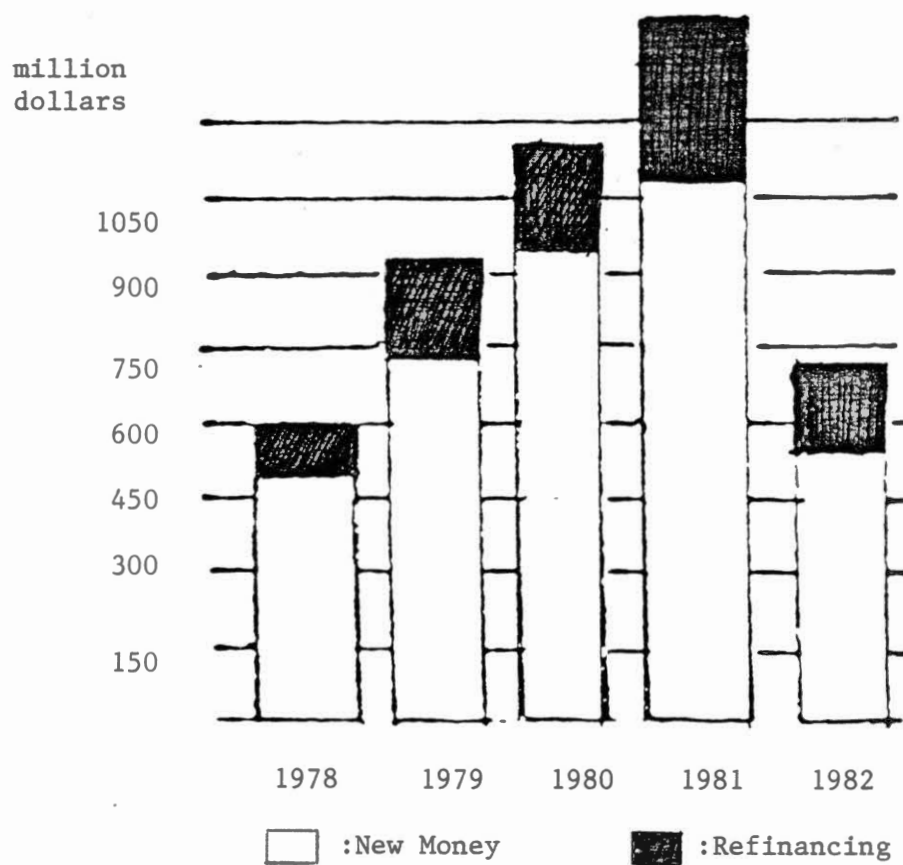


Figure 4. Federal Land Bank Lending Structure

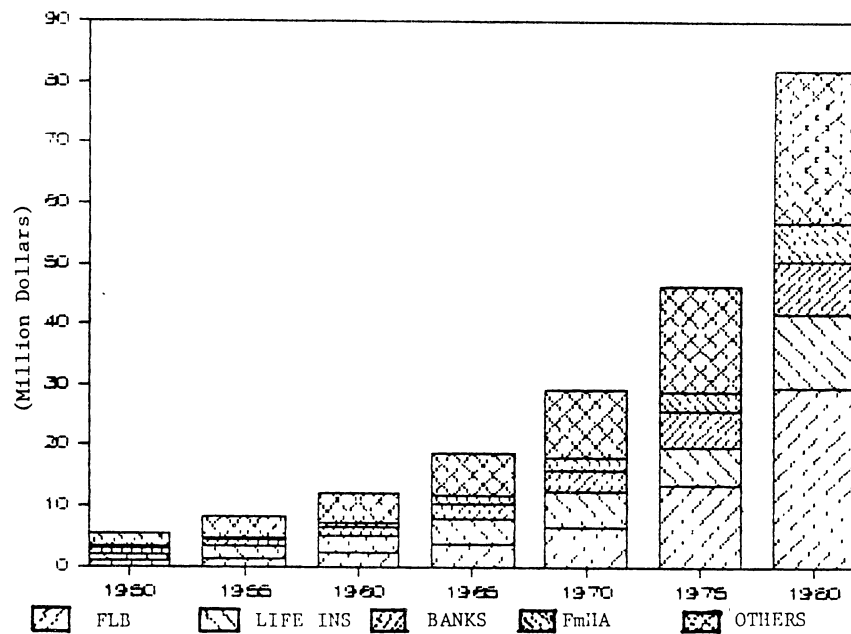


Figure 5. Distribution of Real Estate Farm Debt Between Lenders

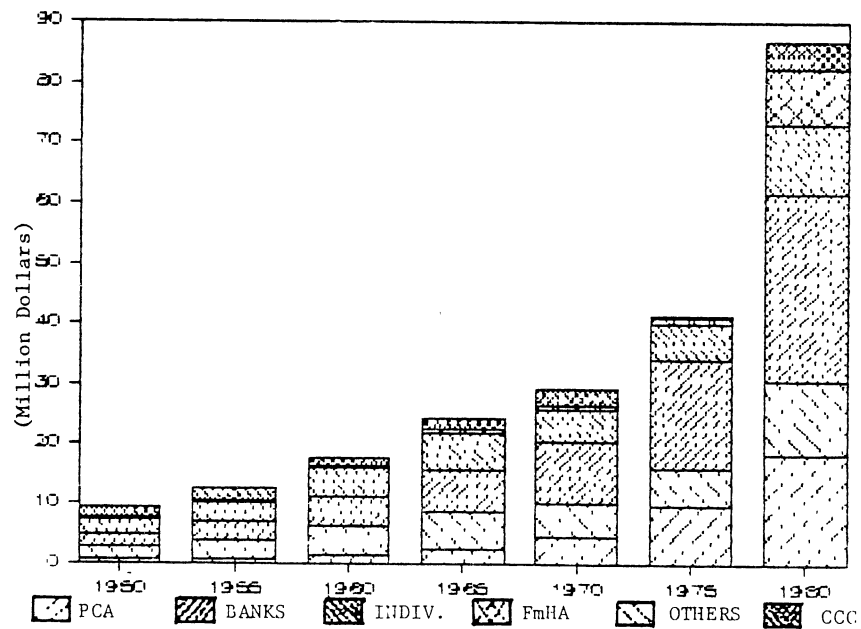


Figure 6. Distribution of Non-Real Estate Farm Debt Between Lenders

loan-to-deposit ratio, availability of funds in rural areas, the implementation of credit controls, and competition with the Farm Credit Service and non-bank financial intermediaries (Barry).

In response to declining farm incomes, banks have loaned funds primarily for short-term, seasonal, operating purposes at variable rates, and have favored the self-liquidating or asset-generating types of loans (Baker). Self-liquidating loans are those where the security for the loan is used up in one production period and the income from that period coincides with the maturity of the loan. An example would be a loan for chemicals or fertilizer, where the loan is paid in full when the crop is harvested. Asset-generating loans are loans to acquire tangible assets that can be encumbered with a lien for security purposes. An example would be a loan for machinery or equipment. In response to lower farm incomes in general, commercial banks have taken fewer risks, and are expected to play a declining role in agricultural lending in the future.

Farmers Home Administration

The Farmers Home Administration (FmHA) is a federal agency with a mission to serve the needs of rural America in an integrated approach. Its assistance ranges from emergency loans to farmers and ranchers, to business loans to enhance employment in rural areas. The rates and terms are generally favorable to the borrowers, and reflect their role as "lender of last resort" to high-risk borrowers. Their position is not intended to be in direct competition with either the cooperative Farm Credit System or commercial banks. Rather, the Farmers Home Administration was created to fill certain financial voids in rural

America, and to supplement other lending institutions (Herr and LaDue).

The agency has undergone several transformations since its beginnings as the Resettlement Agency of 1935, later as the Farm Security Administration in 1938, and finally as the Farmers Home Administration in 1946. It has grown both in loan volume and in the types of assistance available. In regard to total number of loans and grants obligated, the agency in 1980 was 40.9 times its size in 1960. The farm program has grown tremendously since 1950 (figures 7 and 8). The growth in this program can be attributed to high rates of inflation, less commercial bank involvement during periods of low returns to agriculture, and to emergency loan assistance. The emergency loan programs are intended both for physical disasters such as drought or flood, as well as economic disasters, in times of tight credit and cost-price squeezes. The eligibility requirements and application processes are much less stringent for the emergency loans than for the traditional operating and real estate loans. Lower rates were initiated in an effort to respond promptly and efficiently to emergency needs. However, these loans have supplanted the traditional programs and are being made to farmers with higher net worths, larger operations, and higher net incomes (Herr and LaDue). The FmHA is essentially competing with, rather than supplementing, other agricultural lenders.

To address the problems of beginning farm operators faced with inadequate equity and poor cash flows, the Limited Resource program was initiated in 1978. This program involves a subsidized interest rate, 7.25% for operating loans and 5.25% for real estate loans. The

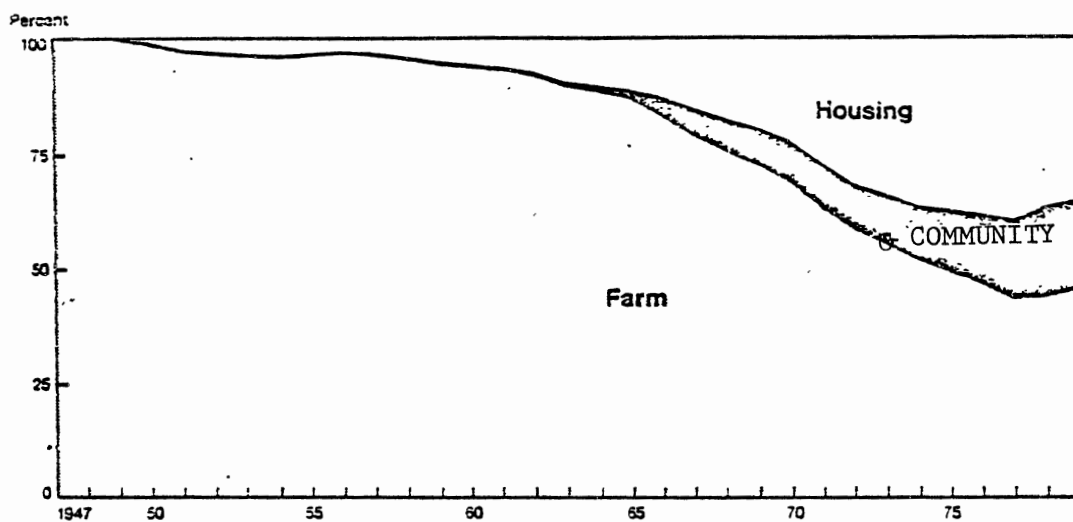


Figure 7. Percentage Distribution of Total Dollars Loaned by the Farmers Home Administration by Loan Program

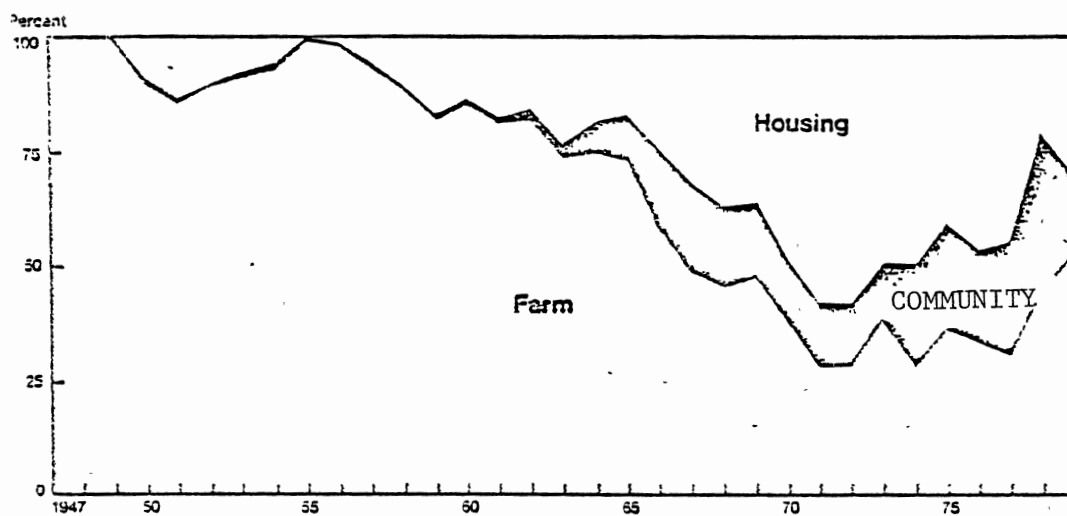


Figure 8. Percentage of Cumulative Dollars Loaned and Granted by the Farmers Home Administration

interest rate is subject to review and adjustment at certain intervals, so that increases in the rate are commensurate with the borrower's repayment ability. Because net worths are generally low, loans are made on the basis of cash flow and repayment capacity much more than on equity and collateral value.

Organization of the Remaining Chapters

The next chapter contains a review of two previous studies which investigate the relationship between agricultural lenders and borrowers, focusing on the relative importance of cash flow, equity levels, and liquidity in the allocation of credit in the farm sector. A review of an existing farm financial program was then completed as a basis for comparison to the financial program developed in this study. In addition, a detailed description of the Integrated Farm Financial Statements (IFFS) program was included in Chapter II.

Chapter III contains a description of four farms in different areas of Oklahoma which were used as case studies in the development of several financial statements using the IFFS program.

The fourth chapter contains the description of a fifth farm scenario in Northwestern Oklahoma which was used to illustrate the effects of different equity levels and cash flow situations on several criteria used in financial analysis. Also, variation in the financial statement of this farm business was illustrated within a one year period to show how the timing of loan requests can play an important role in the acquisition of credit.

Chapter V contains a summary, suggestions for further research, and concluding statements about this study.

CHAPTER II

CONCEPTUAL DEVELOPMENT AND FINANCIAL PROGRAM

The purpose of this study was to develop a system of financial management for farmers and lenders on a microcomputer. The need for financial control of a business has become increasingly apparent to both lenders and farm managers. At the Oklahoma Bankers Association Ag Conference on October 28, 1983, an informal survey was taken to determine the need for some type of financial system on a microcomputer from the banker's standpoint (Survey). Out of thirty-nine responses, approximately half of the bankers already had computer facilities available in their banks and the personnel needed to operate them. Of the remaining bankers, over 60% reported plans to acquire microcomputers within the next two years. 95% of the bankers responding would use financial statements on the computer in their credit programs if they were made available.

Good record-keeping systems have been developed in the past decade in response to this awareness. In the 1980's, microcomputers have become accessible to the public, both in terms of cost and in relative simplicity. The microcomputer is still just an electronic time-saver, and a useful tool in management. By itself, the computer cannot provide much improvement in farm management. Many business managers have adopted new technology in the hopes of freeing up some of their

time for improving production techniques. Computers do help in saving people the drudgery of repetitive entries in a record book, and reducing mathematical errors in calculation. However, even computerized records must be properly analyzed by the farm manager to increase the productivity and efficiency of the business. The purpose of this program is to provide information to the farm manager and lender to facilitate identification of strengths and weaknesses in the business. Often, the important information is overlooked in the mass of data generated from a record-keeping system. Many operators and lenders become overwhelmed, and often ignore the majority of data in their system in making management decisions.

Also, many operations are analyzed only when credit is needed, or when income tax preparation is underway, and at infrequent and irregular intervals. Especially in a farm business, where seasonal variation in receipts and expenses is high, the time of year when analyses are done is crucial. Most management systems are oriented around yearly analysis. In many situations, more frequent reviews are necessary to provide improvement in management practices.

It has become a trend for lenders to mention cash flow as a substitute to equity financing in many areas. This changing emphasis appears to be beneficial, both to the lender and to the borrower. Lending on the basis of a business' cash flow does entail more work for borrower and lender. The borrower must have adequate and dependable records available throughout the year, and the lender must have the tools and knowledge to be able to analyze those records. Only then can good management decisions be made, and financial control be in the hands of the owners of the business.

Previous Research

A study by Sonka and Dixon investigated the determinants of lender response to the farm borrowers' short term credit requests (Sonka and Dixon). Their results showed how important the applicant's liquidity position was in the lender's evaluation of their loan request. Three farm situations were used to test 33 lenders' reactions to different financial conditions in East Central Illinois. The first situation was the low equity case, with a net worth of \$53,900 and a leverage ratio of 2.44. Its liquidity position was the weakest of the three, as measured by the Current Ratio of 1.1. The second situation reported a net worth of \$51,374, a leverage ratio of .795, and a Current Ratio of 2.0. The third farm situation had a leverage ratio of 1.39, a net worth of \$88,013, and a Current Ratio of 1.59. The lenders responded to requests for operating loans of approximately \$40,000 from these three case farms. Out of the 33 lenders surveyed, 42.4% would have declined the request for situation one, with a net worth very close to situation two, but with a poor liquidity position. In reviewing the second case with the lowest leverage ratio and the highest Current Ratio, only 15% of the lenders would have turned the applicant's request down. In the third case, 91% of the lenders would have reacted favorably to the loan request. This case had the highest net worth, and an acceptable cash flow.

Another study by Sonka, Dixon and Jones assessed the impact of the farm financial structure on the amount of credit which was made available to farm borrowers (Sonka, Dixon and Jones). Five hypothetical farm scenarios, with varying degrees of financial

stress, as shown in their cash flow residuals and Net Worth, were presented to a sample of agricultural lenders. The lenders were surveyed as to whether a loan would be approved to these applicants, and in what amount. The lenders were divided into two groups according to their responses: a conservative group and a liberal group. The authors' analyses showed that net worth and income-generating potential were the major determinants of how much credit was approved. The lenders varied by groups as to the importance of short-term equity and the leverage ratio. The conservative group found a positive correlation between the amount of the loan granted and the short-term equity position of the borrower as seen in figure 9. The liberal group did not respond to the short-term equity position of the applicant with all other variables held constant, but were more influenced by the income-generating ability of the farm (figure 10).

A paper on how the farm sector has coped with financial stress and economic crises was prepared by Farris, McGrann, Penson and Pope (Farris et al.). These authors determined that the availability of credit did not appear to be one of the major problems facing certain farmers in Texas during times of economic stress. Those farmers were the established operators, with well developed financial statements and strategies for improved and stabilized cash flows. The cash flow statement was emphasized as a place to determine the actual need for loans, and to corroborate the repayment ability of the borrower. In addition, the Income Statement and Balance Sheet, indicating profitability and long term solvency and progress, would certainly help borrowers to receive favorable consideration of their loan requests, both in normal times, and in times of economic stress.

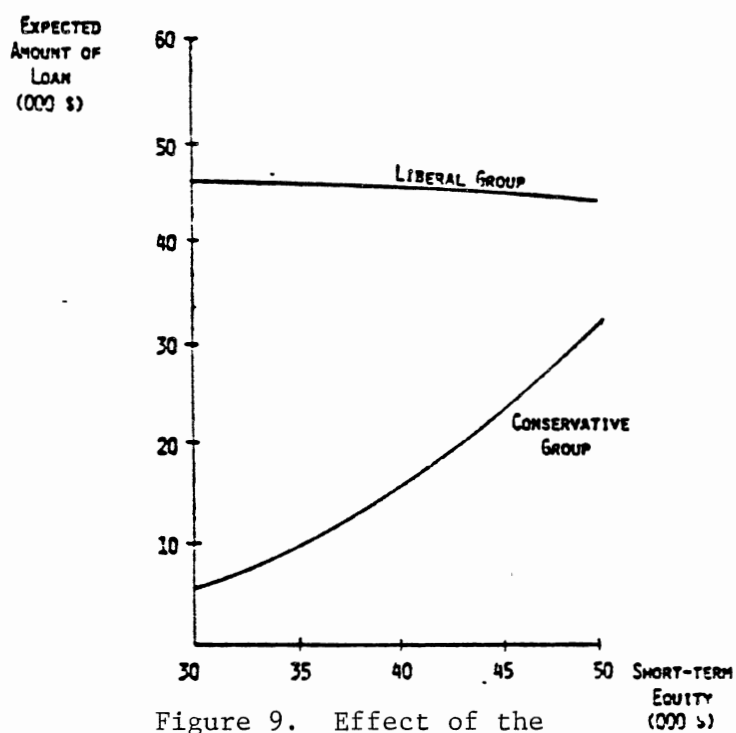


Figure 9. Effect of the Amount of Short-Term Equity on Expected Amount of Loan

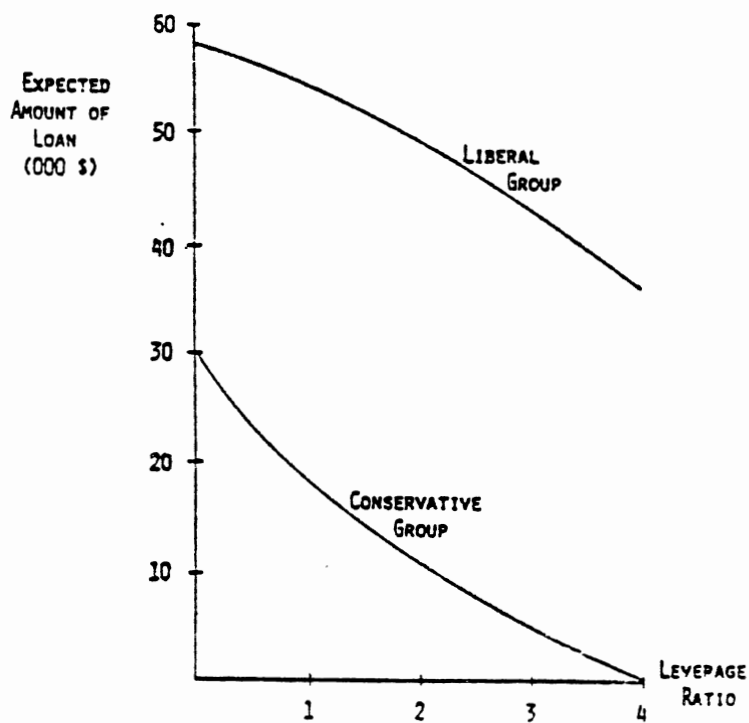


Figure 10. Effect of the Leverage Ratio on Expected Amount of Loan

According to Farris et al.

The present cost-price squeeze in agriculture increases the necessity to have timely accurate costs of production estimates...A record system that generates good production and financial information for the total business...is essential for accurate cost estimates.

Coordinated Financial Statements for Agriculture

One of the earlier programs to provide an integrated approach to farm record-keeping and financial analysis was developed by Thomas L. Frey and Danny A. Klinefelter (Frey and Klinefelter). Their system, Coordinated Financial Statements for Agriculture, provides a supplement to existing record-keeping systems by having financial statements constructed in a step-by-step fashion from information generated from those records. Their system emphasized the importance of having uniformity in agricultural accounting and financial analysis. Farm businesses have been notorious for poor accounting systems with arbitrary guidelines, and with little consistency between farms. Frey and Klinefelter made an attempt to provide a standard, or at least a consensus on how farm accounting should be handled. Their goal was to have a uniform system throughout the country so that comparative analyses could be made between farm businesses as well as on an individual basis. Only then could industry guidelines be made available to lenders and farmers alike to analyze new enterprises, develop management strategies and plan with reliable information.

Coordinated Financial Statements for Agriculture include a Balance Sheet, Statement of Owner Equity, Income Statement, Statement of Change in Financial Position, Cash Flow Statement, and a Monitoring Worksheet. These statements tie together through common entries. Several of the

statements are constructed from supporting schedules where information from the farm record system is summarized and then transferred to the respective financial statements. The financial statements are completed manually at this time, although it appears that in the future a computerized system will be available. The Frey and Klinefelter system was adopted by the Farmers Home Administration on a national basis in 1983. The purpose and projected benefits from this system were improved loan analysis and documentation. Potential problems of a farm borrower could be detected early and possibly avoided with better financial information. While more time is needed before a complete evaluation of their success can be made, the trend towards a uniform and thorough system of farm accounting and analysis seems apparent.

Another development in financial analyses for agriculture has come from microcomputer software programs. There are many different packages on the market now for the farmer manager and lender. Most of these systems incorporate farm record-keeping with financial statements to minimize multiple entries of data. These systems have many advantages in time-saving over the manual systems. If the farm manager is able to afford such systems, and can fully utilize the information in them, much can be gained. In some cases, modifying existing programs to fit individual situations is difficult, if possible at all.

Integrated Farm Financial Statements for the Microcomputer for the Microcomputer

In this project at Oklahoma State University, Integrated Farm

Financial Statements for the Microcomputer (IFFS) was developed on the Apple IIe microcomputer using VisiCalc, a spreadsheet package. The remainder of this chapter includes the manual which was written to document the IFFS program. The manual is reproduced in its entirety in this chapter because the documentation to the program was a major product of this study. The program will be available to the public, and the user's manual provides an overview of the need for such a program, as well as concise instructions on how to use the software. A detailed description of the financial statements available in the IFFS system and several examples are also contained in the manual. The examples given in the manual are based on the Oklahoma farm situation used as an example in the OSU Extension Facts publications on the Net Worth Statement, Cash Flow Statement and Income Statement (Hardin et al., Love et al., Williams et al).

The next chapter contains a description of the resources and financial structure of four Oklahoma farm situations. This data illustrates how the Integrated Farm Financial Statements program can be used to evaluate the credit needs of a farm business.

Integrated Farm Financial Statements for the Microcomputer

How this Manual is Organized

Integrated Farm Financial Statements for the Microcomputer is a system of agricultural financial worksheets which have been adapted to the VisiCalc program. This manual is organized as follows:

The first section provides a brief introduction to the program, lists the basic equipment requirements and offers several words of caution before getting started. Everyone is encouraged to read this section first.

Section 2 provides an introduction to the VisiCalc program and to the Data Interchange Format (DIF) files. For beginners, a VisiCalc manual is certainly the best place to start and the information in this section can be used for easy reference as you go along. Again, for those who are familiar with this program, a quick review of the VisiCalc commands listed in the beginning of this section may be sufficient.

The third section is a rather lengthy discussion on the fundamentals of financial statements in agriculture. This manual is not a textbook. However, for those with little or no background in financial management and accounting, this section should be read carefully to help provide a working knowledge of the concepts and terms used in this manual. For those who are comfortable with these subjects, a quick review should be all that's required.

Section 4 gives a full explanation of how the Integrated Farm Financial System actually operates. Many people will go directly to this section in a hurry to get started. This section provides step-by-step instructions on how to run the programs and these steps should be followed closely.

The Appendices contain several examples of the final output, the Crop and Livestock Budget, and the Additional Information Budget.

Introduction

Integrated Farm Financial Statements for the Microcomputer (IFFS) is a system of financial statements developed on the Apple IIe microcomputer using VisiCalc, a spreadsheet package. The system is an attempt to provide a complete and integrated financial program to the farm manager for purposes of planning for the future, monitoring the present, and analyzing past performance of the farm or ranch business.

The statements include a Net Worth Statement, a Cash Flow Statement, a Monitoring Worksheet, an Income Statement, an Integrated Statement which includes several financial ratios and a Spread Sheet. There are several variations of most of these statements to accomodate the specific needs of most farm managers. An individual would want to choose beforehand, those statements which most nearly fit the actual farm business to be analyzed. The background statements include the Crop and Livestock Budget Worksheets, an Additional Information Worksheet, and Balance Sheet Supporting Schedules.

A computerized farm record system is not a prerequisite for running this program. However, detailed records are, in general, a necessary ingredient in good financial analysis.

Equipment

IFFS is designed for the Apple IIe microcomputer. Minimum requirements include:

1. 64 kilobytes of Random-Access Memory (RAM) are required and additional memory is recommended for future expansion.
2. At least one disk drive.
3. The VisiCalc program, produced by Software Arts, Inc. Either Enhanced or Extended VisiCalc can be used. If Extended VisiCalc is used, 128K is the minimum amount of RAM required.
4. The IFFS VisiCalc Data Disks.
5. A printer is useful, but not mandatory.
6. A minimum of 8 blank, initialized diskettes for making backups of the IFFS Data Disks and for saving your own worksheets and financial data. The Apple IIe disk drives are designed to handle single sided, single density, 5 1/4 inch floppy diskettes. Double density disks can be used, but the Disk Operating System will read and write data to these diskettes just as if they were single density diskettes.

The VisiCalc templates can be transferred to the Radio Shack Model 16 Microcomputer, the IBM Personal Computer and other popular

microcomputers. This is done using a transfer program which employs a relatively simple procedure to allow the computers to communicate with each other.

More will be said in Section 4 about the actual IFFS programs and how they work. However, a few words of caution about the diskettes themselves and some housekeeping details are appropriate at this time.

This program is written on Enhanced VisiCalc. This version of VisiCalc does not include the option of protecting the data entries in the individual cells on the worksheets as do some of the later versions. It is very easy to inadvertently delete or change an equation or label on the worksheet, especially when you are first introduced to the program. Being aware of that possibility is your first step of precaution. Making a copy of the diskettes is a fool-proof way of protecting the original data. It can't hurt, and it may save you from some frustrations later on!

Copying the Diskettes

1. Open your disk drive door and insert the SYSTEM MASTER diskette that contains the Disk Operating System (DOS). If the computer is off, turn it on now to load the contents of the disk. This is referred to as "booting" the disk. If the computer is already on and the red light on the disk drive is off, "boot" the disk by simultaneously holding down the CONTROL key, the OPEN-APPLE, and the RESET key. In this manual, one disk drive is assumed. If your system includes two disk drives, the System Master should be in Drive 1 and you should insert a blank diskette in Drive 2.

2. Now type: RUN COPYA. (DOS commands on the Apple IIe must be in uppercase letters.) This command is addressed to the disk in Drive 1 and it searches the disk's catalog to locate the program named COPYA.

3. Once the program is loaded, remove the System Master diskette, put the IFFS Data Disk 1 in Drive 1 and follow the prompts on the screen. The slot number is typically 6 for both drives. With one drive, you will have to switch the IFFS disk (referred to as the SOURCE disk) with the blank diskette (the TARGET disk) several times to complete the copy program.

4. When the copy has been completed, type a Y(ES) to run the program again and copy IFFS Data Disks 2-6 in the same manner as you did the first.

5. Afterwards, be sure to label all copies, carefully using a soft felt pen, as WORKING DISK:IFFS 1, WORKING DISK:IFFS 2 and so on. Put the original disks in a safe place and use the back-up copies from now on.

The Basics of Visicalc

The Spreadsheet Concept

VisiCalc is a software program available on diskette for most popular microcomputers. It was the first electronic spreadsheet, developed in 1978, equipped with built-in commands, mathematical operations, and functions. The VisiCalc worksheet is basically a grid, divided into 63 columns and 254 rows, with a resultant 16,002 "cells". Each cell can be identified by its appropriate row number and column letter, for example A1, H55, AA200 and so on. The program is easily adapted to documents in tabular form, where the entries are interrelated.

VisiCalc is not a difficult program to master once the basic commands have been learned and no experience in computer programming is necessary. It was developed as an alternative to BASIC, or other high-level programming languages, for manipulating large quantities of tabular data which was very cumbersome and tedious in a BASIC program. Using VisiCalc, individual worksheets, or "templates", can be constructed easily and with instant mathematical calculations. It is an electronic time-saver when "what-if" games are played in a financial analysis because assumptions or inputs can be changed in one section of the worksheet and any other formulas using those values are immediately recalculated.

VisiCalc can be likened to an electronic "scratch pad", with instant "try this...try that" capabilities. For example, a repayment schedule could be computed for a loan at a 15% interest rate for 3 years. Later, if the lender found that the interest rate increased by half a percentage point, the new value could be entered at one cell location and the new payment would be computed instantly. Or, if a farmer was basing his/her cash flow plan for the coming year on wheat at \$3.65 per bushel and the price increased to \$3.70 per bushel, the revised calculations could be easily done using the VisiCalc program. Thus, it allows the user to spend time on planning, forecasting or finding solutions, rather than on tedious computations.

Other advantages of a spreadsheet over the traditional computer programs are its simplicity and its visibility. You need absolutely no experience in computer programming to become proficient in a spreadsheet program. It has few of the mysteries that surround many BASIC or FORTRAN programs because the user can move around the worksheet easily and actually see what the program does. With this ability, it is much simpler to modify existing formulas or assumptions without an experienced programmer nearby!

Moving around the Worksheet

Insert your VisiCalc program disk in Drive 1 and turn on the computer. The worksheet should appear on the screen in a few seconds. The cursor is the green bar which is usually located in the upper left-hand corner of the worksheet, in A1, when you first get started. The cursor can be moved around the screen using the four directional arrow keys. With most versions of VisiCalc, eight columns of nine characters each and twenty rows will appear on the screen at one time. The rest of the worksheet can be viewed by "scrolling" the screen using the arrow keys. These keys are "repeating" keys. Just keep your finger on the key to move a little faster. If you have long distances to travel on the worksheet, it is often easier to type the > key and then the location of the cell you want to go to, such as A1.

Entering Data

An entry into any of the cells can be a value, a label or a formula. The computer will recognize as a value any of the numbers 0 through 9, -, +, (, @, # or the . as a decimal point. As a label, it will recognize any letter, upper or lower case, and any other symbol on the keyboard preceded by the quotation mark, ". Thus, for a date to be treated like a label rather than as a value, just type the " and then the date, 3/10/84. The default column width is 9 characters. When typing a label, only the first 9 characters typed will appear on the worksheet. To type a label longer than 9 characters, just move the cursor to the next cell and continue typing.

Formulas can be composed of values, functions, cell references and any combination of those. If you want to multiply whatever value is entered into cell B10 by 5 and place the result in C10, just place the cursor at C10 and type: +B10 * 5 and the computer will do the rest. The plus sign was crucial in that formula. Without it, the formula would have been treated like a label instead of a value, and a zero would appear in C10.

When typing on the keyboard, it is easy to make a typing error. If you have not pressed RETURN, just backspace in the cell by pressing either the ESC(APE) key or the DELETE key. Or, you can edit the cell by pressing the CONTROL and E keys at the same time and then use the left and right arrow keys in conjunction with the ESC key to correct the mistake.

To get into the Command mode, type a slash (/). The available command prompts are then listed at the top of the screen and you can just type in the letter of the command you want to work with. A VisiCalc manual will give a full explanation of all the commands, functions and operations, but here is a brief summary.

Commands (/)

B : This blanks out the contents of the cell in which the cursor is located.

C : This clears the entire worksheet...Be careful!

D : This deletes the row or column where the cursor is located.

E : This puts you into the Edit mode and corrections can be made easily.

F : This enables you to format a single cell, for example in Dollar Format, Integer Format, Right or Left Justified and so on.

G : This puts you into the Global mode where all cell locations are affected. For instance, all cells can be formatted as integers through this command sequence.

I : This is how you can insert an extra row or column into the worksheet. This command can be very useful when a table is being constructed.

M : The move command will move an entire row or column to another location on the worksheet.

P : The print command. Only use this when a printer is hooked up to your computer, otherwise the computer could lock up. There are many different print style capabilities available in the VisiCalc program. Using the "Setup" and various commands, different lettering styles can be used, such as italics, elite, double-wide, condensed print and so forth. A printer manual should also be referred to for more detail.

R : The replicate command is probably the most powerful command within VisiCalc. It allows you to replicate the contents of a cell throughout any range of columns and rows. It can replicate a formula identically, or relative to each position.

S : The storage command allows you to load, save or delete a VisiCalc template or a Data Interchange Format (DIF) file. It also has a sub-command to initialize blank diskettes. Loading and saving VisiCalc templates or files is a little different procedure than loading and saving DIF files. With DIF files, always type a pound sign (#) in addition to the S(ave) or L(oad) options. With most commands, the computer will give you several options or prompts at the top of the screen. These must be followed in sequence to get the correct results.

T : The title command is a method of maintaining a constant horizontal and/or vertical title or heading on the screen. This is especially useful in large tables, such as the Cash Flow worksheet, where much of the data is not visible on the screen at one time.

V : All this command does is to give you the version number of the VisiCalc program you have loaded.

W : The window command divides the screen horizontally or vertically into two sections based on the location of the cursor when the command is invoked.

- : The repeating command repeats any character throughout a cell. This is helpful in underlining or using a line of dashes to separate different rows.

The above commands are available with Enhanced VisiCalc. The Extended VisiCalc program has many commands in addition to these fifteen.

Arithmetic Operators

These operators are represented by standard computer symbols: + (addition); - (subtraction); / (division); * (multiplication); ^ (exponentiation).

Mathematical Functions

These functions are instantly calculated once the command and the value to be manipulated have been entered. The available functions take the square root (@SQRT), integer portion (@INT), absolute value (@ABS), "e" to the power (@EXP), log base 10 (@LOG10) and natural log (@LN) of a certain value which would be entered in parenthesis after the function symbol. For instance, @SQRT(16) entered in cell A1 would result in a 4 being displayed on the monitor at that location. The functions can be used alone, or in a formula, or combined with other functions and operations.

Evaluation and Analyzing Functions

The @SUM, @AVERAGE, and @COUNT functions evaluate a list of values, which can be either a consecutive range of numbers or a group of random numbers. The @SUM was invaluable in the IFFS templates where monthly data had to be subtotaled over and over. The four analyzer functions include @MIN, @MAX, @CHOOSE and @LOOKUP which are also very useful.

Logical Operations

These include the Boolean Functions (@AND, @NOT, @OR), a conditional calculation (@IF), Truth Value and Error Functions (@TRUE, @FALSE, @ERROR) and @NA and @ISNA, the Not Available tests. In financial analysis, the @IF function was used extensively and gave the program much more flexibility and potential.

Financial Calculations

The Net Present Value function (@NPV) is a useful tool in evaluating the feasibility of investments in many financial analyses where time, and thus, discounting for time, are important.

Other Operations and Special Keys

Typing an exclamation point (!) causes the worksheet to be recalculated. This means that all formulas in the worksheet are instantly recalculated and the up-dated results appear on the screen. This must be done in those worksheets where the preferred, chronological order of calculation wasn't maintained (such as, columns first, then rows). This occurrence is due to the organization of the model and cannot be avoided in many cases. If the formula in one cell depends on the entry in another cell for its result, ideally that entry should be in a position to the left of the cell with the formula if column calculation is in effect. If the calculations are being done in row order, the entry should be above the cell with the formula. There will be a C in the upper right-hand corner of the worksheet if column order is in effect, and an R for row order.

The pound sign (#) copies a value in one cell to another. Control-C stops the printer and any entry you are inserting. Many of these instructions will be much clearer once you start working on a VisiCalc template!

Basics of the Data Interchange Format (DIF) File

When VisiCalc templates are saved on the diskette, all of the formulas, text, numbers and labels in the entire model are kept intact. This can take a lot of space on the diskette. In many instances, it is unnecessary to save all of the formulas which, in general, take a great deal of memory. In many cases, it is sufficient just to save the values created from those formulas and some of the more important labels. DIF files are a way to do this. The procedures to save data into a DIF file are different than those which save the entire VisiCalc worksheet. The block of data to be saved must be clearly identified:

the cursor must be located at the top left-hand corner of the block, and the program will prompt you for the lower right cell location. The data can be saved by columns, or by rows. Throughout the IFFS system, DIF files have been saved, and should be loaded, by rows (This is done by pressing the RETURN key or the letter R when prompted by the computer.) If a VisiCalc worksheet is formatted into integer values, the values are saved as integers. However, values saved in the DIF mode are saved at their full precision. To avoid any rounding problems, or a crowded looking screen, once the DIF file is loaded, just type the Global Command and then format the entire screen into integers, or into a two decimal, or dollar precision. Do this by typing these commands: / G F and I or \$.

DIF files are identified by their filename and an extension which is usually .DIF. They are essentially sequential text files which can be used to exchange data between different computer programs, such as VisiPlot, VisiTrend, MicroTSP, and BASIC programs. They were developed as a "common language" for data which are stored in tables, such as the VisiCalc worksheet or time series data, in an attempt to provide an integrated software package. They take up relatively little memory on the diskette and can be loaded anywhere within a VisiCalc worksheet just by placing the cursor at a certain location and loading the file. DIF files are divided into a Header Section and a Data Section. The Header Section contains general information about the file such as the number of rows and columns, referred to as vectors and tuples. The Data Section contains information on the actual data, such as whether the data is numerical or not and what the actual entry is. It also specifies when there is no more data so the program reading the file doesn't crash when it comes to a blank space. More detail on this subject can be found in the "Programmer's Guide to DIF" from the DIF Clearinghouse, P.O.Box 527, Cambridge, MA 02139.

Fundamentals of Financial Statements in Agriculture

Agriculture is the largest single industry in the United States, contributing more to the Gross National Product than any other industry throughout our history. It is composed of many small family farms which are essentially individual businesses with many similarities to other small entrepreneurships. With regard to accounting practices however, agriculture has not advanced in a uniform or integrated manner. Many farm record systems consist of a desk drawer full of old bills and receipts, and Income Tax time is the only time when some semblance of order or accountability is provided. Most record-keeping has been done with single-entry or cost accounting, with not much attention being paid to changes in inventory. In addition, many operations have kept records only to comply with their lender's requests, and consequently spent the minimal amount of time and energy necessary to complete the required financial statements. To solve a problem or increase profits, many farmers have traditionally preferred spending an additional hour at the end of the day on the tractor, to a half-hour on accounting or "book-work". To quote an Oklahoma banker:

.. It's like my Daddy always said to me: "If we start up early enough in the morning, don't sit too much during the day, and quit late enough...we'll get by."

This attitude doesn't assure profits or success any longer, in an environment where rising interest rates, larger operations, and more competition have made farming a much more complicated business.

A good record system is a prerequisite for financial planning and analysis. Audited or verifiable financial statements are not far into the future as typical requirements for acquiring credit, and records are the basis for these statements. Lenders must serve as instructors and give the incentive to their borrowers to keep complete production and financial records of their businesses. In the past, lenders have often prepared the financial statements for their clients, and typically with piecemeal data. Hence the term, "Upside-down Balance Sheet", where the farmer sits down across the table from the banker, and lets the banker fill in all of the data.

Management decisions must be made with as much background information as possible. Enough risk and uncertainty are inherent in the farm business, without adding any more guesswork. Financial planning must include good forecasting techniques with enough flexibility to allow for sudden price variations, unexpected purchases or other unpredictable situations.

Good records and financial analyses are requirements for success for both the beginning operator and for the established farmer. Especially, but not exclusively, when credit is needed or when tax time rolls around, the more data, the better. The manager and lender can determine the feasibility and profitability of adding or changing enterprise plans by reviewing the Cash Flow and Income Statements. They can determine the optimal loan amount and a repayment schedule

commensurate with the borrower's ability to repay. They can weigh different proposals, and calculate their risk exposure from each plan. Many lenders approve loans solely on the basis of certain financial ratios, so the data used to compute those values must be accurate and reliable. It isn't enough any longer to base loans on the reputation of the family or their past performance alone. Times change too quickly, and estimates for the future are what is needed to survive into the future.

Cash basis accounting recognizes only those financial transactions that involve the actual transfer of cash in or out of the business. Income is reported when it is actually received, and not necessarily in the same accounting period that it was produced. Expenses are reported when they are paid, and not necessarily when they are actually incurred. Under this system, reporting of receipts and expenses can be timed to give the best tax advantage possible. This system can be advantageous to most businesses, and particularly on crop farms where storage of the commodity is possible.

Under the accrual method of accounting, income is reported when assets are produced, rather than when they are sold, and expenses are reported when they are incurred, and not necessarily when they are paid. Changes in inventory, from the beginning of the accounting period to the end, are included in this system in computing income for the year.

Both methods of accounting have their advantages and disadvantages. Cash basis accounting is often used for tax management but it doesn't give a clear picture of the financial growth of the business. The accrual method considers changes in inventory and gives an accurate description of the financial performance of the business upon which to base the Income Statement.

The Net Worth Statement

This statement is also known as the Balance Sheet. It is explained in more detail in OSU Facts No. 752, "Developing a Net Worth Statement". A copy of the sample Net Worth Statement prepared in this factsheet can be found at the end of this section. A statement can be prepared just for the business, or it can be consolidated with a personal financial statement for the family. Farm businesses are typically single proprietorships and as such, have been more accurately described with the consolidated statement.

A Net Worth Statement generally contains the minimum amount of information a lender needs to make a loan. In the past, oftentimes this has been the only information the lender requested. The statement gives the financial picture of the business entity at one point in time. The actual point in time can be based on the calendar year, crop year, fiscal year or any other conventional accounting year. The important aspect of the timing of the Net Worth Statement is that it is the same period year after year. Consistency is very important in the

preparation of financial statements. If necessary, interim statements could be prepared within the year to correspond to the timing of loan requests or large capital purchases, for example.

The Net Worth Statement provides a summary of the assets and liabilities of the business and categorizes the assets as to how liquid, or marketable they are, and the liabilities as to when they are due for payment. It shows the lender and the borrower what would happen if the business had to be liquidated or sold. Could all of the bills be paid from the sale of the assets? Could the business be transferred to another family member without substantial tax penalties? Are all of the loans adequately secured, or is additional collateral necessary? These are the kinds of questions answered with information from the Net Worth Statement.

Methods of Valuation

Items on the Net Worth Statement need to be given values. Some of the methods for evaluating the entries include Market Cost, Net Market Price, Farm Production Cost, Cost Minus Depreciation, Cost Minus Depletion, Capitalization, Market Value and Modified Cost. The Integrated Farm Financial System considers two methods of evaluating assets on the Net Worth Statement, by Modified Cost or by Market Value. In the Liability section, except for Contingent Liabilities, the only way to value the claims against the business is by the actual dollar amount owed as of the date of the Statement.

The Market Value approach values all assets at their estimated value in the marketplace, based on a current appraisal net of selling expenses. When using the Modified Cost approach, only certain items have a value other than their Market Value. They include Marketable Bonds and Securities, Machinery and Equipment, Breeding Livestock, Buildings and Improvements, and Land. Marketable Bonds and Securities in the Current Asset section are valued at their original cost or basis. The Modified Cost approach values the depreciable, intermediate assets such as Machinery and Equipment and Breeding Livestock at their cost or basis less accumulated depreciation. In the Long Term Asset section, the depreciable items (buildings and improvements) are valued at cost less depreciation and land is valued at its original cost.

The two different methods of evaluating real estate in particular show the effect of inflation on Net Worth. Land could be inherited or purchased many years before at extremely low prices. As inflation and other factors have caused land values to rise, farmers, who often have large holdings of land, have experienced tremendous increases in their Net Worth. Some lenders and accountants feel the need to eliminate the effects of inflation when preparing a financial analysis of a business. This is a relatively simple procedure on the asset side of the Net Worth Statement. However, in order to give the whole picture, liabilities must also be considered. How can the effects of inflation, evident in the interest rates charged on accounts and notes payable and mortgages, be eliminated in this section? The real interest rate,

calculated as the nominal interest rate less the inflation rate, should be charged if inflation is to be thoroughly ignored. This is clearly unrealistic. If the lender wants to determine whether an increase in Net Worth is attributable to actual growth in the business or to inflated land or machinery values, that could be accomplished by looking at the changes in those items alone, and not at the bottom line Net Worth figure.

The Modified Cost basis is not a realistic method of evaluating real estate as collateral for a loan in most situations. For the intermediate assets, the Modified Cost values would often approximate a conservative market value, depending on the method of depreciation used. Most lenders prefer a conservative market value approach for determining chattel and real estate security for their loans. In any respect, the method of valuation should reflect the purpose for which the Statement is prepared. For tax purposes, a Modified Cost is generally required, while for estate planning and credit acquisition, Market Value is frequently more appropriate.

Assets

Assets represent everything the business owns that has a tangible or intangible value and which can be expressed in terms of a dollar amount. The items do not have to be entirely paid for, but the actual ownership must reside with the business, subject to any liens or encumbrances. Thus, if land is rented, it is not included as a Long Term Asset. However, if land is owned by the farmer, but is security for a loan, its value is included in the Net Worth Statement.

Current assets are those items owned by the business which could easily be liquidated, or sold. "Easily" generally means that they are cash or near-cash items, or that they are items which will be consumed or marketed during the normal operating year. The sale of current assets by the end of the operating year should not disrupt the farm operation in the sense that future operations could not be continued. Current assets are thought of as very liquid items, so their market value should be a good approximation of the amount of cash they could be exchanged for. Current Assets include Cash, Checking and Savings Accounts, Marketable Bonds and Securities, Notes and Accounts Receivable, Livestock and Crops to be Sold, Feed on Hand, Supplies and Prepaid Expenses. Notes and Accounts Receivable should only include those accounts which relate to production or service items, and not to the sale of capital assets, such as machinery or land. It should include only "good" accounts, where payment is expected within the normal operating year. "Bad" accounts would be less liquid, and would be valued in the intermediate or long term sections, if at all.

Intermediate Assets are also referred to as Working Assets. They comprise those assets whose useful life in the business is expected to be longer than one operating year and probably less than seven years. Their marketability and liquidity are less than Current Assets and "forced" sales would generally cause some loss of value. Many of these

are assets with productive capabilities such as machinery, equipment, breeding livestock, and vehicles. Breeding Livestock can be of two types: raised or purchased. The tax treatment is different with each type so records should be kept with separate categories for each. Purchased breeding livestock is treated similarly to machinery and equipment, with its basis or cost less accumulated depreciation being deducted from market value to determine taxable gains on income tax. Raised livestock is treated as if the basis were zero, so the entire sales price would be taxed as a capital gain. Intermediate Assets would also include Notes Receivable due for payment within one to seven years, Securities Not Readily Marketable, Retirement Accounts and household goods.

Long Term or Fixed Assets include land, buildings and improvements which are of an enduring nature or which are attached to the land. This category would include the residence, barns and service buildings, drainage tile, fences, storage facilities and so on. Land itself is not a depreciable item for tax purposes, while buildings and improvements generally are depreciable. Thus, at the time of acquisition, these items should be separated into different categories and estimated values should be given to each. Long Term Assets would also include Contracts and Notes Receivable, where the maturity is at least ten years, and Non-farm Investments.

There are two tests to help in classifying assets as Current, Intermediate or Long Term. The first is the Convertibility Test. To use this test, classify all the assets in order of how easily they could be converted to cash without losing value. How marketable an asset is depends on how many alternate uses it has, what its value is in relation to the overall business assets, and whether established markets exist for buying and selling the item in question. The assets are then classified from Current to Intermediate to Long Term in order of decreasing liquidity. The second test is the Use Test which refers to how quickly the asset will be consumed or used up in the production process. The assets are classified in order of increasing longevity in the business plans.

Liabilities

Liabilities represent claims against the business assets. These can either be claims held by creditors, and are classified as Liabilities, or they can be claims by the owners, and are known as Owner's Equity, or Net Worth. The classical accounting equation is that Total Assets equal Total Liabilities plus Net Worth. The amount of Net Worth will always be determined after the Assets and Liabilities have been summarized, because they represent the residual equity in the business after all debts have been accounted for at the time the Statement is prepared. Liabilities represent the amount of debt capital invested in the business by other individuals, businesses, the Internal Revenue Service, financial institutions and others. Owner equity represents the amount of debt capital invested by the owners in the business.

Liabilities are classified as Current, Intermediate and Long Term according to the maturity of the original debt instrument. They are valued identically by the Modified Cost and Market Value approaches as the actual dollar amount owed as of the date the Net Worth Statement is prepared.

Contingent Tax Liability

Contingent Tax Liability is an item in all three of the Liability sections on the Net Worth Statement. In all cases, it represents the potential tax liabilities that would be due if the business or a portion of the business were liquidated. This item is frequently omitted on many Net Worth Statements. Its usefulness seems most apparent to retiring farmers and to high risk farm situations, where the prospect of a forced sale or liquidation isn't far from either the lender or the borrower's minds. With stable, on-going operations, these items should not be a major concern.

Current Liabilities

Current Liabilities include Accounts and Notes Payable, Accrued Interest, Taxes and Other Accrued Expenses, Contingent Tax Liability, and the Principal Portion of Intermediate and Long Term Debts due within the accounting period.

Accounts Payable are typically revolving merchandise credit accounts which were used to finance short-term operating expenses, such as fuel, seed, and other supplies. Notes Payable represent the principal portion of short-term notes outstanding as of the statement date. This category would include the operating loan or line-of-credit principal balance. Notes Payable are different than Accounts Payable because with the former, a promissory note or some other written obligation describing the terms of the transaction has been signed.

In order to give an accurate representation of all of the claims against the business, accrued items must be included in the Net Worth Statement. With interest and tax expenses as an example, they might both be due six months from the date of the statement. However, interest on debts usually accrues on a daily basis and taxes are certainly a claim against current income or assets. Since the bills haven't actually been sent out, these accounts are often overlooked. By including those accrued items, all debts which would have to be paid if the business were liquidated are taken into consideration. In this example, both taxes and interest would be claims against the business and would have to be paid in full.

Contingent Tax Liability is determined by adding:

Notes and Accounts Receivable
 Market Livestock and Products
 Stored Crops, Feed and Supplies
 Cash Investment in Growing Crops
 Prepaid Expenses
 Gain from Sale of Marketable Securities (Market Value
 less Modified Cost) times 40%

and then subtracting:

Accounts Payable
 Accrued Interest
 Accrued Taxes
 Other Accrued Expenses

Then multiply the remaining value times your estimated ordinary income tax rate to arrive at the total Contingent Tax Liability for Current Liabilities.

Intermediate Liabilities

Intermediate Liabilities include debts with a maturity date between one and ten years from the date of the Net Worth Statement. This section would include the principal portion of Notes Payable due beyond the current portion listed under Current Liabilities.

Contingent Tax Liability is determined by adding:

Gain from Sale of Machinery and Equipment (Market
 Value less Adjusted Basis)

Gain from Sale of Purchased Breeding Livestock (Market
 Value less Adjusted Basis)

Gain from Sale of Raised Breeding Livestock (Market
 Value) times 40%

Then multiply the sum times your estimated ordinary income tax rate. In those cases where Machinery and Equipment or Purchased Breeding Livestock is sold for more than the original cost, the difference between the gain and the cost would first be multiplied by 40% before being multiplied by the ordinary tax rate.

Long Term Liabilities

Long Term Liabilities typically includes real estate debts plus any other debts with a maturity of more than ten years. The principal portion of real estate mortgages and Notes Payable due

beyond the current portion should be listed here. The Contingent Tax Liability is determined as follows:

Gain from Sale of Real Estate (Market value less
Modified Cost) times 40% times your estimated ordinary
income tax rate.

Owner Equity

At this point, Owner Equity or Net Worth can be computed. Sum the Current, Intermediate and Long Term sections of both Assets and Liabilities. Subtract Total Liabilities from Total Assets to arrive at the amount of Net Worth as of the date of the statement. This figure is used frequently in the financial ratios which will be discussed later in this section.

The Spread Sheet

The Spread Sheet is a place to record items on the Net Worth Statement on an annual basis. Using this format, it is easy to view the business as a continuing entity and to compare the growth and change in the business from year to year. As a tool of analysis, it provides a means of identifying the changing structure of the business assets and liabilities and to pin-point the causes behind an increasing or decreasing net worth in the business. In addition to the asset, liability and net worth comparisons on this Spread Sheet, there are sections for Income Statement entries and Financial Ratios. These sections include a column to insert the projected figures and ratios for the coming year, and a column to insert a tolerable range for those projections. These ranges indicate whether actual results are acceptable to the farm manager and to the lender, or whether changes need to be made.

The Cash Flow Statement

The Cash Flow Statement records all cash inflows and outflows of a business during the accounting period. OSU Extension Facts No. 751, "Developing a Cash Flow Plan", gives a full explanation of this statement. A copy of the sample Cash Flow Statement from the factsheet can be found at the end of this section. The Cash Flow Statement can be based on actual figures or, more commonly, it can be a projection of cash inflows and outflows into the next time period. As a projection, it is often referred to as the Pro Forma Cash Flow Statement. This statement provides insight into all aspects of the financial performance of the business: liquidity, solvency and profitability. The Cash Flow Statement is a convenient place to combine all of the financial concerns of the business: production possibilities, purchasing and marketing

strategies, debt structure and repayment ability, tax strategies, family living expenses and non-farm income.

Cashflow planning has historically been overlooked in the financial analyses of agricultural businesses. Many loans have been made with the Net Worth Statement being the only financial statement required by the credit institution. By not considering the Cash Flow Statement, many loans have not been repaid from the productive capacity of the business; instead, they have been repaid through the sale of capital assets or refinanced with long term, usually real estate, security. Many agricultural lenders loaned on an equity basis, rather than on a cash flow basis, because "it worked". But it "worked" because of inflated land values and non-farm income which essentially subsidized the farm operation. In the future, lenders should become more attuned to the cash flow, and look not only at the long-term profitability of the business, but to its short-term liquidity position as well. If an operator is unable to keep up with the monthly bills and obligations, obvious problems arise. However, if the operator can keep up with expenses only through depleting inventories or selling fixed assets, equally serious problems can arise.

Line-of-Credit Financing

Cash flow planning is especially useful in a line-of-credit financial analysis. For adequate credit to be made available to the farm business, in the right amounts and at the right time, careful planning must be done well before the funds are actually needed. In line-of-credit financing, the total loan needs are anticipated in advance, and are then advanced and later repaid in accordance with an agreed upon schedule between the borrower and the lender. The advantages of this system over the single operating loan are in interest savings to the borrower, and fewer loan agreements and paperwork to the lender.

Line-of-credit financing can be done on a revolving or a non-revolving basis. With a revolving note, a maximum amount of credit is provided and this amount can be continuously paid down and essentially "re-borrowed" as long as the maximum loan balance is not exceeded. This system offers a great deal of flexibility to the borrower, but it can also present some serious accounting headaches to the lender. With a non-revolving note, the total amount of new loan funds must be budgeted, and the funds which are disbursed cannot be loaned again once repayment is received. This system can be a problem when funds are needed in shorter intervals than the term of the loan, causing larger than necessary loan requests which could exceed the banker's approval authority.

Sources of Information

To construct a Cash Flow Statement, estimates of all the cash inflows and cash outflows must be obtained. These can be estimated on a monthly basis, or on an annual basis and then prorated throughout the year. Data can be obtained from several sources. Previous years' records and tax forms are probably the most widely used and reliable sources of information for projecting into the future. Past performance is certainly an important criterion to the lender in evaluating the credit needs and management strategies of the business into the future. Marketing decisions go hand in hand with financial decision-making when planning for the future. Most agricultural products have seasonal production cycles which are well established in their geographic areas. However, many products can be withheld from the market temporarily and placed in storage, to be released at a later date when prices are favorable to the producer. This system provides a great deal of opportunity for large profits, as well as large losses, depending on the timing of sales. A liquidity bind is the situation where receipts and expenses are not timed properly and either credit must be made available in time to cover the obligations, or inventories must be sold, and not necessarily at the time when profits can be maximized. Thus, to be effective, marketing strategies must be carefully considered in a Pro Forma Cash Flow Statement.

Data for the Cash Flow Statement can also be obtained from regional or state averages, or from budgets. The Integrated Farm Financial System is organized to be used in conjunction with the Enterprise Budgets available at Oklahoma State University. Using these budgets, which have both statewide and regional cost and return estimates, a whole farm analysis can be completed. This system can be especially useful to the lender faced with an unusual or unfamiliar loan proposal and where not much information about the amount and timing of receipts and expenses is available. The budgets can easily be altered to more accurately describe the actual farm situation. In addition, they can be adjusted to perform some "what-if" analyses. Prices and yields could be changed, and the resultant effect on cash flow observed. Also, the number of harvested acres or livestock raised could be changed to search for the optimal size operation.

The Cash Flow Statement summarizes all cash receipts and expenses, non-farm income and family living expenses, capital sales and purchases, debt repayment and new loans. The amount of operating credit required is calculated for the months where a cash deficit exists, or when anticipated cash inflows are insufficient to cover cash outflows plus a minimum bank balance established earlier. Interest accrues monthly on the principal loan balance, and is paid first when any cash surplus exists. After accrued interest is paid, the operating loan principal is paid down with any remaining surplus funds. The statement could be adjusted to fit situations where principal and interest are only repaid at

certain intervals during the year. This is typical with Production Credit Association loans and some commercial bank agricultural loans. "What-if" analyses can be done by changing the operating loan interest rate, or the minimum cash balance required, or by rescheduling any of the capital purchases or sales. The computer makes this sort of analyses possible by performing the calculations instantly.

Capital Purchases

There are two methods of entering data in the Capital Purchases section of the Cash Flow Statement if financing is used. One is to enter only the amount of the actual cash outlay, or downpayment, to purchase the capital item in the outflow section of the Cash Flow. This system gives the most accurate description of the actual cash requirements of the business. The amount of new borrowing is entered later in the statement, but the amount of the loan is not used in computing the Ending Cash Balance in the Cash Flow Summary. The other method is to enter the total cost of the capital item in the outflow section, and then to enter the amount of the loan funds advanced to cover the balance of the purchase price in the Cash Flow Summary where it is used in computing the Ending Cash Balance. This method is used in the IFFS with the Integrated Statement because the total cost of the capital item is needed to complete the Income Statement and the Net Worth Statement. With the first method, it isn't always clear whether the additional borrowing was to cover operating expenses, some other expense, or to finance the purchase of the capital asset.

Monitor Statement

In addition to the Cash Flow Statement, there is a Monitor Statement in the IFFS package. A copy of the statement can be found at the end of this section. The Monitor Statement is a worksheet which compares the actual cash flow items to the projections. Computations are done on a monthly basis, and on a year-to-date or cumulative basis. Actual data must be recorded in the same manner as the projections, and accumulated each month or quarterly period. This is a useful statement which should provide the "red flags" to both the farm manager and to the lender when the business is not following its charted course. When large discrepancies are observed, an analysis must be done to determine whether improper management, large price swings, unexpected purchases or other situations were the cause of the actual results being different than the plan. In some cases, revised plans should be prepared for the rest of the year to reflect those contingencies, especially if additional credit is needed. With this statement, the performance of the business can be measured in more frequent intervals than at the end of the year, which in some

cases could be too late.

The Income Statement

The Income Statement is also referred to as the Profit and Loss Statement. More information on this statement can be found in OSU Extension Facts No.753, "Developing an Income Statement", and a sample form is located at the end of this section. This statement measures the overall performance of the business in a given year from a profitability standpoint. Its bottom-line figure, Net Farm Income, is used in computing the amount of Income Tax due, and is an important ingredient in any financial accounting package. The amount of taxable income alone is an unreliable estimate of the business earnings due to such factors as rapid depreciation of capital assets, inventory sales, advance purchases and so forth.

Net Farm Income

Net Farm Income is the amount of income generated by the business during the year which is available for family living, principal debt repayment, savings and reinvestment in the business. A positive Net Farm Income is a prerequisite for continued success and growth of the farm business. Net Farm Income also represents the return to unpaid operator and family labor, management and equity capital. The amount of this return could determine whether the farm business is a competitive employer with other small businesses in the area.

Return to Labor and Management

An estimate of the residual return to labor and management is calculated as follows. First, estimate the average amount of unpaid, non-operator family labor used in the business and multiply that by the average wage rate for similar employment in the area. Then, average the amount of Net Worth for the beginning and ending periods, which represents the owners' equity capital, and multiply that times a conservative return on long-term investments in the capital market, usually between 5% to 10%. This opportunity cost calculation is necessary because the capital invested has alternative uses, such as earning interest on a savings certificate or purchasing stock in another business venture. Finally, subtract both figures from Net Farm Income to arrive at an estimate for the return to operator's labor and management for the year. If this return is comparable to what the farm manager could be earning elsewhere, this is an indication of proper resource allocation in the marketplace. If the manager is earning more than a competitive return, that could be a sign that more money could be spent paying off debts, saving, or for reinvestment in the business. If the

manager is not being adequately compensated for his/her labor and management, then some decisions need to be made. It may be that the farm operator is aware of this situation, that a higher income could be earned by leaving the farm and working in town. However, some families have concluded that their lifestyle on the farm is worth more than enough to offset lower earnings.

The Income Statement summarizes cash revenues, cash expenses and adjustments in inventory items to arrive at the Net Farm Income figure. Gross Receipts from Farming is the summation of all Operating Receipts plus other farm income such as Government Payments, Custom Work, Dividends and Refunds, Cash Rent, Interest on Farm Savings and Equipment Rental. It does not include non-farm income or the sale of intermediate and long-term assets, such as machinery, breeding livestock or land. Cash rent received from another farm owned by the operator should be included in Operating Receipts only if the farm operator actively participates in the other farm operation; otherwise it should be considered as non-farm income and would not be included in the Income Statement.

Expense Items

Total Cash Expenses includes all cash farm operating expenses, such as crop and livestock expenses, interest paid on debts, the farm share of utilities, insurance and taxes, and machinery and equipment expenses. It does not include family living expenses or the purchase of capital assets such as breeding livestock, new equipment and real estate improvements.

Additional borrowing and the principal portion of loan payments are also not considered in the Income Statement. Loan proceeds are not included in Cash Receipts and principal debt payments are not considered Cash Operating Expenses. This is because neither entry affects the overall equity position of the business since equal entries are made on both the asset and the liability sides of the Net Worth Statement. Principal payments on debt would be offset by equal reductions in the cash account, and the amount of a new loan would be offset by a corresponding increase in a capital asset account. By omitting principal debt payments in the expense section, it is also easier to compare similar businesses and trends over time without having to consider varied degrees of leverage.

Both income and expense categories exclude any entries which are not specifically related to the farm operation. In some cases, there is a fine line between the family and the farm business. As with IRS procedures, those items which are common to both the business and the home should be prorated between the two, with just the farm share being reported on the Income Statement.

Inventory Adjustments

In the next section of the Income Statement are the adjustments for changes in inventory and accrued items from the beginning of the accounting period to the end. Changes in inventory include physical changes as well as changes in value from price variations. This section is necessary to give a true picture of Net Farm Income. When inventories are higher at the end of the year than at the beginning, additional income should be reported. If Accounts Receivable is higher at the end of the year than it was at the beginning, then some item had been sold or service performed where cash payment was not actually received. Instead, a promissory note or some credit agreement was given to the business and this I.O.U. should be treated as a source of revenue. When, on the other hand, Accounts Payable are higher at the end of the year than at the beginning, an additional expense should be charged against the business. For those items which correspond to the assets of the business, (Current, Intermediate and Long Term), an increase in value from the beginning of the year to the end will result in a positive adjustment to Net Income. For those items which correspond to the liabilities of the business, an increase would represent an increase in expenses, and would result in a negative adjustment to Net Income. For adjustments to depreciable Capital Items, such as Purchased Breeding Livestock, Vehicles, Machinery and Equipment and Real Estate Improvements, both sales and purchases during the year must be itemized to show the actual change in inventory from the beginning of the year to the end. With yearly comparisons, this section could give an indication to the manager of whether increased capital expenditures were associated with increases in revenue and profits.

The Income Statement can also be used in analyzing future investment possibilities and growth of the business from the standpoint of debt-carrying capacity. This type of feasibility analysis is easily adapted to the spreadsheet programs on the microcomputer with the instant calculating abilities to "try out" different investment plans.

Inventory Method vs. Depreciation Method

There are two methods of completing the Income Statement: the Inventory Method and the Depreciation Method. The Inventory Method is essentially on an accrual basis where revenue is generated not only by cash sales, but by increases in inventory as well. Likewise, expenses are recognized both as cash expenditures and as decreases in inventory. For example, if the value of Stored Crops decreased from \$10,000 at the beginning of the year, to \$7,500 at the end, then \$2,500 of the reported Crop Sales income for this accounting period was actually the result of production in the previous year. If a downward adjustment wasn't made for that

change in inventory this year, Net Farm Income would be overstated by \$2,500.

IFFS uses the Inventory Method, but an example showing both methods can be found at the end of this section. The Depreciation Method is basically on a cash basis where revenue and expenses are recognized only when the cash is received. The Depreciation Method includes depreciation as an expense on the Income Statement, while the Inventory Method accounts for depreciation only through the change in inventory items. To be sure that both methods give the same result, another accounting equation which should always hold is that Beginning Inventories (of depreciable capital items) plus Purchases must equal Ending Inventories (of depreciable items) plus Depreciation plus Sales.

Financial Ratios

Certain ratios are used in the Integrated Farm Financial System as benchmarks to measure the financial performance and stability of the farm business. Ratios are used to compare different enterprises within the farm, to compare the business to others in the area, and by many lenders in their loan review and analysis process. Year-to-year comparisons of these ratios provide a picture of the liquidity, solvency, profitability and growth of the business over time. Financial ratios provide some basis for evaluating the past performance of the business, and for projecting into the future. The accuracy and reliability of these measures alone justifies the amount of work that goes into a good record-keeping system and into the preparation of the three Financial Statements. Data from the Net Worth and Income Statements are used in computing these ratios.

Liquidity Ratios

Liquidity is a concept which refers to the ability of the business to meet its short-term obligations when they are due without having either to borrow money or to sell its productive assets. Since it measures how accurately the operator has timed revenue in relation to expenses and in this respect, the Cash Flow Statement is the most detailed measure of liquidity.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

A ratio of 2:1 has historically been considered safe by many lenders. A Current Ratio of less than 2 could indicate potential cash flow problems, while a ratio of more than 2 might indicate that the business is over-invested in low-earning assets in an effort to remain liquid. This ratio is used mainly when short-term

or operating credit needs are being evaluated. The interpretation of this ratio will depend on the individual business as well as on general economic conditions.

$$\text{Working Asset Ratio} = \frac{\text{Current} + \text{Intermediate Assets}}{\text{Current} + \text{Intermediate Liabilities}}$$

This ratio is similar to the Current Ratio, except it includes Intermediate Assets and Liabilities. This ratio would be of particular interest to those lenders who are involved in both short-term and intermediate credit, for example the Production Credit Associations. A ratio of 2.0 or more would be considered acceptable in a farming operation. In agriculture, where the composition of assets and liabilities varies a great deal during the year (for example, before and after harvest), it is important to compute these ratios at the same time each year. Otherwise, the financial position of the business could be misinterpreted and lead to an unreliable historical analysis.

$$\text{Debt Structure Ratio} = \frac{\text{Current Liabilities}}{\text{Total Liabilities}}$$

This ratio will give an indication of both the asset and liability structure of the business. A high ratio would be typical of a business that leases a great deal of its equipment and land, or an older established farm operation where much of the real estate debt has been paid off. A low ratio would be typical of a capital intensive operation, such as a dairy farm where most of the liabilities are on intermediate or long term notes.

Solvency Ratios

A business is considered solvent if its Total Assets are greater than Total Liabilities. Solvency gives an indication of whether a business should declare bankruptcy or not and if so, whether all its creditors could be paid. The amount of Net Worth, which is the difference between the Total Assets and Total Liabilities of the business, gives the clearest picture of solvency.

$$\text{Net Capital Ratio} = \frac{\text{Total Assets}}{\text{Total Liabilities}}$$

This ratio is a measure of the long term solvency of the business. A "safe" Net Capital Ratio must be determined on an individual basis. A ratio of 1.0 or more is certainly a requirement for a business to be considered solvent. The higher the ratio, the more risk is supported by the owners of the business in comparison to its creditors.

$$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Net Worth}}$$

This ratio is also known as the Leverage Ratio. It shows the relationship between borrowed capital and equity capital invested in the business. This ratio indicates to what degree the creditors, as opposed to the owners, are providing funds for the business. Lenders are particularly interested in this figure because it shows what proportion of the risk they are taking in comparison to the owners of the business. Lending agencies vary in this respect, with commercial lenders preferring a much safer risk position (a Leverage Ratio of 1 or less) than the government credit agencies such as the Farmers Home Administration. The requirements would also vary depending on whether the liabilities are against current, intermediate or long term assets. In general, a higher amount of owner equity would be required with long term, high risk loans.

$$\text{Total Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

This ratio is the inverse of the Net Capital Ratio, but it is another way to measure the risk exposure of the business.

$$\text{Per Cent Equity} = \frac{\text{Net Worth} * 100}{\text{Total Assets}}$$

This ratio is another measure of the risk exposure of the business. Most lenders would prefer this to be 50% or higher, although each business must be examined on an individual basis. In some of the Farmers Home Administration loans to beginning farmers, this ratio could be as low as 15-20%.

$$\text{Debt Servicing Ratio} = \frac{\text{Total Debt Payments}}{\text{Net Cash Farm Income}}$$

This ratio reflects the proportion of Net Cash Farm Income which is needed to make scheduled debt payments of both principal and interest. Net Cash Farm Income is calculated as Gross Receipts from Farming less Total Cash Expenses plus Cash Interest paid during the year. This ratio will generally be higher for beginning operators than for well established, high-equity operations.

Profitability Ratios

The following measures show whether the business made a profit or a loss during the year, and the Income Statement is the source of most of the data. The amount of Net Farm Income indicates whether sufficient income was generated by the business to cover costs plus a residual to retire debts, provide a return to unpaid owner labor and management, and provide for growth of the business.

$$\text{Return on Equity} = \frac{\text{Net Farm Income} - \text{Opportunity Return to Labor and Management}}{\text{Average Net Worth}}$$

This ratio represents the ratio of returns to equity capital to the total amount of equity capital in the business. The Return on Equity is basically what farm managers are trying to maximize. This rate of return should be compared to a typical opportunity return on equity capital, in the range of 5-8%.

In this ratio, the Opportunity Return to Labor and Management represents the value of unpaid labor provided by the family and an opportunity cost of the operator's labor and management. An estimate of the operator's labor and management could be based on alternative employment options in the area. This value could also be estimated as the difference between Net Farm Income and a typical return (5-10%) on the value of Total Assets. The rate used should be a realistic estimate of how much those assets (Current, Intermediate and Long Term) could be earning if invested elsewhere. The value of Total Assets can be the value at the beginning of the year, at the end of the year, or an average of the beginning and ending values.

$$\begin{array}{lcl} \text{Rate of Return} & & \text{Net Farm Income} + \text{Interest} - \text{Opportunity} \\ \text{on Investment} & = & \text{Return to Labor and Management} \\ & & \hline & & \text{Average Total Assets} \end{array}$$

This ratio represents the rate of return earned on all sources of investment in the business, both owner-capital and debt-capital. Interest on debt is added back into this formula because interest represents the return earned by creditors on the borrowed funds which they invested in the business. This includes interest as a cash expense as well as an adjustment for the change in interest liability from beginning to end of the year. A typical Return on Investment for a farm business would be from 3% to 6%.

The Relationship between the Financial Statements

In the IFFS Integrated Statement worksheet, the Net Worth, Cash Flow and Income Statements and the Financial Ratios are all

consolidated. One of the main advantages of the integrated system is the ability to trace the effects of a change in product price, or in the interest rate, or in the timing of a capital purchase, or in any other variable, on all of the Financial Statements. Thus, transactions which affect the profitability of a business for example, might also affect the solvency and net worth of the business. The repercussions of a major change in one aspect of the business are often carried into other financial statements and those effects must be considered in any whole farm planning strategy or analysis.

The interrelationships between the three financial statements are illustrated in figure 11. For the statements to tie together, the Beginning and Ending Net Worth Statements must be available and they must represent the same accounting period as the Cash Flow Statement.

An actual example of how the statements interrelate is located in the section, "How It Works".

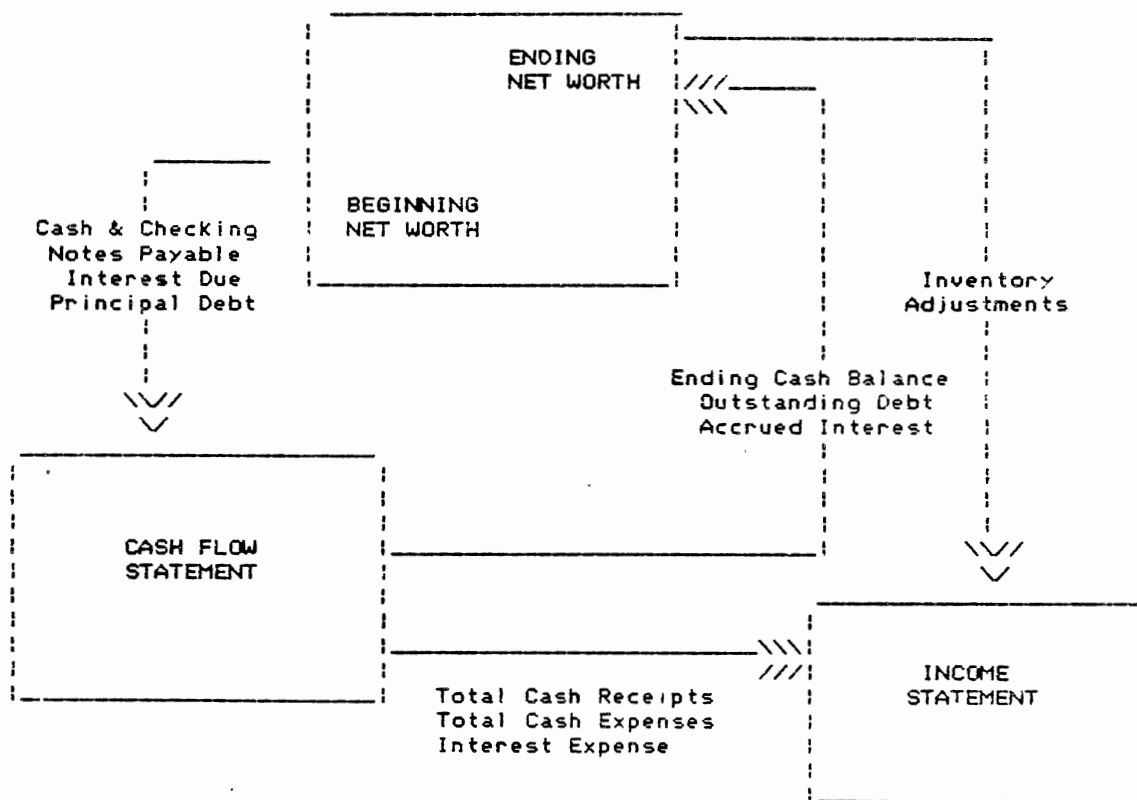


Figure 11. Relationship Between Financial Statements

Table 2. Net Worth Statement: OK PRODUCER

NET WORTH STATEMENT							
ASSETS	Beginning Balance	Ending Balance	Net Change	LIABILITIES	Beginning Balance	Ending Balance	Net Change
CURRENT ASSETS				CURRENT LIABILITIES			
1. Cash & Checking	2000	2000	0	37. Accounts Payable	1200	1120	-80
2. Savings & Time Certificates	500	530	30	38. Notes Payable	50000	48479	-1521
3. Marketable Bonds & Securities			0	Interest Due:			
4. Accounts Receivable	850	1000	150	39. Current Liabilities	895	871	-24
5. Cash Value Life Insurance	600	600	0	40. Intermediate Liabilities	5600	5523	-77
6. Other			0	41. Long Term Liabilities	8362	8072	-290
7. TOTAL (lines 1 thru 6)	3950	4130	180	Taxes Due:			
Market Livestock & Products:				42. Real Estate & Personal Property	990	1000	10
8. Raised Livestock			0	43. Employee Payroll Withholding			0
9. Purchased Livestock	53550	55080	1530	44. Personal & Self-Employment	2100	2200	100
10. Stored Crops, Feed, Supplies	23454	24900	1446	45. Other Accrued Expenses	480	480	0
11. Cash Investment Growing Crops	8000	8400	400	46. Contingent Tax Liability	0	0	0
12. Prepaid Expenses			0	((Tax Rate: 0.00))			
13. Other Current Assets			0	Principal Due in 12 mos:			
14.			0	47. Intermediate Liabilities	5050	7729	1679
15.			0	48. Long Term Liabilities	2465	2755	290
16.			0	49. Other Current Liabilities			
17.			0	50.			0
18. TOTAL CURRENT ASSETS	88954	92510	3556	51. TOTAL CURRENT LIABILITIES	79142	79229	87
INTERMEDIATE ASSETS				INTERMEDIATE LIABILITIES			
19. Notes Receivable	0	0	0	52. Notes Payable	33950	31721	-2229
Breeding Livestock:				(Principal Due Beyond 12 Mos.)			
20. Raised Livestock	25100	24700	-400	Contingent Tax Liability:			
21. Purchased Livestock	1500	1440	-60	53. From Sale of Machinery			0
22. Vehicles	5000	3950	-1050	54. From Sale of Breeding Livestk	0	0	0
Machinery & Equipment:				55. Other			0
Cost or Basis				56. TOTAL CONTINGENT TAX LIABILITY	0	0	0
23. Less Accum. Depreciation	46760	38650	-8110	57. Other Intermediate Liabilities			0
24. Securities Not Readily Mktable.	2750	2750	0	58.			0
25. Other Intermediate Assets			0	59.			0
26.			0	60.			0
27. TOTAL INTERMEDIATE ASSETS	81110	71490	-9620	61. TOTAL INTERMEDIATE LIABILITIES	33950	31721	-2229
FIXED ASSETS				LONG TERM LIABILITIES			
28. Contracts & Notes Receivable			0	62. Mortgages & Notes Payable	73830	71075	-2755
29. Buildings & Improvements	2400	3400	6000	(Principal Due Beyond 12 Mos.)			
Land				Contingent Tax Liability:			
30. Croplands:	324000	324000	0	63. From Sale of Real Estate			0
31. Pasture:	36000	36000	0	64. Other			0
32.			0	65. TOTAL CONTINGENT TAX LIABILITY	0	0	0
33. Non-Farm Investments			0	66. Other Long Term Liabilities			0
34. Other Long Term Assets			0	67.			0
			0	68.			0
35. TOTAL FIXED ASSETS	362400	368400	6000	69. TOTAL LONG TERM LIABILITIES	73830	71075	-2755
				70. TOTAL LIABILITIES	185922	181025	-4897
36. TOTAL ASSETS	532464	532400	-64	71. NET WORTH	346542	351375	4833
				72. TOTAL LIABILITIES & NET WORTH	532464	532400	-64

Table 3. Spread Sheet

ITEM	Standard for Comparison	Year Ending 12/31/XX	Year Ending 12/31/XX	Year Ending 12/31/XX	Year Ending 12/31/XX
NET WORTH STATEMENT					
CURRENT ASSETS					
1. Cash & Other Liquid Assets	.....	.....	.....	.....	.....
2. MFT.Livestock & Products: Fed.	.....	.....	.....	.....	.....
3. MFT.Livestock: Purchased	.....	.....	.....	.....	.....
4. Stored Chops, Feed & Supplies	.....	.....	.....	.....	.....
5. Cash Investments Growing Crops	.....	.....	.....	.....	.....
6. Prepaid Expenses & Other Assets	.....	.....	.....	.....	.....
7. Total Current Assets	0	0	0	0	0
INTERMEDIATE ASSETS					
8. Notes Receivable	.....	.....	.....	.....	.....
9. Breeding Livestock: Purchased	.....	.....	.....	.....	.....
10. Breeding Livestock: Purchased	.....	.....	.....	.....	.....
11. Vehicles	.....	.....	.....	.....	.....
12. Machinery & Equipment	.....	.....	.....	.....	.....
13. Other Intermediate Assets	.....	.....	.....	.....	.....
14. Total Intermediate Assets	0	0	0	0	0
FIXED ASSETS					
15. Contracts & Notes Receivable	.....	.....	.....	.....	.....
16. Buildings & Improvements	.....	.....	.....	.....	.....
17. Land	.....	.....	.....	.....	.....
18. Other Fixed Assets	.....	.....	.....	.....	.....
19. Total Fixed Assets	0	0	0	0	0
20. TOTAL ASSETS	0	0	0	0	0
CURRENT LIABILITIES					
21. Accounts & Notes Payable	.....	.....	.....	.....	.....
22. Interest Due	.....	.....	.....	.....	.....
23. Estimated Taxes Due	.....	.....	.....	.....	.....
24. Accrued Expenses	.....	.....	.....	.....	.....
25. Principal Due in 12 Mos. Inter.	.....	.....	.....	.....	.....
26. Long-Term	.....	.....	.....	.....	.....
27. Other Current Liabilities	.....	.....	.....	.....	.....
28. Total Current Liabilities	0	0	0	0	0
INTERMEDIATE LIABILITIES					
29. Notes Payable	.....	.....	.....	.....	.....
30. Other Intermediate Liabilities	.....	.....	.....	.....	.....
31. Total Intermediate Liabilities	0	0	0	0	0
LONG TERM LIABILITIES					
32. Mortgages & Notes Payable	.....	.....	.....	.....	.....
33. Other Long Term Liabilities	.....	.....	.....	.....	.....
34. Total Long Term Liabilities	0	0	0	0	0
35. TOTAL LIABILITIES	0	0	0	0	0
36. NET WORTH	0	0	0	0	0
37. TOTAL LIABILITIES & NET WORTH	0	0	0	0	0
INCOME STATEMENT					
38. Gross Receipts from Farming	.....	.....	.....	.....	.....
39. Total Cash Expenses less Interest	.....	.....	.....	.....	.....
40. Interest Expense	.....	.....	.....	.....	.....
41. Net Cash Income from Operations	0	0	0	0	0
42. Adjustments for Accrued Items & Changes in Inventory	.....	.....	.....	.....	.....
43. Adjustments for Capital Items	.....	.....	.....	.....	.....
44. Net Farm Income	0	0	0	0	0
45. Opportunity Return to Labor & Mgmt. (.....J return on equity capital)	0	.....	.....	.....	.....
FINANCIAL RATIOS					
LIQUIDITY MEASURES					
46. Current Ratio	0	0	0	0	0
47. Working Asset Ratio	0	0	0	0	0
48. Debt Structure Ratio	0	0	0	0	0
SOLVENCY MEASURES					
49. Net Capital Ratio	0	0	0	0	0
50. Total Debt Ratio	0	0	0	0	0
51. Debt to Equity Ratio	0	0	0	0	0
52. Per Cent Equity	0	0	0	0	0
PROFITABILITY MEASURES					
53. Return on Investment	0	0	0	0	0
54. Return on Equity	0	0	0	0	0
55. Profit Margin Ratio	0	0	0	0	0

Table 6. Income Statement: OK PRODUCER

INCOME STATEMENT				FINANCIAL RATIOS	
A. OPERATING RECEIPTS				Current Ratio $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ =	
Livestock Sales & Products:					
Raised market livestock	13785				
	0				
Livestock purchased for resale:	72174			Working Asset Ratio $\frac{\text{Current Int. Assets}}{\text{Current Int. Liabilities}}$ =	
Livestock products					
Subtotal:	85959				
Crop Sales:	38400			Debt Structure Ratio $\frac{\text{Current Liabilities}}{\text{Total Liabilities}}$ =	
	12600				
Subtotal:	51000			Net Capital Ratio $\frac{\text{Total Assets}}{\text{Total Liabilities}}$ =	
Other Farm Incomes:					
Government payments	3220			Debt to Equity Ratio $\frac{\text{Total Liabilities}}{\text{Net Worth}}$ =	
Custom Work					
Dividends, Refunds					
Cash Rent				Total Debt Ratio $\frac{\text{Total Liabilities}}{\text{Total Assets}}$ =	
Other	530				
Subtotal:	3750				
GROSS RECEIPTS FROM FARMING	140789			Per Cent Equity $\frac{\text{Net Worth} \times 100}{\text{Total Assets}}$ =	
B. CASH FARM EXPENSES				Debt Servicing Ratio $\frac{\text{Total Debt Payments}}{\text{Net Cash Farm Income}}$ =	
Hired Labor		240			
Mach. & Equip. Repairs		1487			
Building & Fence Repairs		282			
Cash Interest		17034			
Feed Purchased		4704			
Seed, Plants, Other		1920			
Fertilizer, lime, chemicals		14812			
Machinery Hire		14990			
Supplies		790			
Breeding Fees		0			
Vet. fees, medicine		1505			
Gas, fuel, oil, lubricants		3949			
Storage, Warehousing		400			
Taxes: Real Est. & Pers. Prop.		990			
Insurance		550			
Utilities (farm share)		490			
Cash Rent & Leases		480			
Freight, Trucking		1042			
Conservation Expenses		0			
Miscellaneous Expenses		150			
Losses purchased for resale		1063			
		51000			
TOTAL CASH EXPENSES		118090			
C. NET CASH INCOME FROM OPERATIONS					
			22611		
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:					
1. Accounts & Notes Receivable:					
	Notes & Accounts	Other	Other		
Ending Inventory	1000				
Beginning Inventory	250				
Change	150	0	0		
2. Accounts Payable & Accrued Expenses:					
	Accounts	Taxes	Interest	Other	
Beginning Inventory	1200	990	14857	400	
Ending Inventory	1120	1000	14466	400	
Change	80	-10	391	0	461
3. Prepaid Expenses:					
	Ending Inventory	Beginning Inventory			
	0	0			
4. Inventories:					
	Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops		
Ending Inventory	55000	24900	9400		
Beginning Inventory	53550	23454	9000		
Change	1530	1446	400		
E. ADJUSTMENTS FOR CAPITAL ITEMS:					
	Breeding Livst.	Mach. & Equip.	Improvements		
Ending Inventory	26140	3950	30650	9400	
Sales	2125	0	0	0	
Subtotal:	28265	3950	30650	9400	
Beginning Inventory	26600	5000	46760	2400	
Purchases	0	0	0	7500	
Subtotal:	26600	5000	46760	9900	
Change	1665	-1050	-8110	-1500	-8995
F. VALUE OF FARM PRODUCTS USED IN THE HOME					
			0		
G. NET FARM INCOME			17603		

Table 7. Inventory Method Versus Depreciation Method

INCOME STATEMENT			
I. Inventory Method		II. Depreciation Method	
RECEIPTS		RECEIPTS	
Livestock sales	85959	Livestock sales	85959
Livestock product sales		Livestock product sales	
Crop Sales	51000	Crop sales	51000
Miscellaneous receipts	3780	Miscellaneous receipts	3780
		Profit from depreciable	
Sale of deprec. assets	2125	asset sales:	2125
Inventory increase:		Inventory increase:	
Depreciable assets	6000	Livestock	1530
Livestock	1530	Feed, seed, supplies	1846
Feed, seed, supplies	1846	Accounts receivable	150
Accounts receivable	150		
Value of farm products		Value of farm products	
used in the home:		used in the home:	
TOTAL RECEIPTS	152390	TOTAL RECEIPTS	146390
EXPENSES		EXPENSES	
OPERATING EXPENSES:		OPERATING EXPENSES:	
Livestock, excluding feed	1505	Livestock, excluding feed	1505
Crop expenses	31722	Crop expenses	31722
Mach. & Equip. repair	1687	Mach. & Equip. repair	1687
Building repair	282	Building repair	282
Hired labor	260	Hired labor	260
Utilities	490	Utilities	490
Miscellaneous	7874	Miscellaneous	7874
Feed purchases	4704	Feed purchases	4704
Livestock purchases	51000	Livestock purchases	51000
FIXED EXPENSES:		FIXED EXPENSES:	
Taxes	990	Taxes	990
Insurance	550	Insurance	550
Interest	17034	Interest	17034
Purchases of depreciable		Losses from depreciable	
assets:	7500	asset sales:	0
Inventory decrease:		Inventory decrease:	
Livestock	460	Livestock	460
Feed, seed, supplies		Feed, seed, supplies	
Buildings		Vehicles	1050
Machinery	8110	Accounts payable	-461
Vehicles	1050		
Accounts payable	-461	Depreciation:	
		Buildings	1500
		Machinery	8110
TOTAL EXPENSES	134757	TOTAL EXPENSES	128757
NET FARM INCOME	17633	NET FARM INCOME	17633

How it Works!

All of the financial statements in this system can either be used individually, or they can be used in conjunction with the other statements. We anticipate most managers using them together, so we will discuss that system in most detail. The following VisiCalc and Data Interchange Format files are discussed in this section:

FILENAME =====	PURPOSE =====
CASHFLOW/VC	A blank Cash Flow worksheet which is used for direct keyboard entries of the data, and to accumulate the crop, livestock and additional information budgets.
60 CROP AND LIVESTOCK BUDGETS	These VisiCalc templates were compiled from OSU's Enterprise Budget Book to provide representative budgets for most of the farming situations in Oklahoma.
BUDGET BUILDER	A blank budget form which can be completed to fit any crop or livestock operation not covered in the IFFS package.
C&L BUDGET	The Crop and Livestock Budget form.
C&L CLEAR	This is a file with blank data which is used to clear the upper portion of the C&L BUDGET worksheet in between loading budgets.
AI/VC	This is the Additional Information Budget worksheet. This budget should be completed with those cash flow items which cannot be allocated to any particular enterprise. It includes such items as Capital Sales and Expenses, Family Living Expense, Non-farm Income and Debt Repayment.
BLANKOUT.DIF	This is a file with blank data. It is needed when the various crop and livestock budgets are being accumulated to avoid double entries.

Cash Flow Statement

Let's begin with the Cash Flow Statement. This statement generally has the most "number crunching" and is therefore a good candidate for adoption on the microcomputer. Cash flow projections can be developed from the previous year's records, from "educated" guesses, or from budgets.

Direct Keyboard Entry. If the previous year's records or "educated guesses" are to be used, the data must be input directly into the Cash Flow VisiCalc template. To do this, follow these instructions:

1. Insert the VisiCalc program disk in Drive 1 and turn on the computer. This loads or "boots" the entire program into the computer's memory and the program disk isn't needed again unless the computer is turned off.

2. At this point, be sure you have a couple of blank, initialized disks. If you don't, this is a good time to initialize them. In this manual, the commands you should type will appear in boldface print. Type these commands: / S(torage) I(nitalize) and then replace the VisiCalc disk with your blank disk and press RETURN. The computer will make some whirring noises for a minute, and then will notify you when the initialization process has been completed. This process essentially prepares the blank diskette to receive information from the computer by dividing its surface into tracks and sectors. If you are having problems with a diskette, re-initializing it can improve the performance in some cases. The contents of the disk should be copied temporarily to another disk during this process as initialization erases the entire disk.

*** Please note: That last step was irreversible, so anything that was on that particular diskette is now and forever gone! So be careful!

3. Now, remove the blank, but initialized disk and insert the IFFS Data Disk I.

4. To load the Cash Flow worksheet, type these commands: / S(torage) L(oad) and the filename which is CASHFLOW/VC. Instead of typing the filename, you can load the file by scrolling through the disk directory using the right arrow key and pressing RETURN when the filename appears. That's all there is to it! Practice moving the cursor around the screen until you get the feel for it.

5. Complete the worksheet by inserting your data in the appropriate cells. The monthly data should be inserted in columns E through P. Operating Receipts are located in rows 56- 63; Capital Sales in rows 66-68 and Other Cash Inflows in rows 70-72.

Operating Expenses should be inserted in rows 75-93; Capital Expenses in rows 96-98; Other Outflows in rows 100-108 and New Borrowing in rows 111-112. Do not attempt to fill in any of the totals or subtotals...the computer will do this for you. Insert the Operating Loan interest rate in cell C115 (Note: 15% should be typed in as 15, 14 1/2% as 14.5); the Beginning Cash Balance in E117 and the Minimum Cash Balance in D116. The Minimum Cash Balance represents the minimum balance the operator wishes to maintain in the farm checking account. As of the beginning of the year, Accrued Interest Payable on the Operating Loan should be entered in A131; Outstanding Operating Debt in A132; Outstanding Intermediate Debt in A133 and Outstanding Long Term Debt in A134.

6. Once all of the data have been entered, recalculate the worksheet by typing a '!'. Now, save the entire worksheet. Insert your blank, initialized disk in the disk drive and type this sequence of commands: / S(torage) S(ave) and your new filename, such as CASHFLOW PROJECTIONS and RETURN. You could save the worksheet under the old filename but then you wouldn't have a blank Cash Flow worksheet for future reference. Either method is acceptable.

7. The data in this worksheet will be needed later when the other financial statements are combined in the Integrated Statement. Only the actual numbers need to be saved because the labels and formulas have already been transferred onto the Integrated Statement. Just the data can be saved in a Data Interchange Format (DIF) file. To do this, place the cursor at E56. Now type: / S(torage) # (which alerts the computer that a DIF file is being saved) S(ave) and CASHFLOW.DIF, which is the name of the file. When the computer prompts you with: "Data Save: Lower right", type P112. Then, when you are prompted with: "Data save: R C or RETURN", always press the RETURN key or R. After the light on the disk drive goes off, your cash flow data has been saved in the CASHFLOW.DIF file.

Different Methods of Computing Interest. The Production Credit Association schedules repayment on its Lines-of-Credit such that all accrued interest is due for repayment at the end of the year. Payments made during the year are generally applied only to principal. A loan could be entirely repaid, principal and interest, before the end of the year if the borrower wanted to do so. To adjust the Cash Flow model to this type of situation, follow these instructions:

1. Load the CASHFLOW/VC worksheet.

2. Place the cursor at E123 and just type a zero, which will replace the formula in that cell. With this change, any interest payments made during the year will have to be entered directly into the appropriate month.

3. Leaving the cursor at E123, replicate the zero in January

from February thru November. Do this by typing: / R RETURN
F123...O123 (as the "target" range).

4. In December, if there are not sufficient funds to pay the interest due, additional money should be borrowed. Place the cursor at P120 and change the formula to do this. Type this formula:
@IF(P119<(D116+O122-O123+(O126*(C115/1200))),D116-P119+O112-O123+(O126*(C15/1200)),0)

Some lenders compute the interest due on Operating Loans based on a variable interest rate. The CASHFLOW/VC worksheet can be altered to reflect this situation.

1. Load the CASHFLOW/VC worksheet.
2. Type "Variable" in cell C115.
3. If the interest rate is adjusted monthly, choose a cell location below the worksheet, such as A136, and insert the January interest rate. Then insert February's rate in A137, March's in A138 and so on. If the rate is adjusted quarterly, only four values would be entered.
4. The formulas in cells E122 through P122 have to be retyped or edited to reflect these changes. The formulas should be changed so that the cell location of that month's interest rate replaces C115 in the formula. For example, with your cursor at E122, retype the formula in that cell, changing the C115 to A136. No other changes are necessary in that formula. Then move the cursor to F122, and replace the C115 in the formula with A137, and so on.
5. If the interest rate is adjusted quarterly, change the formula in January as you did in step 4, and then replicate that formula into February and March. Then place your cursor at H122, and replace the C115 in the formula with the cell location holding the second quarter's interest rate.

Enterprise Budgets. If you prefer not to input all of this data yourself, and instead wish to use the budgets, Oklahoma State University has a large computer program which generates Crop and Livestock Budgets, called Enterprise Budgets, for various sections of Oklahoma and for the state as a whole. The budgets assume certain production processes, certain yields and prices, machinery requirements and so on, and give estimates for expected receipts and expenses, both on a monthly and on an annual basis. The budgets are up-dated at regular intervals to give current costs and returns. The budgets are available through the Department of Agricultural Economics, 308 Agricultural Hall, Oklahoma State University, Stillwater, OK 74078. In this IFFS system, these budgets can be used as the beginning basis for cash flow planning. The budgets can be adapted easily to an individual farm situation, and provide a good starting point for many producers and lenders

who are analyzing prospective loan requests.

The IFFS Data Disks 3-6 contain 60 sample budgets for the major crop and livestock enterprises in Oklahoma. There is also a blank worksheet on disk 3, called BUDGET BUILDER, which can be used to create additional budgets. The budgets listed on the following pages have been adapted to this program.

BUDGET NUMBER	DISK NUMBER	DESCRIPTION	AREA
11101018	4	COW-CALF, 100 COW UNIT SIZE SPRING CALVING, NATIVE PASTURE	NORTHWEST
11101218	4	COW-CALF, 100 COW UNIT SIZE SPRING CALVING, IMPROVED PASTURE & ALFALFA HAY	NORTHWEST
11101318	4	COW-CALF, 100 COW UNIT SIZE SPRING CALVING: IMPROVED PASTURE & GRASS HAY	NORTHWEST
11601318	3	COW-CALF, 100 COW UNIT SIZE SPRING CALVING, IMPROVED PASTURE & GRASS HAY	SOUTHWEST
11701318	6	COW-CALF, 100 COW UNIT SIZE SPRING CALVING: IMPROVED PASTURE & GRASS HAY	WESTSOUTHCENTRAL
11902218	5	COW-CALF, 50 COW UNIT SIZE SPRING CALVING: DRY GRASS	SOUTHEAST
13100034	4	STOCKER STEERS: BUY OCT.15-SELL MARCH 1 400# IN- 590# OUT	NORTHWEST
13100236	4	STOCKER STEERS: BUY OCT.15-SELL MAY 15 400# IN-701# OUT: GRAZE-OUT WHEAT	NORTHWEST
13200153	5	STOCKER STEERS: STARTING WEIGHT 400# SMALL GRAIN GRAZING	NORTHCENTRAL
13601134	3	STOCKER STEERS: BUY OCT.15, 400# SELL MARCH 1, 568#	SOUTHWEST
13601136	3	STOCKER STEERS: BUY OCT.15, 300# SELL MAY: GRAZE-OUT WHEAT	SOUTHWEST
13603325	3	STOCKER STEERS: BUY MAY 1, 500# SELL OCT.1	SOUTHWEST
13701336	6	STOCKER STEERS: BUY OCT-SELL MAY GRAZE-OUT WHEAT	WESTSOUTHCENTRAL

BUDGET NUMBER	DISK NUMBER	DESCRIPTION	AREA
13900116	5	STOCKER STEERS: BUY SEPT.15, 500# SELL JULY 15: BERMUDA O.S. FESCUE	SOUTHEAST
21041101	3	DAIRY COW & REPLACEMENTS: 80 COW HERD 12,000 LBS. OF MILK SOLD PER YEAR	STATE
31012383	3	SHEEP: 100 EWE SYSTEM RAMBOUILLET EWES-DORSET RAMS REPLACEMENTS PURCHASED: FALL LAMBING	STATE
41011333	3	SWINE: FARROW TO FINISH: 90 SOW CONFINEMENT: PURCHASE COMPLETE RATION	STATE
41011433	3	SWINE: FARROW TO FINISH: 90 SOW CONFINEMENT: COMPLETE FEEDMILL	STATE
72100860	4	CORN IRRIGATED, SURFACE SYSTEM 24" WATER, CUSTOM HARVEST	NORTHWEST
73101161	4	GRAIN SORGHUM, IRRIGATED, SURFACE SYSTEM: 24" WATER, CUSTOM HARVEST	NORTHWEST
73101967	4	GRAIN SORGHUM, IRRIGATED, CIRCULAR SPRINKLER: 24" WATER: CUSTOM HARVEST	NORTHWEST
73104108	4	GRAIN SORGHUM: DRYLAND: CUSTOM HARVEST	NORTHWEST
73201904	5	GRAIN SORGHUM OWNED HARVEST EQUIPMENT	NORTHCENTRAL
73691661	3	GRAIN SORGHUM: IRRIGATED: WELL SOURCE	SOUTHWEST
73700704	6	GRAIN SORGHUM: CUSTOM COMBINE & HAULING	WESTSOUTHCENTRAL
73902001	5	GRAIN SORGHUM, UPLAND: OWNED EQUIPMENT	SOUTHEAST
74750005	6	OATS: OWN MACHINERY	WESTSOUTHCENTRAL
76101550	4	WHEAT, IRRIGATED, 18" WATER SURFACE SYSTEM: CUSTOM HARVEST	NORTHWEST
76101551	4	WHEAT, IRRIGATED, 18" WATER SURFACE SYTEM: OWNED HARVEST EQUIPMENT	NORTHWEST
76101857	4	WHEAT, IRRIGATED, 18" WATER CIRCULAR SPRINKLER: CUSTOM HARVEST	NORTHWEST
76200101	5	WHEAT FOR GRAIN	NORTHCENTRAL
76300801	6	WHEAT & SOYBEANS DOUBLE CROPPED OWNED EQUIPMENT	NORTHEAST

BUDGET NUMBER	DISK NUMBER	DESCRIPTION	AREA
76601204	3	WHEAT: LOAM SOILS	SOUTHWEST
76691831	3	WHEAT, IRRIGATED: WELL SOURCE	SOUTHWEST
76700804	6	WHEAT: LOAM SOILS CUSTOM COMBINE & HARVEST	WESTSOUTHCENTRAL
76900101	5	WHEAT: LOAM SOILS	SOUTHEAST
81101291	4	ALFALFA HAY, IRRIGATED, SURFACE SYSTEM: 33" WATER: OWNED HARVEST EQUIPMENT: CONVENTIONAL BALE	NORTHWEST
81201801	5	ALFALFA HAY: 3 TONS: 3 CUTTINGS OWNED EQUIPMENT	NORTHCENTRAL
81601904	3	ALFALFA HAY & SEED CROP CUSTOM HARVEST	SOUTHWEST
81602004	3	ALFALFA HAY OWN EQUIPMENT	SOUTHWEST
81750005	6	ALFALFA HAY & SEED OWN EQUIPMENT: CUSTOM HAUL	WESTSOUTHCENTRAL
81900101	5	ALFALFA HAY: CUSTOM HARVEST CONVENTIONAL BALE	SOUTHEAST
83200902	5	BERMUDA PASTURE & HAY: 1.25 TONS 1 CUTTING (JULY): CUSTOM HARVEST	NORTHCENTRAL
83205101	5	BERMUDA PASTURE: GRAZING MAY THRU OCTOBER	NORTHCENTRAL
83608302	3	BERMUDA: 50# NITROGEN	SOUTHWEST
83900301	5	BERMUDA GRASS PASTURE & HAY CONVENTIONAL BALE CUSTOM HARVEST & HAUL	SOUTHEAST
84901102	5	FESCUE & BERMUDA: HAY & PASTURE CUSTOM HARVEST	SOUTHEAST
85100001	4	NATIVE PASTURE: YEAR-ROUND GRAZING	NORTHWEST
85300101	6	NATIVE GRASS PASTURE YEAR-ROUND GRAZING	NORTHEAST
85901101	5	NATIVE PASTURE, MAINTENANCE	SOUTHEAST
86100560	4	CORN SILAGE, IRRIGATED, SURFACE	NORTHWEST

BUDGET NUMBER	DISK NUMBER	DESCRIPTION	AREA
87600902	3	SUDAN FOR PASTURE	SOUTHWEST
89200801	5	SMALL GRAIN GRAZE-OUT	NORTHCENTRAL
89692834	3	SMALL GRAIN GRAZE-OUT, IRRIGATED FLOOD IRRIGATION: WELL SOURCE	SOUTHWEST
89740005	6	SMALL GRAIN GRAZEOUT	WESTSOUTHCENTRAL
93602904	3	COTTON: DRYLAND	SOUTHWEST
93693251	3	COTTON: IRRIGATED, WELL SOURCE FLOOD IRRIGATION	SOUTHWEST
95500718	6	PEANUTS: OWN MACHINERY	EASTCENTRAL
95740007	6	PEANUTS: DRYLAND	WESTSOUTHCENTRAL
98901201	5	SOYBEANS: CUSTOM HARVEST	SOUTHEAST

These budgets are all compiled on a per acre or per head basis. First, choose the budgets which you think are most appropriate to your farm situation, or to the farm you are planning to analyze. Before loading any of the worksheets, have on a handy piece of paper the total number of acres or head for each enterprise, and any changes you anticipate making to more accurately describe your own operation.

Loading the Enterprise Budgets. Follow these instructions:

1. The first step is to load the Crop and Livestock Budget worksheet on IFFS Disk 1. With a clear worksheet on the screen, type this sequence of commands: / S(torage) L(oad) and C&L BUDGET. This will just take a few seconds.

2. Now, load the first budget you will be using. Without moving the cursor from A1 and without clearing the screen, type these commands: / S(torage) L(oad) and the filename, such as 76601204, the wheat budget for Southwest Oklahoma. Insert the total number of acres in cell number D4. This process completes one budget at a time, so be sure to enter only the number of head or the number of acres, and not both! If you don't have any corrections to make, recalculate the worksheet once (by typing a !), and the total expenses and receipts will be calculated for you.

Customizing the Budgets. The budgets can be "customized" to fit your own situation.

3. To make an adjustment in the yield per acre or in the amount of fertilizer used, just place the cursor at the appropriate cell location and type the new formula or value. If you are not changing the monthly allocations, then just recalculate the worksheet (by typing a !) and the adjusted totals will appear. As an example on the wheat budget, file number 76601204, let's change the cost of seed from \$4.40 per bushel to \$4.65. Place the cursor at F32 and type the new price, 4.65. Now, recalculate the worksheet and that's all there is to it!

4. As another example, change the monthly allocation of fuel, oil and lubricants so equal costs are incurred in January, July, August and September and those costs are doubled in June and October. The monthly entries are percent allocations of the totals and these formulas should be changed very carefully. First, blank out the existing formulas in cells H37 to S37 by placing the cursor at H37 and typing these commands: / B(lank) and Y(es). Then, copy that "blank" in the other months by leaving the cursor at H37 and typing: / R(eplicate) H37 as the "source" cell and I37 to S37 as the "target range". Without moving the cursor, enter the new formula for January, which would be +G37*.125, which would multiply the yearly total by one-eighth. Then, replicate that formula in cells N37 thru P37. This is done in the same manner as before, with the "target range" being N37 to P37. When the computer prompts you with "No Change or Relative" for the G37 cell, type an N in this case. Now, move the cursor to M37 and enter the new formula, +G37*.25. Replicate that formula into cell Q37 for October's cost. Now, just recalculate the worksheet and the revised expenses will be computed for you.

Saving the Worksheet and the Data. Follow these instructions:

5. If you have made some changes in the budgets, you might want to save the worksheet. Again, this can be saved onto your own data disk, or it can replace the file you loaded, in this case, 76601204. In any case, save the worksheet by typing: / S(torage) S(ave) and the filename, but do not clear the screen yet.

6. Now, we want to save just the data you've created in a DIF file for future use in the whole farm Cash Flow Statement. Place the cursor at G55. To do this, you can either use the four directional arrows and move to the cell location. Or, you can type a > and then the computer will prompt you with "Go to: Coordinate" and you just type the column and row coordinates of the cell you are heading towards. This can save a lot of time in a large worksheet. However you get there, you should now have the cursor at G55.

7. Type this sequence of commands: / S(torage) # S(ave) and the filename, such as 76601204.DIF. When the computer prompts you with: "Data Save : Lower right", type a S79 for all of the crop and livestock budget worksheets in this exercise. Then, when you are

prompted with "Data save: R C or RETURN", always press the RETURN key or R. When all of these steps have been completed, the actual data will be saved on your diskette and can be later loaded into the Cash Flow worksheet.

8. Before loading the next budget, you have to clear the top fifty-one rows of this worksheet. Do this by loading the C&L CLEAR file which is located on each disk containing the Enterprise Budgets. Type: / S # L C&L CLEAR. Load this file by ROWS. Now you are ready to load the next budget by following the exact same procedures as above, beginning with Step 2.

9. If you are interested in building your own budgets from scratch, load the BUDGET BUILDER file. This is essentially the same worksheet as the C&L BUDGET, except it takes less memory to store the individual budgets in this format. The totals could be filled out on a per acre basis in column F and the monthly allocations would then be entered as percentages. Or, monthly data could be entered in columns H through S and then column G would have a formula to sum the monthly data. To do this, the formula @SUM(list) must be entered in column G. When all the information is typed, place the cursor at A1 and save the worksheet as before. A DIF file is not created from this worksheet.

Additional Information Budget. In addition to the crop and livestock budgets, there is an Additional Information Budget worksheet on IFFS Data Disk 1. This budget is for the whole farm, and the income and expense items are not allocated to any particular enterprise. The entries include Capital Sales and Expenses, Income from Wages or Investments, Family Living Expenses, Debt Repayment and New Borrowing.

1. Load the Additional Information worksheet in the same manner you loaded all of the other budgets. Insert IFFS Disk 1 and type: / S(torage) L(oad) and the filename which is AI/VC.

2. Fill in only the monthly data in columns F through Q except for "Wages and Salaries" and "Family Living" in rows 10 and 18. For these two items, just the totals should be entered in column E and the monthly allocations will be computed for you. If you wish to change the percent allocations, just be sure that the sum of the months equals the total!

3. Recalculate the worksheet twice (by typing a ! twice) and save both the worksheet and the DIF file as before. The VisiCalc worksheet should be saved by typing: / S(torage) S(ave) and the filename, AI/VC. The DIF file should be saved by placing the cursor at F46 and typing: / S(torage) # S(ave) and the filename, AI.DIF. The lower right is R65. Again, save the data by rows.

4. Clear the worksheet by typing: / C(lear) Y(es).

Accumulating the Data. The next logical step is to accumulate all of the data you have saved into a general Cash Flow worksheet.

5. With a clear screen in front of you, load the CASHFLOW/VC template on IFFS Disk 1 by typing: / S L and CASHFLOW/VC.

6. For example, let's assume you have completed three budgets for Southwest Oklahoma, 11601318, 76601204 and 93602904. The DIF files were saved by following the file numbers with .DIF. With the cursor located at A1, load the first Crop and Livestock Budget's DIF file. (Important: The "-999999" in A1 is not a mistake..Leave it alone!) To load the DIF file, type this sequence: / S # L(oad) and the filename, 11601318.DIF. Load all DIF files by hitting the R or the RETURN key when you are prompted with "Data load: R C or RETURN". This will take several seconds.

7. Once the information is loaded, and WITHOUT CLEARING THE SCREEN OR MOVING THE CURSOR FROM A1, load the next budget's DIF file in the same manner as the first. Repeat this process until all of the Crop and Livestock Budget data has been entered.

8. Now, again at A1, load the "BLANKOUT.DIF" file on your IFFS Data Disk I the exact same way you just entered the enterprise DIF files. This step is necessary so the information in the last enterprise budget you loaded is not loaded twice. Once "BLANKOUT.DIF" is loaded, the top 50 rows of the screen will be blanked out.

9. Now, move the cursor to A26 and load the Additional Information DIF file (AI.DIF) in the same manner you've loaded all of the other DIF files.

10. Move the cursor to C115 and enter the Operating Loan interest rate (15% should be entered as 15, 14 1/2% as 14.5). The Minimum Cash Balance desired should be entered in D116.

11. Now, recalculate the worksheet several times. If you've followed all of luck, your Cash Flow Statement should be completed. To see the results, cursor down the screen through Q128.

12. The data in the Cash Flow Statement will be needed later in the Integrated Statement. This is the best time to save the data. Place the cursor at E56 and save the data in a DIF file. The filename should be CASHFLOW.DIF and the lower right is P112.

13. Clear the worksheet.

Net Worth Statement

Let's move on to the Net Worth Statement. The Net Worth Statement gives a condensed, birds-eye view of the financial

position of a business. As it is condensed, there is not always enough room to get sufficient working space or detail on the statement itself. To provide more detail, the IFFS system has a group of background worksheets, called Balance Sheet Supporting Schedules, which can be loaded into the final Net Worth Statement later on. These schedules are optional. If the user has another ledger or account book with Accounts Payable, Machinery and Equipment Reports and so on, these schedules could be redundant.

The following VisiCalc worksheets and DIF files will be discussed in this section:

FILENAME	PURPOSE
=====	=====
BSSS	These are the Balance Sheet Supporting Schedules and include: Securities Accounts & Notes Receivable Livestock & Products Crops, Feed & Supplies Breeding Livestock Real Estate Machinery & Equipment
NW1-6	There are six different versions of the Net Worth Statement which are described in detail in this section.

The Balance Sheet Supporting Schedules. If the Net Worth Statement is to be used in conjunction with the Supporting Schedules, follow these instructions:

1. To complete the Balance Sheet Supporting Schedules, load the BSSS VisiCalc template on the IFFS Data Disk 2. Do this by typing: / S(torage) L(oad) and BSSS. There is a Table of Contents at the top of the screen to save you some time moving the cursor around the worksheet.
2. Complete those sections of the worksheet which are relevant to your farming operation by simply moving the cursor around the schedules and entering the data into the appropriate cells. It is not necessary to sum any of the data yourself... the computer can do that!
3. Recalculate the worksheet several times and then save the template. This should be saved under another filename than BSSS so the original is kept blank. Save the worksheet as before, by typing / S S and the filename.
4. Save just the data in a DIF file whose upper left-hand cell is X46

and whose lower right is Y108. Do this by typing: / S # S and BSSS.DIF as the filename.

5. Then clear the worksheet (/ C Y) and load one of the Net Worth Statements.

There are several different Net Worth Statements which are explained in more detail below. The user should choose beforehand which format is most appropriate to the business needs. It is useful to have a printer available when completing this statement. The data generated in the Net Worth Statement will have to be manually input into the Integrated Statement later on, and a hardcopy will be extremely useful.

To load one of the Net Worth Statements, follow these instructions:

6. With a clear screen in front of you, and the IFFS Data Disk II in the disk drive, type: / S L and the filename, such as NW1, NW2, NW3 and so on.

7. Place the cursor at A1 and load the BSSS.DIF file by typing: / S # L and BSSS.DIF. This should be loaded by rows as the other DIF files have been loaded. If you have a BSSS file for the Ending Balances, load this DIF file at C1.

8. Now, input any additional data from your keyboard in all appropriate sections of the balance sheet except where the Supporting Schedule data is located and where the formulas are entered. The formulas are located in those cells which have zeros in them when the worksheet is first loaded up. Leave those cells alone unless you want to change the actual formulas.

9. After all of the data is entered, recalculate the worksheet twice (by typing a ! twice).

10. Save the worksheet, under a new filename, by typing: / S S and the filename.

11. To print the worksheet, place the cursor at the upper left-hand cell and type these commands: / P P - and the bottom right cell location. The different statements are different sizes, so the upper left and bottom right cells are listed in the discussion of each statement.

12. To print the worksheet in condensed print, which is generally 17 characters per inch (CPI), rather than 10 CPI, follow the instructions for your printer. For the Epson printers, type a " ^CO after the commands above. For the C.I.TOH Prowriters, type a " ^EQ after those commands. Always follow the instructions in your printer manuals if you encounter any problems.

All of the Statements can be used with or without the Balance Sheet Supporting Statements DIF files. If the DIF file option is not used, direct input on the keyboard must be made for all entries on the Net Worth Statement. To do this, follow instructions #6-11 omitting #7

above.

A brief explanation of the various Net Worth Statements is provided below:

Net Worth One. This Net Worth Statement has both Modified Cost values and Market Values. Modified Cost is used with readily marketable bonds and securities, machinery and equipment, and real estate. The other assets and all of the liabilities are valued identically at Market Value and Modified Cost. Market Value estimates are based on current appraisals of the assets and liabilities and, as such, include the effects of inflation. In most cases, the Market Value approach will give higher values to the assets than with Modified Cost, and is generally the approach used to determine collateral for a loan. Using the Modified Cost method, the items above are valued at cost or basis less accumulated depreciation. Thus, net worth is also on a cost basis, and it ignores some of the major effects of inflation to give a clearer picture of the actual growth of the business. This statement gives the total numbers of livestock (market and breeding livestock), and total acreage of pasture and cropland without any detail as to weight or price. The Contingent Tax Liability items in Current, Intermediate and Long Term Liabilities are only relevant in the Market Value section because of the capital gain implications on Marketable Securities, Machinery and Equipment , Breeding Livestock, and Real Estate.

This statement can be printed on a 14" X 11" sheet of computer print-out in regular printing styles (10 CPI), or on an 8 1/2" X 11" sheet in condensed print (17 CPI). The upper left is F1 and the lower right cell is T63.

Net Worth Two. This statement gives no detail on the livestock numbers and real estate acreage. It has only one column for valuation of the assets and liabilities and, for most items, Market Value is used. Machinery and equipment are valued at the Modified Cost basis, or cost less accumulated depreciation. This should result in a more conservative estimate than Market Value, which is a "safer" method for a lender in determining the value of security for a loan.

This statement has the same printer options as Statement One.

Net Worth Three. The third Net Worth Statement also gives no additional detail on livestock and real estate. It has columns for Beginning and Ending Balances and Net Change for all Assets and Liabilities, where the valuation is identical to Net Worth Two. The accounting period, for Beginning and Ending Balances, is usually the calendar year. Whatever period of time is chosen, it should be consistent from year to year, and it should correspond to the time when revenue and expenses for the business are summarized.

Net Worth Three must be printed in condensed print on the wide computer print-out paper. The upper left is I1 and the lower right

cell is W63.

Net Worth Four. Net Worth Four differs from the previous three statements in that it gives full detail on the livestock (market and breeding livestock) and gives acreage amounts on pasture and cropland. The detail might be desired by a livestock producer as a way to determine if the change in net worth is due to increased livestock weight or prices, or to changing land values, for instance. The columns for Beginning and Ending Balance and for Net Change are the same as Net Worth Three, as is the method of valuation. All assets and liabilities are valued at their estimated market value, except for Machinery and Equipment, which is valued at cost or basis less accumulated depreciation.

This statement can be printed on two sheets of the 14" X 11" computer print-out in condensed print. The upper left is I1 and the lower right cell is AF98.

Net Worth Five. This Statement also gives a full description of the livestock and real estate. It differs from Statement Four in the valuation columns. It gives both Modified Cost and Market Values at one point in time, like the first Net Worth Statement.

It can be printed on two sheets of 8 1/2" X 11" paper in condensed print. The upper left is G1 and the lower right cell is U95.

Net Worth Six. This Statement is identical to the last one, except the valuation is identical to number two. All items are valued at their estimated Market Value, except Machinery and Equipment.

It has the same printing options as the last statement. The upper left is G1 and the lower right cell is T95.

Now, let's sit back for a minute and contemplate what we've accomplished up to this point. By now, the Net Worth and Cash Flow Statements should be completed. To construct an integrated, or combined worksheet using the Net Worth, Cash Flow and Income Statements, beginning and ending values are needed on the Net Worth Statement. Net Worth Statements Three, Four or Six have beginning and ending values already incorporated in them. To use the other Statements, two print-outs would be necessary because both beginning and ending values are needed to complete the Income Statement. The change in Net Worth, from the beginning to the end of the accounting period, is needed to calculate the change in inventory values on the Income Statement. To continue then, let's assume one of these statements was completed and a print-out is available with both beginning and ending balances.

Integrated Statement

1. With a clear screen in front of you, load the VisiCalc template on IFFS Disk 2 named "INTEGRATED STATEMENT" by typing these commands: / S L and INTEGRATED STATEMENT. Don't panic when you notice several ERROR messages on the three statements... they will soon disappear!

2. Now, input the data from your Net Worth Statement into the worksheet. Several items on the Ending Balances will be entered directly from the Cash Flow Statement, so leave these blank. They are: "CASH & CHECKING", a Current Asset; "NOTES PAYABLE" and "INTEREST DUE ON CURRENT LIABILITIES", under Current Liabilities; "NOTES PAYABLE" under Intermediate Liabilities; and "MORTGAGES AND NOTES PAYABLE", a Long Term Liability.

3. Move the cursor to E40 and load the DIF file from your Cash Flow Statement. The commands are: / S # L and the filename, which is CASHFLOW.DIF. The file should be loaded by rows when the computer prompts you with: "Data load: R C or RETURN".

4. Then, at C99 and D100, insert the appropriate interest rate to be used in calculating the Operating Loan cost, and the Minimum Cash Balance required. The interest rate should be entered as a percentage, such as 15 or 14.5.

5. Recalculate the worksheet three times (type a ! three times). At this point, all three Statements and the Financial Ratios should be completed. Move the cursor around the screen to see the results.

6. If you are interested in doing any "What-If's?", change the appropriate cell value, and recalculate the worksheet several times to be sure all the formulas tied to that value are changed.

7. When data are loaded into the Cash Flow Statement from the DIF file, several things happen. One, all of the values entered are now at full precision, with four or five decimals, in the individual cell locations. Two, several formulas for summation have been replaced with values. A characteristic of the DIF file is that only numbers can be saved and, therefore retrieved. If a number is the result of a formula, such as the summation of all cash expenses in January, then only the actual value is saved, and not the formula itself. This presents a problem in the Integrated Statement if changes are to be made in the Cash Flow section. To correct this problem, place the cursor at the following locations, and enter these commands:

<u>Cursor Location</u>	<u>Commands</u>
E48	@SUM(E40...E47)
Total Cash Receipts	/ R(eplicate) RETURN

Cursor Location	Commands
	F48...P48 (as the target) R(egative) R
E57 Total Cash Inflow	@SUM(E48...E56) / R RETURN F57...P57 R R
E78 Total Cash Expenses	@SUM(E59...E77) / R RETURN F78...P57 R R
E93 Total Cash Outflows	@SUM(E78...E92) / R RETURN F93...P93 R R

NOTE: The TOTALS in column Q were not affected by the DIF file.

8. To change any of the crop and livestock prices and yields on a per acre basis, it is necessary to return to the original budgets and make the adjustments there. Then, load the revised DIF files into the CASHFLOW/VC worksheet as before.

A print-out of this worksheet can be obtained using three sheets of 14" X 11" paper and the condensed printing style. The lower right cell is Q177.

Figure 12 on the following page shows the general relationship between the supporting schedules, budgets and Financial Statements.

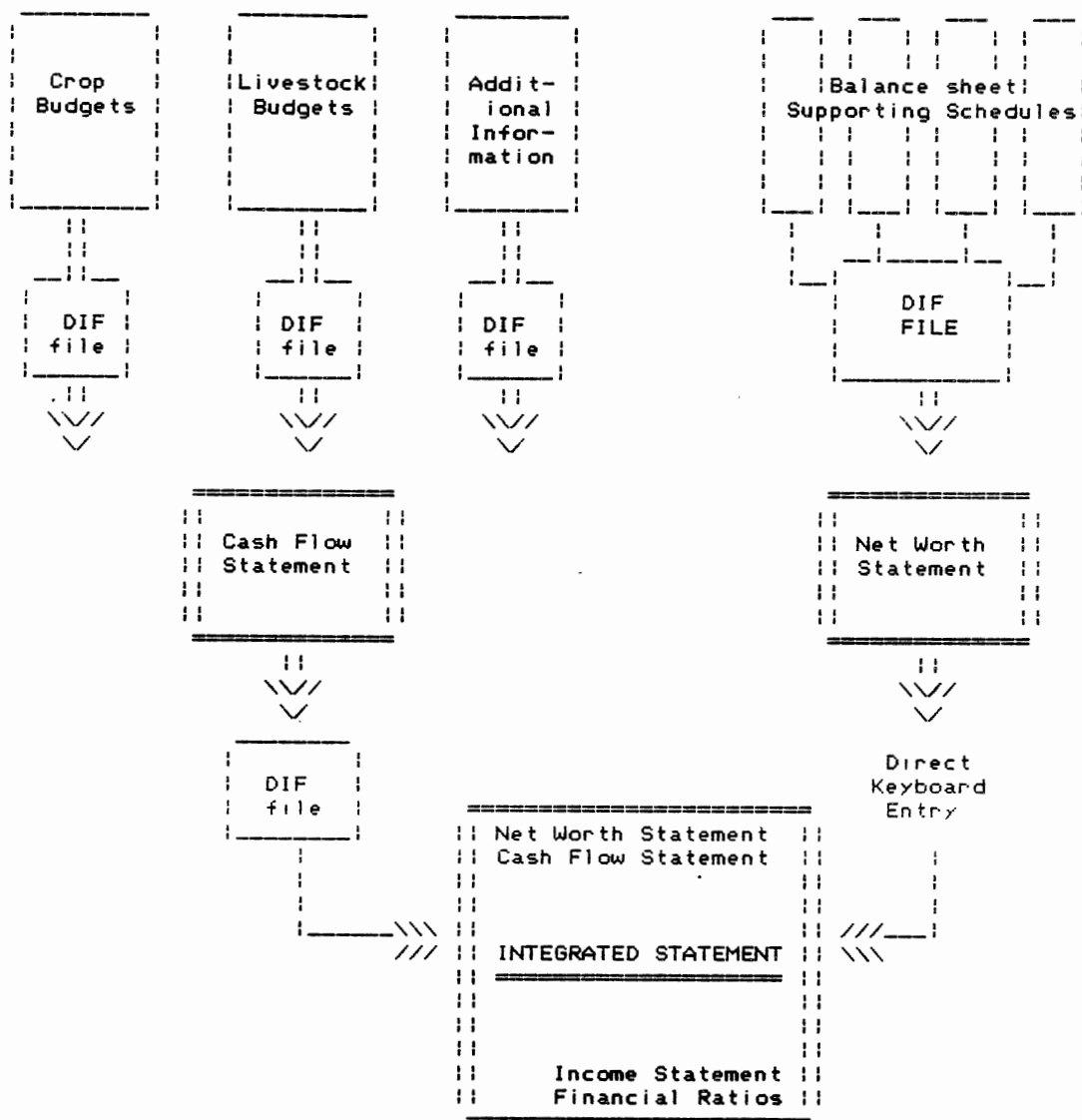


Figure 12. Relationship of Budgets, Supporting Schedules and Financial Statements

Two Examples of the Integrated Statement. The following examples provide an illustration of the interdependence between the financial statements.

Load the "OK Producer" template on the IFFS Data Disk 1 (by typing: / S L and OK PRODUCER) and follow the effects of a change in the short-term interest rate. To do this, once the worksheet is on the screen, place the cursor at C115. The interest rate in the example is 14%. Change this to 15.5% and recalculate the worksheet (by typing a !) three times. Now move the cursor around the screen through the Net Worth, Cash Flow, and Income Statements and the Financial Ratios and observe the changes. The changes are summarized below:

Net Worth Statement: Ending Current Liabilities increased by \$341.00.

Ending Net Worth decreased by \$341.00.

Cash Flow Statement: New Borrowing for Operating Purposes increased by \$242.00.

Interest Payments on Operating Loan increased by \$242.00.

Outstanding Operating Debt increased by \$242.00.

Income Statement: Total Cash Expenses increased by \$242.00

Net Cash Income from Operations decreased by \$242.00

Accounts Payable and Accrued Expenses decreased by \$100.00.

Net Farm Income decreased by \$341.00.

Financial Ratios: Per Cent Equity decreased by .07%.

A copy of this example, labelled "OK Producer-Example 2", can be found in the Appendix.

As another example, let's assume the bookkeeper had forgotten about the \$1,000 that was hidden in the safe in the boss' office. Change the beginning "Cash and Checking" balance on the Net Worth Statement to \$3,000 and recalculate the worksheet three times (by typing a ! three times). The changes on the financial statements are summarized below:

Net Worth Statement: Beginning Current Assets increased by \$1000.00.

Ending Current Liabilities decreased by \$1,077.00.

Beginning Net Worth increased by \$1000.00.

Ending Net Worth increased by \$1077.00.

Cash Flow Statement: New Borrowing for Operating Purposes decreased by \$2,646.00.

Interest Payments on Operating Loan decreased by \$52.00.

Principal Payments on Operating Loan decreased by \$1,594.00.

Outstanding Operating Debt decreased by \$1,052.00.

Income Statement: Total Cash Expenses decreased by \$52.00.

Net Cash Income from Operations increased by \$52.00.

Accounts Payable and Accrued Expenses increased by \$25.00.

Net Farm Income increased by \$77.00.

Financial Ratios: The Current Ratio increased by .02.

The Net Capital Ratio increased by .02.

Debt to Equity Ratio decreased by .01.

Per Cent Equity increased by .2%.

A copy of this example, called "OK Producer- Example 3", can also be found in the Appendix.

The Monitor Statement

As a way to evaluate an ongoing farm operation, the IFFS includes a Cash Flow Monitor Statement. This Statement provides a monthly comparison of the projected receipts and expenses to the actual receipts and expenses. It provides a means to:

1. Evaluate how closely the projected figures estimated the

actual results.

2. Determine whether financial, production or management adjustments are necessary for the business to be successful.

3. Identify exactly when and where the actual problems occurred.

4. Examine the causes behind those problems and determine how significant they could be.

5. Assist in projecting the following year's receipts and expenses more realistically.

In the Monitor Statement, the difference between the projected and the actual figures is a measure of the variance. A positive figure represents an increase in receipts or a decrease in expenses between the projections and the actual results. A positive figure represents an improvement in the overall cash flow position of the business. This situation is referred to as "under budget". Conversely, a negative figure represents a decrease in receipts or an increase in expenses. A negative figure represents a worsening in the cash flow position and is referred to as "over budget". The year-to-date figures are an accumulation of the monthly data, from January up to and including the month that is being compared. For example, if actual results are available for the first half of the year, then the monthly comparison will be between the projected and actual figures for June, and the year-to-date figures will represent the summation of monthly data from January through June.

The IFFS Monitor Statement is constructed with data from the Cash Flow Statement. Several manipulations of the data into Data Interchange Format (DIF) files are explained below. The use of DIF files is an attempt to save the time of entering data into a worksheet which would be considerable with this size Cash Flow Statement. The Monitor Statement provides a monthly and a cumulative comparison of projected cash flow figures to the actual results.

The first step is to complete the projected Cash Flow Statement for the entire year. This can be done with the use of crop and livestock budgets, previous year's records, or other sources of information. Once the statement is completed, the individual monthly data must be saved into DIF files. Saving all of these will take approximately 190 bytes of storage space on your diskette. Save these files by typing the following sequence of commands:

1. Have either the Cash Flow Statement in the Integrated Statement or the independent Cash Flow Statement completed and loaded into your computer.

2. Place the cursor at E56 for ALL of the files to be saved if you have CASHFLOW/VC loaded. The cursor should be at E40 for all

files if the INTEGRATED STATEMENT is loaded.

3. Type: / S # S and the filenames, which should be JAN.PROJ, FEB.PROJ, MAR.PROJ and so on.

4. INTEGRATED STATEMENT: When prompted by the computer, the lower right cell location is E112 for the JAN.PROJ file, F112 for February, G112 for March, H112 for April, I112 for May, J112 for June, K112 for July, L112 for August, M112 for September, N112 for October, O112 for November and P112 for December. For the CASHFLOW/VC worksheet, the lower right locations are E128, F128, G128, H128, I128, J128, K128, L128, M128, N128, O128 and P128.

5. All of the files should be saved by pressing RETURN when the computer prompts you with: Data Save: R C or RETURN.

Now, the projections will be saved for the year. The actual data should be completed on a monthly basis. After each month's data has been entered, save the DIF files in the same manner the projections were saved. The filenames should be JAN.ACT, FEB.ACT and so on. The bottom right locations will be identical to the projected data files.

After each month, it is possible to analyze the progress of the business through the Monitor Statement. To do this, load the Monitor Statement which is located on the IFFS Data Disk II. This worksheet should be loaded as any other VisiCalc template with the commands: / S L and the filename, MONITOR. Don't be concerned about the ERROR messages which appear in the Year-to-Date section... they will soon disappear!

Let's assume you are interested in analyzing the business for the month of June. Then, after the Monitor is loaded, follow these steps:

6. Place the cursor at G4 and load the projections for June. Do this by typing: / S # L and the filename, JUN.PROJ. Load all DIF files by pressing RETURN when prompted by the computer.

7. Then move the cursor to G79 and load the JUN.ACT file in the same way.

8. Now, recalculate the worksheet twice. (by typing a ! twice)

9. Scroll down the worksheet to see the results which are located in A153 through L231.

10. Generally, just the results would be printed. The Monitor Statement can be printed on two sheets of 8 1/2" X 11" paper in condensed print (17 characters per inch) or on two sheets of 14" X 11" paper in normal print. Before printing, place the cursor at A153. Then, type the printer commands: / P P - and the bottom right location which is L231. For condensed print, after typing the -, type: " ^EQ for the Prowriter printers, and " ^CO for the

Epson printers.

The projected and actual DIF files must be loaded in the appropriate cell locations to get the proper results. These locations are summarized below:

MONTH =====	Load PROJECTIONS at: =====	Load ACTUALS at: =====
January	L4	L79
February	K4	K79
March	J4	J79
April	I4	I79
May	H4	H79
June	G4	G79
July	F4	F79
August	E4	E79
September	D4	D79
October	C4	C79
November	B4	B79
December	A4	A79

To analyze another month, you don't need to clear the screen. Just follow these instructions:

11. Place the cursor at A4.

12. Load the CLEAR file which is on the IFFS Data Disk II. Do this by typing: / S # L and the filename, CLEAR.DIF. Recalculate the worksheet once.

13. Now load another month's projections and actuals in the same manner you loaded the June data.

The Spread Sheet

The Spread Sheet does not rely on the DIF files for data entry. All figures must be manually input from the keyboard into the worksheet. Load this VisiCalc template located on IFFS Disk 2 as follows:

1. Type: / S L and the filename which is SPREAD SHEET.

2. Enter the data from print-outs of your Net Worth Statement, Income Statement and Financial Ratios for every year and save the worksheet each time under the same name (SPREAD SHEET). Type: / S S and the filename.

3. This worksheet can be printed on two sheets of 8 1/2" X 11" paper in the normal print size (11 CPI). Place the cursor at A1. The bottom right cell is N91.

Chapter 3 contains the financial statements for several hypothetical farm situations which were developed using the Integrated Farm Financial System. In Chapter 4, another farm situation was analyzed in detail using the financial information from the IFFS program.

CHAPTER III

PROGRAM APPLICATIONS

To illustrate the usefulness of the Integrated Farm Financial Statements, this study includes an analysis of five farm situations in different areas of Oklahoma (figure 13). Data for the study was obtained from Oklahoma State Area Extension Specialists in Farm Management from these areas of the state. The farm situations are described as typical farms, and not necessarily optimum resource scenarios.

The Integrated Farm Financial Statements program was used to analyze the five case farms. Crop and livestock enterprise information was developed using the OSU Enterprise Budget Generator as modified by the area agents (Dept. of Agricultural Economics). Certain basic information about each representative farm situation was obtained from the area agents, including estimates of off-farm income, family living expenses, average volume and value of crops in storage, and average investment and percent equity in machinery, equipment and real estate.

The first step in building the financial statements was to modify the individual enterprise budgets from the mainframe computer so they could be accessible to the microcomputer. Income and cash expense items were allocated by months, and then totaled for the year in individual worksheets. After any modifications were made to the budgets, the actual numbers of acres or head of livestock were entered

to determine the total receipts and costs for each enterprise. All of the enterprise data were then accumulated in one worksheet to be used later in the Cash Flow worksheet.

An additional information worksheet was then completed for each area. Information included income and expense items which were related to the farm as a whole and could not be allocated to any one enterprise. Capital Sales, Wages and Salaries, Investments, Capital Expenses, Family Living Expenses, Income Tax and Debt Repayment were included in this budget. Some of the data in these worksheets was obtained from the area agents, and the rest was developed to provide a variety of equity situations and credit terms for each area.

Data from the enterprise budgets and the additional information budget were then consolidated into the Cash Flow Statement. This statement provides a monthly summary of all income and expenses for the farm. An appropriate interest rate for operating credit and a required, or preferred, minimum monthly balance in the farm bank account were entered into the Statement. The program then computes, based on the total inflows and outflows for each month, the amount of money which has to be borrowed to cover all expenses. In the months where a surplus of funds exists, the operating note is paid down. As a planning tool, the Cash Flow Statement provides estimates of the repayment capacity of the business which are useful for scheduling repayment of existing debts and for acquiring additional credit. With existing loans, it is important to time the repayment terms with anticipated income flows. With new loan requests, the Cash Flow Statement provides a basis for loan approval or denial based on repayment ability.

The Cash Flow Statement was then combined with the beginning of the year Net Worth Statement and the end of the year Net Worth Statement in the Integrated Statement. While the Cash Flow Statement is basically a flow concept, the Net Worth Statement and Income Statement are stock concepts. The Net Worth Statement gives a financial glimpse of the business at a particular point in time, which is usually at the beginning or end of the year. Data for the Income Statement and Financial Ratios were calculated directly from the other two statements. No additional information was necessary.

The criteria used to analyze the farm situations included liquidity, solvency, profitability and trends in equity positions and cash flow. Liquidity refers to the ability of a business to meet its short-term obligations without having to borrow money or sell its productive assets. Ratios which are used to measure liquidity include the Current Ratio, Working Asset Ratio and Debt Structure Ratio. These ratios were explained in more detail in Chapter II.

Solvency indicates whether a business has sufficient assets to cover its liabilities. In case of liquidation, a business which is solvent will be able to pay all of its creditors and other liabilities from the sale of the business assets. There are several ratios which show whether a business is solvent, although the amount of net worth gives one of the clearest indications. Other measures include the Net Capital Ratio, Debt to Equity Ratio, Total Debt Ratio, Per Cent Equity, and Debt Servicing Ratio.

Profitability measures whether the business made a profit or loss during the year. Net Farm Income shows whether sufficient income was generated by the business to cover costs plus a residual to retire

debts, provide a return to unpaid labor and management, and provide for growth of the business. Other measures of profitability include the Return on Equity and the Return on Investment.

Changes in net worth from the beginning of the accounting period to the end will give an indication of whether the business is able to remain solvent in future years from the earnings of the business. A decreasing trend might indicate that the business is continuing to operate only through depletion of its equity base. The amount of operating credit from beginning to end of the year gives another picture of the profitability of the business over time.

This chapter gives a description of the resource situations of farms in four areas of the state and summarizes the results of the analyses. The Cash Flow Statements, Net Worth Statements, Income Statements and Financial Ratios for each area are included in the Appendix. An in-depth analysis of one farm situation in Northwestern Oklahoma is then described in the next chapter.

Southeastern Oklahoma Case Farm

The Southeastern district includes Haskell, Pittsburg, Latimer, LeFlore, Atoka, Pushmataha, Choctaw and McCurtain counties. This is one of the poorest parts of the state agriculturally, with the average market value of agricultural products sold in 1982 ranging from a high of \$57,592 in Haskell County to \$24,399 in Latimer County for farms with sales of \$10,000 or more (U.S. Dept. of Commerce). Only the medium and large farms were included in these statistics in order to remove the influence of part-time and hobby-type farms. The average size farm ranged from 1164 acres in Pushmataha County to 522 acres in

McCurtain County. The average investment in land and buildings ranged from \$472,620 in Pushmataha County to \$254,027 in Latimer County. Over half of the farms in this category are operated by full-owners, with the rest primarily part-owners and a few tenants. The majority of farms in this area are family operated. The remainder are partnerships and corporations which often have the farm family owning the controlling interest in the business.

Resources

The representative farm was composed of 350 acres of owned land and 100 rented acres. Two hundred acres of cropland were planted in peanuts, soybeans and bermuda grass. The remaining two hundred and fifty acres were unimproved, native pasture. Fifty cows were grazed on the bermuda grass during the winter months, and were then put onto the native pasture. Both the peanuts and soybeans were grown on rented land, with a crop share agreement between the landlord and operator. The landlord received one third of the income from each crop, and was responsible for one third of the fertilizer and chemical expenses.

This was a family owned and operated farm, with hired labor available in the area at \$4.25 per hour. Off-farm income was estimated at \$12,000 annually, and family living expenses at \$12,000. The beginning Net Worth Statement showed \$22,000 of current assets, \$84,817 of intermediate assets and \$197,500 of long-term assets, primarily real estate.

Financial Data

This farm was indebted to the Production Credit Association for equipment purchases and to the Federal Land Bank for real estate purchase and improvements. A local bank held the first and second mortgages on the residence, and had a line-of-credit with the farm business. Average equity in the machinery and equipment was 51.68% and equity in the real estate was 68.14%. Neither of these percentages is unusual for the farming industry, although many farmers do not have as high an equity in their land as this operator.

Overall, the owners had an average equity level of 66.36% in the business during the year. This is certainly a solvent business, with approximately \$196,714 in assets in excess of total liabilities. If a sale or liquidation was necessary, all indications are that creditors could be paid in full, and the owners left with a sizable amount of money. Although not a significant change, the percent equity did decrease from the beginning of the year to the end, from 66.7% to 66.35%. The beginning operating debt was \$4,052 including principal and interest. An additional \$33,014 was borrowed during the year, \$32,963 repaid, for a net increase in operating credit of \$2,532 (Appendix Table C-2).

The above figures do not suggest a business with a great deal of financial stress, but the Income Statement and Financial Ratios give another perspective. The Net Cash Income from Operations was \$5,384 while Net Farm Income was \$-17,098. Negative net farm income indicates a weakening of the financial structure due to adjustments in inventory, primarily machinery and equipment. These changes can be

seen in Adjustments for Capital Items in the Income Statement. A large amount of depreciation of machinery and equipment during the year caused a disproportionate decrease in asset values.

From the Current Ratio of .876, it appears that this business has a liquidity problem. The rule-of-thumb for lenders in the farming industry is a Current Ratio of 2.0 as the minimum satisfactory value. The value of .876 provides an insight into the cash flow problems of the business, albeit slight problems, mentioned earlier. The Debt Structure Ratio of .269 which is computed as current liabilities divided by total liabilities seems reasonable for a farm operation with a majority of intermediate and long-term indebtedness. The asset side seems to be the problem, with current assets representing only 7.5% of total assets.

The Working Asset ratio, which is similar to the Current Ratio except it includes intermediate assets and liabilities, was 2.56 indicating a more favorable financial position of the business. Cash Interest paid of \$10,234 represented approximately 19% of Total Cash Expenses for the year.

Both the Return on Investment and Return on Equity were fractional, negative figures based on an Opportunity Return to Labor and Management of \$18,000. These figures are computed from Net Farm Income which was low due to the depreciation of capital assets, and thus the low returns might not be a major concern of management.

To summarize, this farm was relatively small and located in an area where land values are generally lower than other areas of the state. As a result, owner equity has not risen as dramatically as it has in other parts of the state. This farm also had a low level of

operating debt. This low operating debt seems at odds with the low Current Ratio mentioned earlier. This can be explained by the lack of market livestock in the Current Asset section of the Net Worth Statement, and by the low level of stored and growing crops. Because this farm is involved in two crops where there is no carry-over value into the beginning of the year, current assets are low as of January 1st. Both crops are planted and sold within one year so stock levels are low. It could be advantageous to change the accounting year for this farm to June or October to obtain higher current asset values. This farm could also become more profitable by expanding operations and thereby reducing its per acre fixed costs. Also, with more acres in the production of peanuts or soybeans, the farm manager could justify the purchase of harvesting equipment which could increase profits. However, most of the income problems of this business appear to be the result of the two accounting techniques mentioned earlier: rapid depreciation of machinery and equipment, and an accounting year which does not reflect the production activities of the farm.

North Central Oklahoma Case Farm

The North Central district includes Woods, Alfalfa, Grant, Kay, Major, Garfield, Noble, Dewey, Blaine, Kingfisher and Logan Counties. It is one of the most productive agricultural areas of the state, with an average value of agricultural products sold in 1982 ranging from a high of \$115,283 in Alfalfa County to a low of \$51,383 in Logan County, for farms with sales of \$10,000 or more. Wheat, grain sorghum and stockers are the primary crop and livestock enterprises in the area.

Farm size ranges from 1,159 acres in Woods County to 624 acres in Logan County. Real estate values are generally above average for the state, with an average investment in land and buildings ranging from \$833,018 in Garfield County, to \$573,895 in Logan County. There appears to be a high percentage of part-owners as opposed to full-owners and tenants. Part-owners represented 62.3% of the farm businesses in Noble County, 59.4% in Logan County, and over 50% in the remaining counties in the district. Thus, a large portion of the farmers depend on rented land to supplement their own acreages.

Resources

The representative farm in this study contained 980 acres, including 500 acres of owned land and 480 acres of rented land. Two hundred stockers were grazed on wheat pasture from November to February, and then on 200 acres of wheat grazeout through May until being sold. 50 cows grazed on 50 acres of bermuda grass from July through October, and were then turned out on the 250 acres of native pasture.

Wheat was grown on the 480 acres of rented land, on a crop share agreement. One-third of the income and one-third of the nitrogen, fertilizer and insecticide costs were the responsibility of the landlord.

This was a family owned and operated business, with hired labor available in the area at \$4.25 per hour. Off-farm income was estimated at \$10,000 and family living expenses at \$18,000 per year. The average investment in machinery and equipment was \$77,198. Real estate investment was high at approximately \$613,750 with an average

equity \$386,962 or 63%.

Financial Data

This farm operation was indebted to the Production Credit Association and to an equipment dealer for machinery and equipment, and to the Federal Land Bank and to the Farmers Home Administration for real estate. In addition, a commercial bank held two mortgages on the residence, and had a revolving line-of-credit, with a principal balance of \$100,000 at the beginning of the year. The Farmers Home Administration loan was a Farm Ownership loan with a fixed interest rate of 5% for forty years, while the Federal Land Bank loan had a term of twenty years with a variable interest rate, averaging 9.2% for 1980.

This business had a lower per cent equity than the Southeastern farm. Net worth averaged \$424,367, representing 44.98% of the total assets. However, the declining trend in the equity position of the owners, from 52.25% at the beginning of the year, to 44.98% at the end of the year is an obvious problem to the farm manager. The business is solvent, but it appears to have an earnings problem and cash flow problems as well. The operating debt increased from \$100,000 at the beginning of the year, to \$176,884 at the end of December, a 76.8% increase within one year. This type of situation is not uncommon in the farm sector today. Interest costs, totalling \$50,520 for the year, represented 27.5% of cash expenses for the business. With this type of financial dilemma, both the lenders and owners should monitor the operation carefully, and possibly suggest changes in management or in production activities.

The asset and liability structure was not unusual, except for the relatively high equity level in total intermediate assets at 75%. Current assets represented 15.5% of total assets on the average, compared to current liabilities at 45.65% of total liabilities. Intermediate assets averaged 14% of total assets, while intermediate liabilities averaged 9.5% of the total liabilities. Long-term assets were the majority of total assets, at 70.4%, as compared to long-term liabilities at 44.9% of total liabilities. This structure led to a very low Current Ratio of .55, substantially lower than the 2.0 level many lenders prefer. The Working Asset Ratio at .88 is higher, but it still appears that this business has serious liquidity problems, as seen in the change in Operating Debt and the low Current Ratio.

Information from the Income Statement also provides several warning signals of potential problems in this business. Net Cash Income from Operations was \$-46,839, while Net Farm Income was a staggering \$-77,376. Again, the latter includes adjustments for capital items, such as depreciation of machinery and equipment, which lowers the Net Farm Income. Based on an Opportunity Return to Labor and Management of \$18,000, the Return on Investment was $-.066$ and the Return on Equity was $-.225$, both of which would indicate the lack of profitability of this farm. The Opportunity Return to Labor and Management is based on an estimate of what the farm manager could be earning elsewhere. The Return on Investment of $-.066$ is a measure of the rate of return on the total investment in the business, both by the owners and creditors. Interest on debt is added to Net Farm Income in this formula because interest represents the return earned by creditors on the borrowed funds they invested in the business. The

interest expense includes both the cash expense and an adjustment for the net change in the interest liability during the year. The Return on Investment should be compared to what the farm assets could be earning if they were invested elsewhere. Return on Investment for a farm business has averaged between 3% and 6.3% from 1950 to 1979 (Tweeten). The Return on Equity of $-.225$ represents a rate of return which the owners of the business are earning on their investment in the business. In today's financial market, that rate of return would range between 5% and 8%.

Southwestern Oklahoma Case Farm

The Southwestern section of Oklahoma includes Roger Mills, Custer, Beckham, Washita, Caddo, Harmon, Greer, Kiowa, Jackson and Tillman Counties. It is one of the driest areas of the state, with an average annual rainfall of 22 to 28 inches, as compared to 22 to 32 inches in North Central and to 38 to 52 inches in Southeastern Oklahoma (OK Water Resources Board). The predominant crops are wheat, cotton, hay, and grain sorghum and stocker steers is the major livestock enterprise. The average market value of agricultural products sold in 1982 ranged from \$89,400 in Jackson County to \$44,921 in Beckham County. Irrigated land averaged 12.7% of total cropland in Caddo County, 12% in Jackson County, 11.7% in Harmon County, with the remaining counties having less than 5% of irrigated cropland.

Farms are generally large in this area of the state, ranging from 1,172 acres in Roger Mills County to 636 acres in Caddo County. However, with the exception of Caddo County and Washita County, all

of the counties in this district had an average farm size of 850 acres or more. The average value of land and buildings in this district ranged from \$898,713 per farm in Custer County, to \$407,138 in Greer County. The majority of farms were operated by part-owners, a reflection of the number of operations which depend to some degree on rented land.

Resources

The representative farm in this study was a lower equity operation, suggesting a beginning farmer scenerio. It was a large operation, 1,680 acres, with 980 acres owned and 700 acres rented. In some cases, entry into farming has entailed larger and larger operations in order to spread costs over a wide base. This occurred a great deal in the mid-1970's when inflation was high and before interest rates rose so dramatically. Three hundred acres of cotton were grown, 200 acres on a share lease agreement with the landlord being responsible for one-fourth of the fertilizer and chemical expenses in return for one-fourth of the cotton crop. In addition, 900 acres of wheat were grown, 500 acres rented on a 2/3 : 1/3 share lease agreement. For livestock, 150 stockers grazed the wheat pasture from November through February, until being sold in March. Fifty cows grazed the 480 acres of native pasture.

Off-farm income was estimated at \$12,000 annually, and family living expenses at \$18,000 per year. The average investment in machinery and equipment was \$93,703. The average real estate investment was \$674,500, with an average equity level of \$248,160 or 36.8%.

Financial Data

This farm operation had a high debt load, primarily to the Farmers Home Administration. Its intermediate loan from the FmHA was a Limited Resource loan, made available through a program for entry level farmers. The rates and terms are subsidized, at 7.25%, generally for seven years. The rate is then adjusted as the financial condition of the business improves to the extent that there is sufficient ability to repay the loan at the regular rates. The business also had a Farm Ownership loan from the Farmers Home Administration, at a fixed rate of 5% for 40 years. The balance of the long-term indebtedness was a loan from the owners of the property, also at a low rate of 5% for 40 years. In addition to these loans, the local commercial bank held a mortgage on the owner's residence, and a line-of-credit for \$40,000.

Net Worth was \$368,708 at the beginning of the year, and it increased to \$369,437 by the end of the year. This is an insignificant increase of .2%; however, it reflects a favorable trend of the business. The average level of equity was 39.87% so the business would certainly be considered solvent. The Cash Flow Statement shows an increase in operating debt from \$40,000 at the beginning of the year, to \$49,276 at the end of the year, an increase of 23.2%. However, intermediate and long-term debt decreased from \$482,275 to \$472,654 during the year. There was approximately 23.66% equity in Current Assets at the end of the year; 70.34% equity in Intermediate Assets; and 45.2% equity in Long Term Assets at the end of the year.

The Current Ratio of 1.31 indicated that this business was in a better liquidity position than the other farms examined. The Working Asset Ratio of 1.9 was more in line with many lenders' requirements (Hardin et al.).

Net Cash Income from Operations was \$8,845 while Net Farm Income was a positive \$7,419. Interest expense was approximately 20% of Cash Farm Expenses. This farm shows more profitability than the previous situations analyzed, and despite the low equity position, might be a better credit risk to many lenders. It should be pointed out that the Farmers Home Administration provides funds to the majority of its borrowers at interest rates well below prevailing rates in the private sector. Without these concessionary rates and terms, entry into farming would be impossible for the low equity operator aspiring to become a full-time owner of an economically sized farm unit. For this farm situation, higher interest rates on the same debt level would substantially reduce Net Farm Income and the profitability of the business.

West South Central Oklahoma Case Farm

This area of the state includes Canadian, Oklahoma, Grady, Cleveland, McClain, Comanche, Garvin, Cotton, Stephens, and Jefferson Counties. It is an area with a great deal of part-time farm operations, including some of the more urban sections of the state. It is an area which was recently damaged by flooding of tributaries of the Red River which left large deposits of silt on the farmland, causing tremendous crop and livestock losses for many farmers. Considering only farms with sales of \$10,000 or more, the average

size farm ranged from 1,154 acres in Jefferson County, to 418 acres in Oklahoma County. Most of the counties reported an average farm size between 500 and 750 acres. The value of land and buildings averaged between \$758,772 in Oklahoma County and \$437,164 in Garvin County.

This area had an average market value of agricultural products sold ranging from a high of \$81,440 in Cotton County, to a low of \$49,540 in Comanche County in 1982. These values are lower than those for the other areas of the State. There was a more balanced combination of full-owners and part-owners in this area, with a small number of tenants. The major crops are wheat, alfalfa, cotton, and soybeans. The primary livestock enterprises are cow-calf operations and stocker steers.

Resources

The representative farm situation for West South Central Oklahoma was a larger livestock operation with 100 cows and 200 stockers. The stockers grazed 100 acres of wheat pasture from November until March, and the 100 acres of small grain graze-out from November until being sold in May. The 100 cows grazed the 400 acres of bermuda pasture, and the 280 acres of native pasture. Out of a total of 880 acres farmed, 480 acres were owned, and 400 rented. The bermuda hay was grown on the rented land, with a cash rent agreement of \$12 per acre.

Financial Data

This business had a number of loans outstanding, with two

intermediate loans, two land loans, two mortgages on the residence, and a line-of-credit at the local bank. The first intermediate loan was from the Production Credit Association, a variable interest rate loan averaging 11.5% for five years, secured by a lien on machinery and equipment. The business was also indebted to an equipment dealer for approximately \$10,680 to be repaid at 15% over two years. The land loans were both fixed rate loans, at 12% and at 5%. The line-of-credit balance was \$70,000 at the beginning of the year.

This operation had a high off-farm income of \$25,000, which might suggest a part-time farm manager with a large amount of hired, seasonal labor. Family living expenses were estimated at \$18,000 per year. Average equity in the \$56,063 investment in machinery and equipment was 47.9%. The average investment in real estate was \$285,750, substantially lower than the district averages. The owners of the business had \$168,245 of equity in the real estate on the average for the year, representing 58.9% of the real estate value. The asset and liability structure was as follows: current assets were 21.5% of total assets; intermediate assets were 22.4% of the total; and long-term assets represented 56% of total assets. On the liability side of the Balance Sheet, the debt load of this business was skewed towards current liabilities, at 44% of total liabilities, while intermediate liabilities were only 11% and long-term liabilities were 44.8% of total liabilities.

Considering all of the Balance Sheet entries, owner equity increased from \$238,225 to \$257,145 (46% to 51%), an increase of 7.9% within the year. This increase in owner's equity indicates good financial progress and growth of the business. The business is

solvent, and with a decrease in the operating debt from \$70,000 at the beginning of the year to \$64,778 at the end of the year, it is paying its obligations and decreasing its overall debt level. Intermediate and long-term debts also decreased 9% during the year.

The Current Ratio of 1.00 was low, reflecting the high level of current liabilities mentioned above and potential liquidity problems. The Working Asset Ratio at 1.66 shows a more favorable mixture of assets and liabilities.

Net Cash Income from Operations was the highest of the farms analyzed, at \$16,689 and Net Farm Income was \$10,570. Cash Interest of \$31,614 was 14.2% of Total Cash Expenses. Return on Investment and Return on Equity were both low. Return on Equity was a negative .018, based on an estimated Opportunity Return to Labor and Management of \$15,000. These figures are traditionally low in a farm business, partly because of the adjustments for capital items in the Income Statement which depress the level of Net Farm Income. It is also difficult to estimate the opportunity return for the owners' labor and management because it is based on alternative employment in the area, as well as some of the intangible benefits of farming and being one's own boss.

This farm situation had a positive cash flow for the year. However, without the off-farm income of \$25,000, the total cash outflows would have exceeded the total cash inflows by \$4,236. In addition, the 5% interest rate on the land loan, and the overall low debt, kept the interest expense at a low level.

Chapter IV contains a detailed analysis of one farm situation in Northwestern Oklahoma. This analysis shows the effects on certain

financial criteria of variations in the equity position, interest rates and cash flow throughout the year. This chapter provides an illustration of financial monitoring within the accounting year, rather than only at the beginning or end.

CHAPTER IV

CASE FARM ANALYSIS

This chapter describes one farm situation in Northwestern Oklahoma in more detail than the previous case farm analyses in Chapter III. A number of assumptions were changed from the original case farm scenario to provide an illustration of how the Integrated Farm Financial Statements can assist farm managers and lenders in monitoring the financial condition of a business when variables change within the year. In addition, the seasonal variation in income and expenses in most farm businesses can greatly influence the financial ratios and other factors which lenders consider when making a loan review. Depending on whether a loan application is made before or after harvest, there is a great deal of difference in the farm balance sheet and cash flow statement. Thus, to obtain the appropriate amount of credit, and at the right times, it is imperative that the farm manager consider these yearly monitoring tools.

According to Barry, Hopkin and Baker (Barry et al.)

... an important element of the test of financial feasibility is accounting for the period when the firm is experiencing its greatest financial risk. At this point, loan repayability and loan security are most crucial and must be assured.

The Northwestern area of the state includes Cimarron, Texas, Beaver, Harper, Ellis and Woodward Counties. It is one of the driest

areas of the state, with a large percentage of its crops being grown on irrigated land. The average rainfall is between 17 and 22 inches per year (Oklahoma Water Resources Board). In Texas County alone, 150,019 acres were irrigated, representing 22.5% of all cropland in the county (U.S. Dept. of Commerce). For this reason and others, farm size is the highest in the state, ranging from 2,845 acres in Cimarron County to 1,510 acres in Woodward County, for farms with sales of \$10,000 or more in 1982. All of the remaining county averages were between 1,500 and 1,800 acres. The value of land and buildings averaged between \$1,104,685 in Cimarron County and \$519,508 in Ellis County, with most of the counties averaging half of a million dollar investment in real estate per farm.

The tenure characteristics of the farm operator were skewed towards part-owners, as opposed to full-owners and tenants. In all of the counties, over 50% of the farm operations reporting were run by part-owners. Again, this is a reflection of the need for rented land as a supplement to owned land to take advantage of the size efficiencies of a large farm unit.

The major crop enterprises include wheat, hay and grain sorghum. Stockers are the primary livestock enterprise owing to the proximity of packing houses and feedlots, and to the favorable range conditions in the Oklahoma Panhandle. The average market value of agricultural products sold in 1982 was \$477,715 in Texas County, by far the highest reported per farm sales in the state. Cimarron County reported an average of \$207,725; Harper County an average of \$146,278; Beaver County, \$95,934; Woodward County, \$71,568; and Ellis County, \$55,674.

The average investment in machinery and equipment was also high, ranging from \$108,897 in Texas County, to \$49,626 in Woodward County. Many of the wheat growers use custom harvesters in this area, which would decrease the equipment requirements for each farm considerably.

Resources

The representative farm in the Northwestern district was a large operation, with 2,167 acres of cropland and 500 acres of native pasture. Of the 2,667 total acres farmed, 1,620 were owned land and 1,047 rented. All of the crops, except 227 acres of grain sorghum, were grown on irrigated land. On the owned land, 200 acres of irrigated corn were grown, along with 120 acres of irrigated alfalfa, 300 acres of irrigated grain sorghum and 500 acres of irrigated wheat. The leased land was available on a crop share agreement, with the landlord receiving one third of the income from 120 acres of irrigated alfalfa, one third from the 227 acres of dry grain sorghum, and one tenth of the income from 700 acres of irrigated wheat. In turn, the landlord was responsible for one third of the fertilizer and chemical expenses for the alfalfa and grain sorghum, and for one half of those expenses for the irrigated wheat crop.

The livestock enterprises included 300 stockers and 85 cows. The cows grazed the corn and grain sorghum stubble from November through March, and were then turned out on the native pasture. The alfalfa hay was not grazed, and four cuttings of hay were produced. The stockers were purchased in October, then grazed on the wheat

pasture from November until March when they were sold.

This was a family owned and operated business, with an estimated off-farm income of \$12,000 per year. Royalty income was received yearly, in two payments of \$6,000 in June and December. Family living expenses averaged \$20,000 per year. The average investment in machinery and equipment was approximately \$79,280. Both the grain sorghum and corn were custom harvested, so the farm owned just hay and wheat harvesting equipment.

Financial Data

Three different equity positions were developed for this farm scenario at low, medium and high levels. There were two sets of data for the Cash Flow Statement: the first represented the normal situation with enterprise data coming from the OSU Enterprise Budget Generator and the second represented a poor production year with reduced yields for some crops and higher prices for certain expenses. For the poor cash flow, wheat, alfalfa, grain sorghum and corn yields were reduced; fuel, oil, lubricant, seed, fertilizer and lime expenses were increased for all budgets by 5%; beef prices were reduced and feed costs increased by 5% for the livestock budgets.

This section illustrates the importance of both the Net Worth Statement and the Cash Flow Statement if lenders are to have a clear picture of the financial condition of their clients. One suspects that lending practices in the past which have not considered cash flow have led to a reduced net worth in the farm sector, and have resulted in insufficient attention being paid to management practices and to the long-term effects of declining equity.

According to Boehlje and Eidman (Boehlje and Eidman)

Loan programs and the opportunity to refinance on appreciating land values provided protection from volatile incomes. These historical means of protection have changed ...in particular the "safety valve" of monetarizing capital gain to cover debt servicing problems is not as readily available because nominal and real interest rates are higher and positive capital gains less certain than in the past.

A goal of this study was to develop criteria which lenders and borrowers can use in determining their credit needs, based on an integrated system. Viewing liquidity in the short-run, and profitability and solvency in the long-run, gives a broader basis for loan review. Agricultural lenders should be encouraged to pay attention to the sufficiency of their collateral to protect their security interests, but to base the borrowing capacity and repayment schedules of their clients on cash flow projections. Bankers have several options if a borrower has insufficient cash flow to repay a loan.

1. Require the borrower to sell some of the business assets, preferably non-productive assets.
2. Suggest changes in management, enterprise mix, marketing strategies, or production techniques.
3. Ignore the problem as long as there is sufficient equity in the business to protect the bank's security.
4. Reduce the payment on the loan, refinancing it on a long-term note. The action taken by the banker will obviously influence the long-run survival of the farm.

The analyses were performed for a one year period, with certain financial ratios and other measures computed on a monthly basis. Full results of the analyses of these case farm situations can be

found in the Appendix. In the Cash Flow Summary, a variable interest rate was used to compute payments on the operating loan. The rate was adjusted monthly, and was based on the average non-real estate commercial bank rate charged in 1980. 1980 was a year with an average annual interest rate of 15.1%, compared to 16.6% in 1982 and 14.03% in 1983. There was also a great deal of variability in the interest rate (figure 14). The coefficient of variation for 1980 interest rates was .0705, representing over twice as much variability as for 1983, which had a coefficient of .035. The variable interest rate is typical for commercial banks; however, the overall financial condition of the business was not significantly affected by the variable interest rate.

Low Equity Situation

The farm business in the low equity situation had a net worth of \$587,361 as of January 31, representing 40.2% of total assets. Net Worth decreased by 14.3%, to \$503,231 by the end of the year under the good cash flow situation, and by 32.2%, to \$398,086 with a poor cash flow (Tables 8 and 9). This trend is also illustrated in the change in the Debt to Equity Ratio, also referred to as the Leverage Ratio, computed as total liabilities divided by net worth. This ratio shows how the financing of the business has been allocated between the owners of the business, indicated by the amount of net worth, and the creditors, indicated by the amount of total liabilities. This ratio shows a great deal of variation within the year for both of the cash flow situations. The coefficient of variation, which measures the relative variability of the data, was

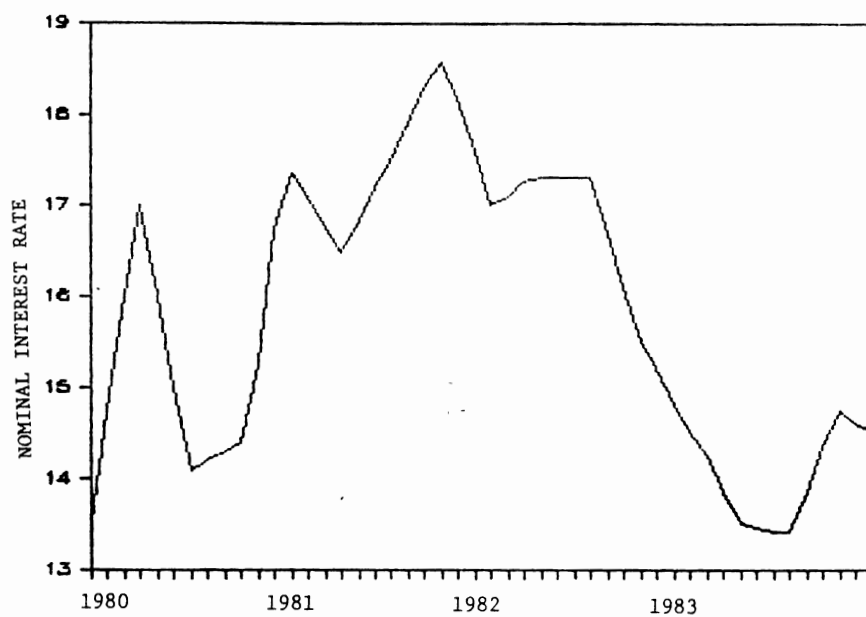


Figure 14. Commercial Bank Lending Rates:
Non-Real Estate Interest Rates

Source: Irwin

Table 8. Monthly Financial Analysis Worksheet for Low Equity, Good Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: LOW Equity Good Cash Flow Fixed Interest Rate													
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December
CASH FLOW CRITERIA:													
Operating Debt	156000	153707	114352	94868	147439	195508	35410	46071	97007	135768	44600	85510	162644
% Change from Previous Month		2.41	-34.42	-20.54	35.66	24.39	-452.13	23.14	52.51	28.55	-110.17	24.45	47.43
NET WORTH CRITERIA:													
CURRENT ASSETS													
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110353	110357	41950	0	0	0	0	0	0	0	82422	89555	96953
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125
Cash Investment in Growing Crops	75734	74589	77340	98492	125764	151455	67410	79624	123837	132719	34920	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500
Total Current Assets	214052	242446	163790	136492	158916	179605	105560	120624	164137	176019	194342	213793	219323
INTERMEDIATE ASSETS													
Breeding Livestock	44400	44583	44764	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600
Machinery & Equipment	87404	84218	81053	77842	74654	71464	68278	65090	61902	58714	55526	52338	49153
Other Intermediate Assets	27000	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500
Total Intermediate Assets	158804	155926	153066	150166	147266	144400	141526	138646	135766	132886	130006	127126	124253
LONG TERM ASSETS													
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39804	39728	39592	39456	39320	39184	39048	38912	38776	38640	38504
Total Long Term Assets	1061000	1061000	1060804	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059504
TOTAL ASSETS	1453898	1459372	1397798	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076
CURRENT LIABILITIES													
Notes Payable	150000	153709	114352	94868	147439	195508	35410	46071	97007	135768	44600	85510	162644
Interest Due	70517	17502	11209	16404	20500	27829	29883	24774	30550	36936	37399	43415	44259
Principal due: Intermediate Debts	30120	30120	30120	30120	27525	27525	27525	15559	15559	15559	12777	12777	34401
Long Term Debts	19005	19805	19739	19673	19606	19538	19470	19402	19332	19263	19192	19121	19050
Other Current Liabilities	15000	12800	14600	15400	12500	12500	12100	14900	14700	18500	15800	16600	17500
Total Current Liabilities	233642	233936	190020	176667	227580	282710	124398	120706	177148	226026	149768	177423	261770
INTERMEDIATE LIABILITIES													
169680	169980	169380	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880
LONG TERM LIABILITIES													
468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195
TOTAL LIABILITIES													
931517	872011	628095	814742	865455	920785	762473	758781	815223	864101	787843	815498	899645	982478
NET WORTH													
522381	587361	569613	532644	501159	463692	544933	560673	544728	504716	596291	585066	503231	520598
RATIOS:													
Current Ratio	0.80	1.04	0.97	0.77	0.70	0.64	0.85	1.00	0.93	0.78	1.30	1.21	0.84
Working Asset Ratio	0.85	0.99	0.94	0.83	0.77	0.72	0.84	0.89	0.86	0.78	1.01	0.98	0.80
Net Capital Ratio	1.56	3.67	3.95	3.95	3.49	3.10	4.53	4.63	3.98	3.51	4.41	4.10	3.29
Debt to Equity Ratio	1.78	1.48	1.43	1.53	1.73	1.99	1.40	1.35	1.50	1.71	1.32	1.39	1.79
Total Debt Ratio	0.64	0.27	0.25	0.25	0.29	0.32	0.22	0.22	0.25	0.29	0.23	0.24	0.38
Per Cent Equity	35.93	40.25	40.75	39.50	36.67	33.49	41.68	42.49	40.05	36.87	43.08	41.77	35.87
Debt and Asset Structure Ratios:													
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.16
Intermediate Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.76	0.79	0.79	0.77	0.81	0.80	0.78	0.77	0.76	0.76	0.76
Current Liab: Total Liab	0.32	0.59	0.54	0.52	0.53	0.63	0.43	0.42	0.52	0.58	0.48	0.52	0.61
Intermediate Liab: Total Liab	0.16	0.43	0.48	0.50	0.43	0.38	0.59	0.60	0.50	0.44	0.54	0.50	0.40
Long Term Liab: Total Liab	0.50	1.10	1.32	1.27	1.20	1.05	1.62	1.64	1.37	1.20	1.49	1.37	1.18

Table 9. Monthly Financial Analysis Worksheet for Low Equity, Poor Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: Low Equity Poor Cash Flow Variable Interest Rate														
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December	January 1
CASH FLOW CRITERIA:														
Operating Debt	150000	153878	116453	100196	154435	203946	87833	104067	166669	212160	166359	187866	265068	265068
% Change from Previous Month		2.52	-32.14	-16.23	35.12	24.28	-132.20	17.19	36.36	21.44	-27.53	11.45	29.13	
NET WORTH CRITERIA:														
CURRENT ASSETS														
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110358	118357	61950	0	0	0	0	0	0	0	82422	89555	96955	96955
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125	40125
Cash Investment in Growing Crops	73734	74589	77348	98492	125766	151455	67410	79824	123837	132719	64920	73743	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500	7500
Total Current Assets	234092	242446	183798	136492	158916	179605	105568	120624	146137	176019	194342	213798	219323	219323
INTERMEDIATE ASSETS														
Breeding Livestock	44400	44583	44766	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600	46600
Machinery & Equipment	87406	84218	81030	77842	74654	71466	68278	65090	61902	58714	55526	52338	49153	49153
Other Intermediate Assets	27000	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500	28500
Total Intermediate Assets	158806	155926	153046	150166	147286	144406	141526	138646	135766	132886	130006	127126	124253	124253
LONG TERM ASSETS														
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39864	39728	39592	39456	39320	39184	39048	38912	38776	38640	38500	38500
Total Long Term Assets	1061000	1061000	1060864	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059500	1059500
TOTAL ASSETS	1453898	1459372	1397708	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076	1403076
CURRENT LIABILITIES														
Notes Payable	150000	153878	116453	100196	154435	203946	87833	104067	166669	212160	166359	187866	265068	265068
Interest Due	78517	17502	11209	16606	20575	27998	29883	25390	31876	39092	37399	44708	52520	66987
Principal due: Intermediate Debts	30120	30120	30120	30120	27535	27535	27535	15559	15559	15559	12777	12777	12777	3446
Principal due: Long Term Debts	19805	19805	19739	19673	19606	19538	19470	19402	19332	19263	19192	19121	19050	21796
Other Current Liabilities	15000	12800	14600	15400	12500	12300	12100	14900	14700	18500	15800	16600	17500	17500
Total Current Liabilities	293442	234105	192121	181995	234651	291317	176821	181318	248136	304574	251527	281072	366915	405745
INTERMEDIATE LIABILITIES	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880	169880	135479
LONG TERM LIABILITIES	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	468195	446399
TOTAL LIABILITIES	931517	872180	830196	820070	872726	929392	814896	819393	886211	942649	889602	919147	1004990	987623
NET WORTH	522381	587192	567512	527316	494068	455075	492510	500061	473740	426168	494522	481417	398086	415453
RATIOS:														
Current Ratio	0.80	1.04	0.96	0.75	0.68	0.62	0.60	0.67	0.66	0.58	0.77	0.76	0.60	0.54
Working Asset Ratio	0.85	0.99	0.93	0.81	0.76	0.70	0.71	0.74	0.72	0.65	0.77	0.76	0.64	0.63
Net Capital Ratio	1.56	1.67	1.68	1.64	1.57	1.49	1.60	1.61	1.53	1.45	1.56	1.52	1.40	1.42
Debt to Equity Ratio	1.78	1.49	1.46	1.56	1.77	2.84	1.65	1.64	1.87	2.21	1.80	1.91	2.52	2.38
Total Debt Ratio	0.64	0.60	0.59	0.61	0.64	0.67	0.62	0.62	0.65	0.69	0.64	0.66	0.72	0.70
Per Cent Equity	35.93	40.24	40.60	39.14	36.15	32.87	37.67	37.90	34.84	31.13	35.73	34.37	28.37	29.61
Debt and Asset Structure Ratios:														
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.16	0.16
Intermed. Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.76	0.79	0.78	0.77	0.81	0.80	0.78	0.77	0.77	0.76	0.76	0.76
Current Liab: Total Liab	0.32	0.27	0.23	0.22	0.27	0.31	0.22	0.22	0.28	0.32	0.28	0.31	0.37	0.41
Intermed. Liab: Total Liab	0.18	0.19	0.20	0.21	0.19	0.18	0.21	0.21	0.19	0.18	0.19	0.18	0.17	0.14
Long Term Liab: Total Liab	0.50	0.54	0.56	0.57	0.54	0.50	0.57	0.57	0.53	0.50	0.53	0.51	0.47	0.45

.126 for the good cash flow, and .164 for the poor cash flow. A situation with no variation in the ratio throughout the year would have a coefficient of zero. However, the net change during the year was much less for the good cash flow situation, beginning at 1.48 and ending at 1.79, a 20.4% increase. For the poor cash flow, the net change was a significant 70%, beginning the year at 1.49 and ending at 2.52. The increase in the Leverage Ratio indicates that, by the end of the year, the creditors had over twice the investment in the business, and thus over twice the risk, than did the owners (figure 15).

The principal operating debt at the beginning of the year for both situations was \$150,000. Operating debt showed a great deal of variability during the year, reaching its minimum level for both cases in June, and its maximum in December. For the good cash flow, the outstanding operating debt increased to \$162,644 by the end of the year, a net increase of 8.4%. For the poor cash flow situation, the outstanding operating debt increased dramatically, by 76.7% during the year, ending at \$265,068 (figure 16).

The Net Capital Ratio, another measure of the solvency of the business, is computed as total assets divided by total liabilities. It is a measure of the long-term solvency position of the business. This ratio showed less variability than the Debt to Equity Ratio for both cash flow situations. For the good cash flow, the coefficient of variation was .046, and for the poor cash flow, .054 (figure 17). Again, with the better cash flow, the net change from the beginning to end of the year was much less significant than with the poor cash flow.

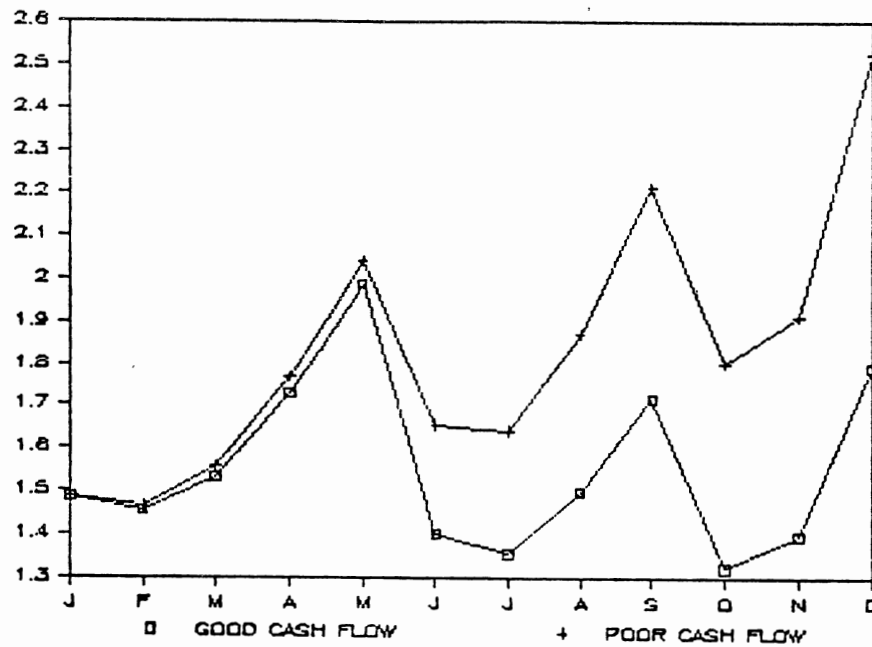


Figure 15. Debt to Equity Ratio: Low Equity Situation

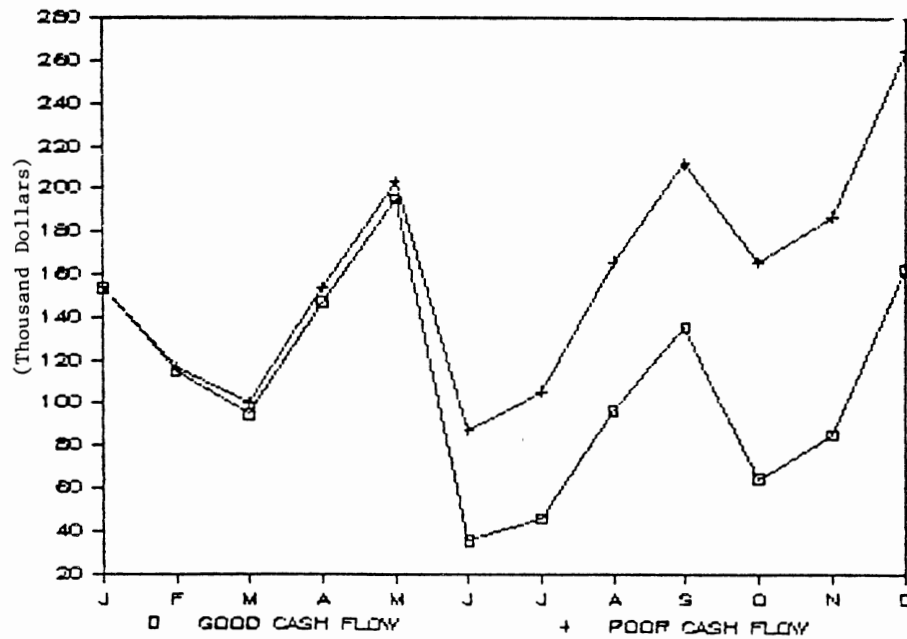


Figure 16. Outstanding Operating Debt: Low Equity Situation

Certain liquidity measures also showed a great deal of variation within the year. The Current Ratio was 1.04 at the beginning of the year for both cases. It decreased to .84 by the end of the year for the good cash flow, and to .60 for the poor cash flow. The coefficients of variation were very similar for both cases: .21 for the good Cash Flow, and .19 for the poor cash flow (figure 18). The Working Asset ratio, which considers both current and intermediate assets and liabilities, had approximately half the variability as the Current Ratio in the good cash flow situation, and two-thirds of the variability as the Current Ratio in the poor cash flow (figure 19).

The variation in the structure of the liabilities can be seen in figures 20 and 21. This amount of variation would not be unusual for a farm business, but it illustrates how the timing of loan requests with the balance sheet can make a large difference in many of the financial ratios used in the decision-making process. Much of the variation in the balance sheet reflects changes in the level of operating debt, which in turn reflects the variation in the cash inflows and cash outflows of the business. Some of this variation is inherent in a seasonal business. However, debt repayment is scheduled unevenly in small monthly installments, larger quarterly installments, and an even larger installment in December which causes some of the fluctuation in the monthly cash balance. An analysis of these ratios on a monthly basis provides a way to evaluate the financial performance of the business with the seasonal variation taken into consideration.

In summary, even though this operation had a low equity level,

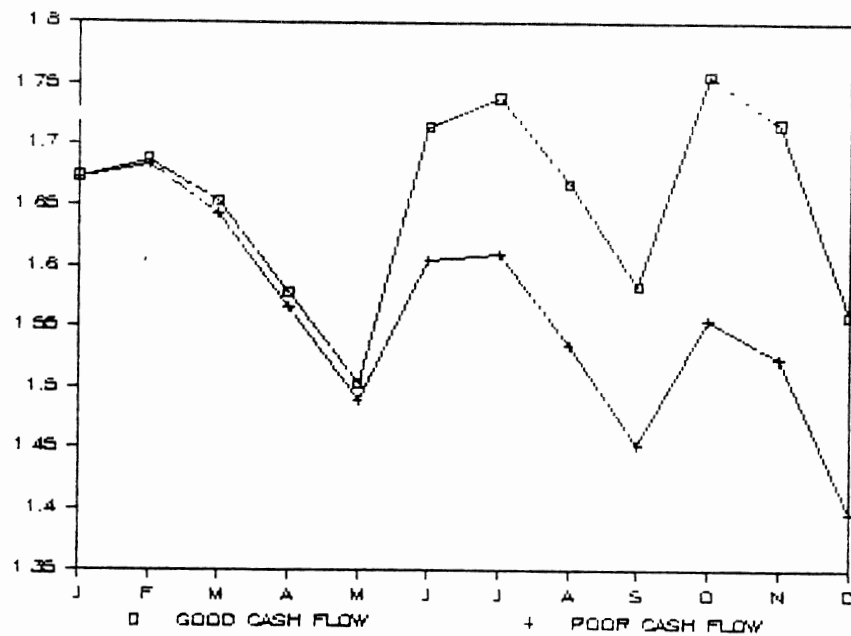


Figure 17. Net Capital Ratio: Low Equity Situation

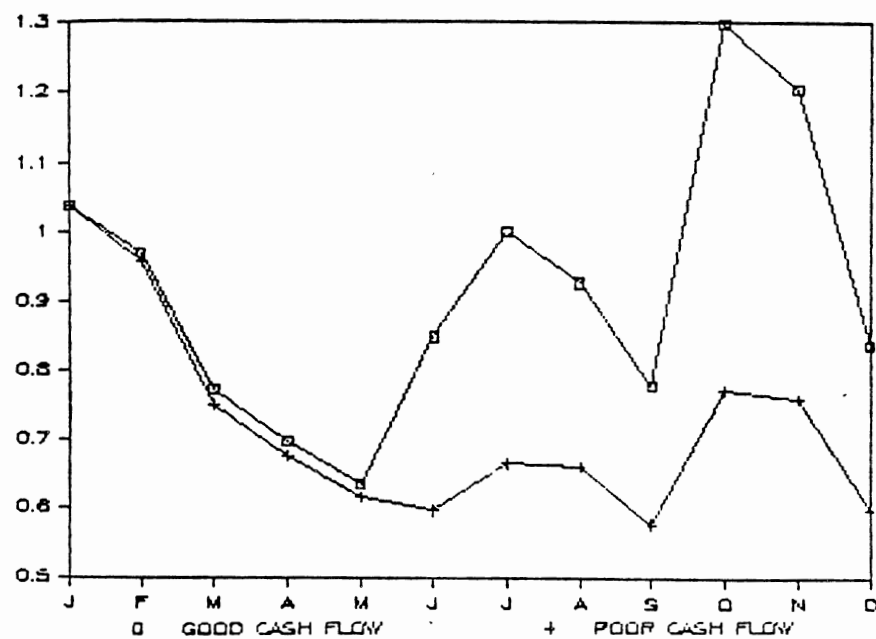


Figure 18. Current Ratio: Low Equity Situation

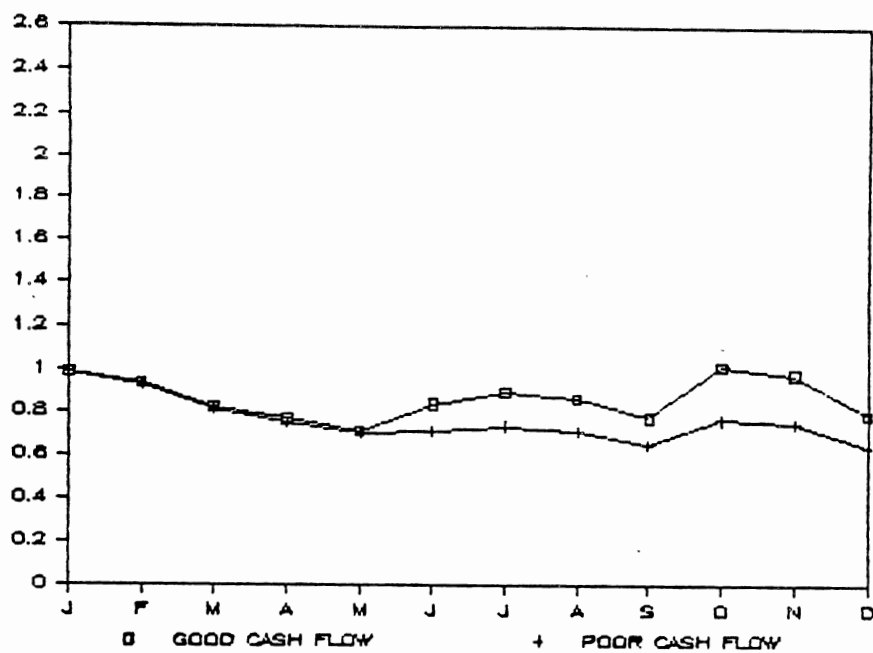


Figure 19. Working Asset Ratio: Low Equity Situation

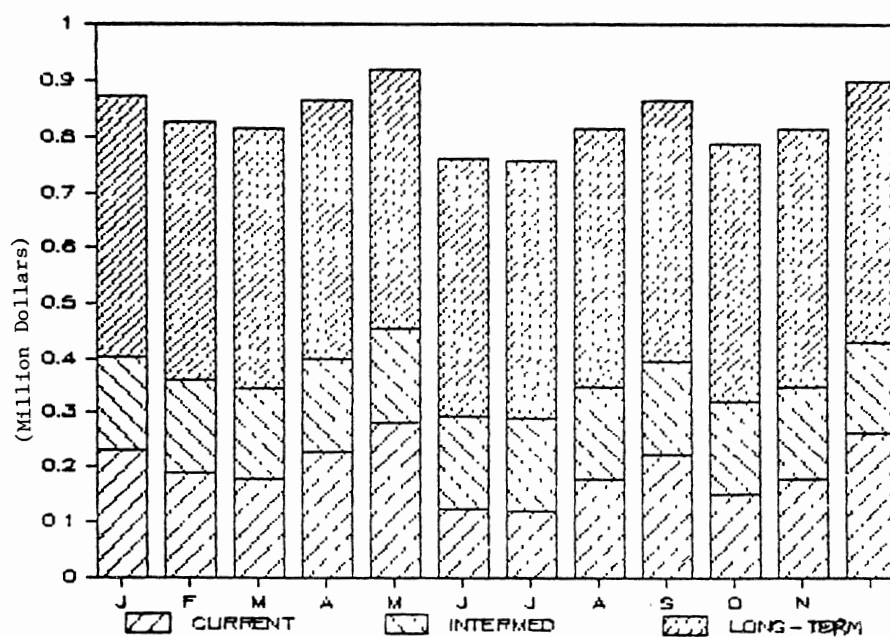


Figure 20. Liability Structure: Low Equity and Good Cash Flow

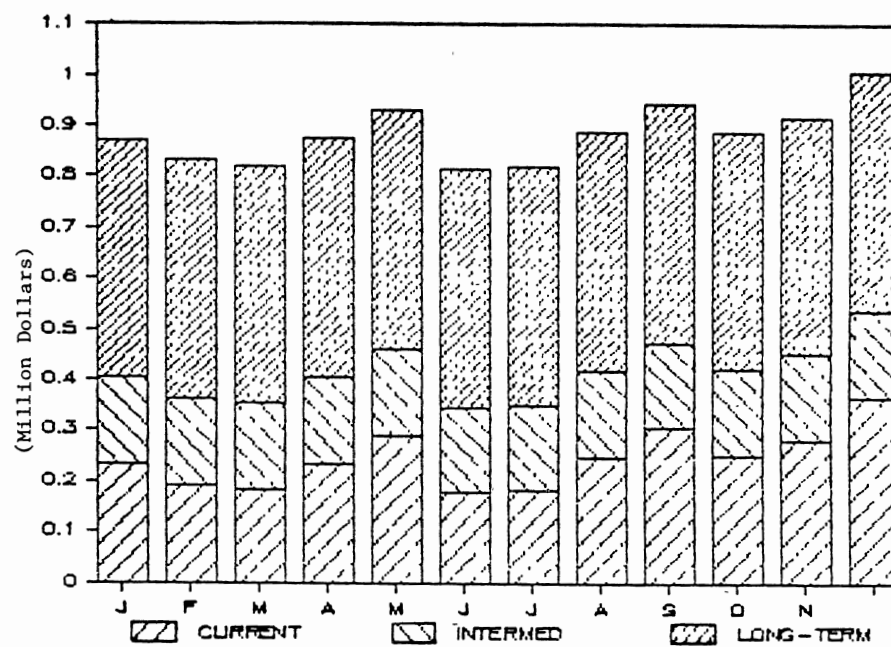


Figure 21. Liability Structure: Low Equity Situation and Poor Cash Flow

with a strong cash flow, the overall financial position of the business did not significantly deteriorate from the beginning to the end of the year. With the poor cash flow, however, it is apparent that major changes and possibly liquidation are necessary. Both cases had negative Net Farm Incomes for the year: -\$3,281 for the better cash flow, and -\$108,428 for the poor cash flow.

Medium Equity Situation

The farm business representing the medium equity situation had a net worth of \$874,326 as of January 31, or 59.9% of total assets (Tables 10 and 11). This decreased by 4% during the year under the good cash flow situation, and it decreased by 16% under the poor cash flow. The Debt to Equity ratio exhibited the same trends as it had in the low equity situation: a great deal of variability within the year, but insignificant net changes for the year under the stronger cash flow case. The coefficient of variation was .135 with the good cash flow, and .13 with the poor cash flow (figure 22).

The outstanding operating debt for both situations was \$150,000 at the beginning of the year. For the better cash flow, operating debt decreased by 24.7%, to \$112,896 by the end of the year (figure 23). The reduction indicates that the business is being managed with profitability in mind, and should be emphasized in a loan review. For the poor cash flow, the principal operating debt increased to \$215,320 during the year, a significant 43.5%. This increase is obviously a warning signal to both the farm manager and to the lender.

The Total Debt Ratio, computed as total liabilities divided by

Table 10. Monthly Financial Analysis Worksheet for Medium Equity, Good Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: Medium Equity Good Cash Flow Variable Interest Rate														
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December	January 1
CASH FLOW CRITERIA:														
Operating Debt	150000	153709	109352	89801	142373	190441	12809	23470	74405	113167	40925	61835	112896	112896
% Change from Previous Month		2.41	-40.56	-21.77	36.93	25.24	-1386.77	45.42	68.46	34.25	-176.52	33.82	45.23	
NET WORTH CRITERIA:														
CURRENT ASSETS														
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110358	118357	61950	0	0	0	0	0	0	0	82422	89555	94955	94955
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125	40125
Cash Investment in Growing Crops	73734	74589	77348	98492	125764	151455	67410	79824	123837	132719	64920	73743	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500	7500
Total Current Assets	234092	242446	183798	136492	158916	179605	105560	120624	164137	176019	194342	213798	219323	219323
INTERMEDIATE ASSETS														
Breeding Livestock	44400	44583	44766	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600	46600
Machinery & Equipment	87406	84218	81030	77842	74654	71466	68278	65090	61902	58714	55526	52338	49153	49153
Other Intermediate Assets	27000	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500	28500
Total Intermediate Assets	158806	155926	153046	150166	147286	144406	141526	138646	135766	132886	130006	127126	124253	124253
LONG TERM ASSETS														
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39864	39728	39592	39456	39320	39184	39048	38912	38776	38640	38500	38500
Total Long Term Assets	1061000	1061000	1060864	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059500	1059500
TOTAL ASSETS	1453898	1459372	1397708	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076	1403076
CURRENT LIABILITIES														
Notes Payable	150000	153709	109352	89801	142373	190441	12809	23470	74405	113167	40925	61835	112896	112896
Interest Due	50540	10537	7279	10711	12568	17864	18093	18894	22537	29798	26189	30039	34227	43258
Principal due: Intermediate Debts	10935	10935	10935	10935	8350	8350	8350	5668	5668	5668	2886	2886	2886	12670
Principal due: Long Term Debts	18563	18563	18497	18431	18364	18296	18228	18160	18090	18021	17950	17879	17808	20492
Other Current Liabilities	10000	7800	9600	10400	7500	7300	7100	9900	7900	13500	10800	11600	12500	12500
Total Current Liabilities	240038	201544	155643	140278	189155	242251	64580	76092	130400	180154	98750	124239	180317	201616
INTERMEDIATE LIABILITIES	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	51395
LONG TERM LIABILITIES	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	298945
TOTAL LIABILITIES	623540	585046	539145	523780	572657	625753	440082	459594	513902	563656	482252	507741	563819	552156
NET WORTH	830358	874326	858563	823606	794137	758714	859324	859860	846049	805161	901872	892823	839257	850920
RATIOS:														
Current Ratio	0.98	1.20	1.18	0.97	0.84	0.74	1.63	1.59	1.26	0.98	1.97	1.72	1.22	1.09
Working Asset Ratio	1.29	1.50	1.53	1.40	1.21	1.06	1.92	1.85	1.54	1.26	1.99	1.81	1.41	1.36
Net Capital Ratio	2.33	2.49	2.59	2.57	2.39	2.21	2.92	2.87	2.65	2.43	2.87	2.76	2.49	2.54
Debt to Equity Ratio	0.75	0.67	0.63	0.64	0.72	0.82	0.52	0.53	0.61	0.70	0.53	0.57	0.67	0.65
Total Debt Ratio	0.43	0.40	0.39	0.39	0.42	0.45	0.34	0.35	0.38	0.41	0.35	0.36	0.36	0.39
Per Cent Equity	57.11	59.91	61.43	61.13	58.10	54.80	65.73	65.17	62.21	58.82	65.16	63.75	59.82	60.65
Debt and Asset Structure Ratios:														
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.16	0.16
Intermediate Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.76	0.79	0.78	0.77	0.81	0.80	0.78	0.77	0.77	0.76	0.76	0.75
Current Liab: Total Liab	0.38	0.34	0.29	0.27	0.33	0.39	0.14	0.17	0.25	0.32	0.20	0.24	0.32	0.37
Intermediate Liab: Total Liab	0.10	0.11	0.12	0.12	0.11	0.10	0.14	0.14	0.12	0.11	0.13	0.13	0.11	0.09
Long Term Liab: Total Liab	0.51	0.55	0.59	0.61	0.56	0.51	0.71	0.70	0.62	0.57	0.66	0.63	0.57	0.54

Table 11. Monthly Financial Analysis Worksheet for Medium Equity, Poor Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: Medium Equity Poor Cash Flow Variable Interest Rate														
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December	January 1
CASH FLOW CRITERIA:														
Operating Debt	150000	153878	111453	95130	149368	198879	65232	83465	144068	189559	142684	144191	215320	215320
% Change from Previous Month		2.52	-38.07	-17.16	36.31	24.90	-204.88	21.85	42.07	24.08	-32.85	13.10	23.75	
NET WORTH CRITERIA:														
CURRENT ASSETS														
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110358	118357	61950	0	0	0	0	0	0	0	82422	89555	96951	96955
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125	40125
Cash Investment in Growing Crops	73734	74589	77348	98492	125766	151455	47410	79824	123837	132719	64920	73743	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500	7500
Total Current Assets	234092	242446	183798	136492	158916	179605	105560	120624	164137	176819	194342	213798	219323	219323
INTERMEDIATE ASSETS														
Breeding Livestock	44400	44583	44766	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600	46600
Machinery & Equipment	87406	84218	81030	77842	74654	71466	68278	65090	61902	58714	55526	52338	49153	49153
Other Intermediate Assets	27000	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500	28500
Total Intermediate Assets	158806	155926	153046	150166	147286	144406	141526	138646	135766	132886	130006	127126	124253	124253
LONG TERM ASSETS														
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39864	39728	39592	39456	39320	39184	39048	38912	38776	38640	38500	38500
Total Long Term Assets	1061000	1061000	1060864	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059500	1059500
TOTAL ASSETS	1453898	1459372	1397708	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076	1403076
CURRENT LIABILITIES														
Notes Payable	150000	153878	111453	95130	149368	198879	65232	83465	144068	189559	142684	144191	215320	215320
Interest Due	50540	10537	7279	10711	12644	18033	18093	19509	23863	31954	26189	31332	36949	45980
Principal due: Intermediate Debts	10935	10935	10935	10935	8350	8350	8350	5668	5668	5668	2886	2886	2886	12678
Long Term Debts	18563	18563	18497	18431	18364	18296	18228	18160	18090	18021	17950	17879	17808	20492
Other Current Liabilities	10000	7800	9600	10400	7500	7300	7100	9900	9700	13500	10800	11600	12500	12500
Total Current Liabilities	240038	201713	157744	145607	194226	250858	117003	136702	201389	258782	208509	227888	285463	306942
INTERMEDIATE LIABILITIES	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	64065	51395
LONG TERM LIABILITIES	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	319437	298945
TOTAL LIABILITIES	623540	585215	541246	529109	579728	634360	500505	520204	584891	642284	584011	611390	688965	657302
NET WORTH	830358	874157	856462	818277	787066	750107	806901	799250	775060	726613	800113	789174	734111	745774
RATIOS:														
Current Ratio	0.98	1.20	1.17	0.94	0.81	0.72	0.90	0.88	0.82	0.68	0.97	0.94	0.77	0.71
Working Asset Ratio	1.29	1.50	1.52	1.37	1.18	1.03	1.36	1.29	1.13	0.96	1.23	1.17	0.98	0.96
Net Capital Ratio	2.33	2.49	2.58	2.55	2.36	2.18	2.61	2.54	2.33	2.13	2.37	2.29	2.18	2.13
Debt to Equity Ratio	0.75	0.67	0.63	0.65	0.74	0.85	0.62	0.65	0.75	0.88	0.73	0.77	0.91	0.88
Total Debt Ratio	0.43	0.40	0.39	0.39	0.42	0.46	0.38	0.39	0.43	0.47	0.42	0.44	0.48	0.47
Per Cent Equity	57.11	59.98	61.27	60.73	57.58	54.18	61.72	60.57	56.99	53.08	57.81	56.35	52.32	53.15
Debt and Asset Structure Ratios:														
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.15	0.16
Intermed. Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.09	0.09	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.74	0.79	0.78	0.77	0.81	0.80	0.78	0.77	0.77	0.76	0.76	0.76
Current Liab: Total Liab	0.38	0.34	0.29	0.28	0.34	0.40	0.23	0.26	0.34	0.40	0.34	0.37	0.43	0.47
Intermed. Liab: Total Liab	0.10	0.11	0.12	0.12	0.11	0.10	0.13	0.12	0.11	0.10	0.11	0.10	0.10	0.08
Long Term Liab: Total Liab	0.51	0.55	0.59	0.60	0.55	0.58	0.64	0.61	0.55	0.58	0.55	0.52	0.48	0.45

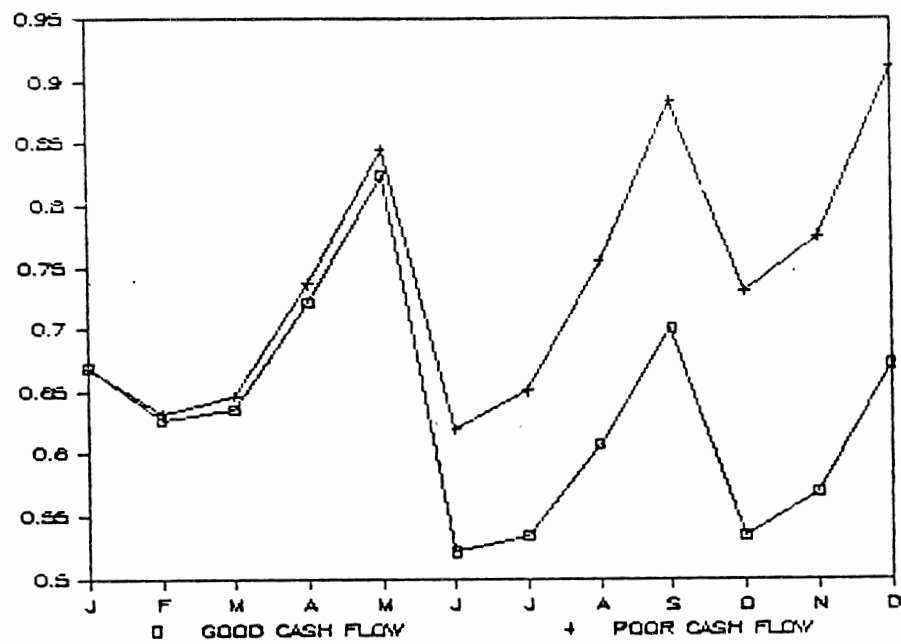


Figure 22. Debt to Equity Ratio: Medium Equity Situation

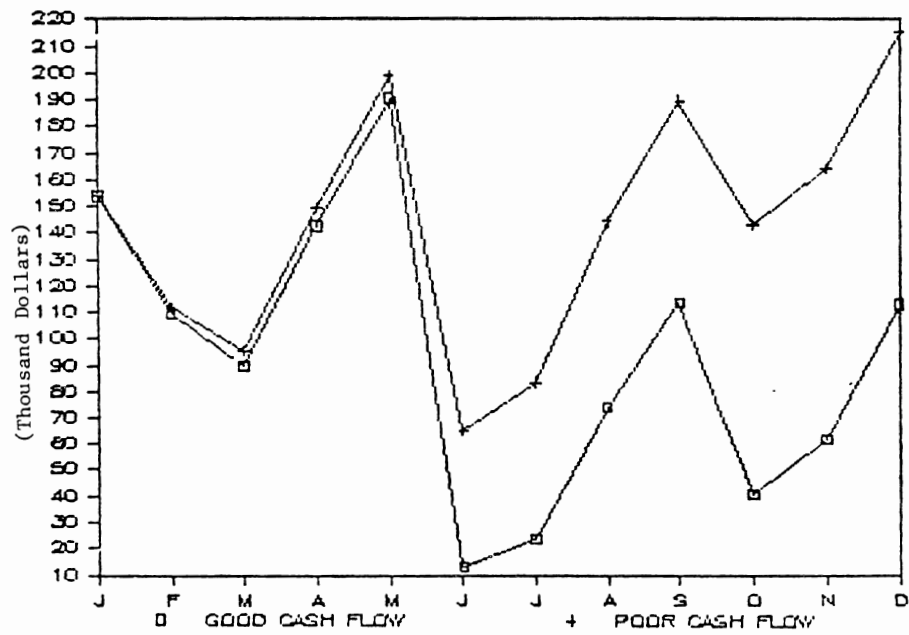


Figure 23. Outstanding Operating Debt: Medium Equity Situation

total assets, is another measure of the risk exposure of the business. It averaged .39 for the good cash flow, and .42 for the poor cash flow. The variability was relatively low, with a coefficient of variation for the better cash flow of .08, and .07 for the poor cash flow (figure 24). The stable Total Debt Ratio indicates a fairly stable relationship between the owners' investment in the business, and the creditors' investment.

The liquidity position is stronger than that of the low equity position. The Current Ratio averaged 1.3 for the strong cash flow case, and .90 for the weaker cash flow. Again, there was a great deal of variability in this ratio, reflecting the seasonal swings in production and expenses of the farm (figure 25). The Working Asset ratio averaged 1.54 and 1.2, with considerably less variation than the Current Ratio, especially with the stronger cash flow (figure 26).

The Net Farm Income was -\$105,601 in the poor cash flow situation, another clear warning signal to both the borrower and lender. For the stronger cash flow, the Net Farm Income was \$19,062 for the year.

The variation in the structure of the liabilities in the medium equity case farm can be seen in figures 27 and 28.

High Equity Situation

This farm situation had a net worth at the beginning of the year of \$1,041,893 which represents a 71.39% equity level. Equity decreased by 1.4% by the end of the year for the good cash flow situation, and by 11.5% for the poor cash flow situation. Compared

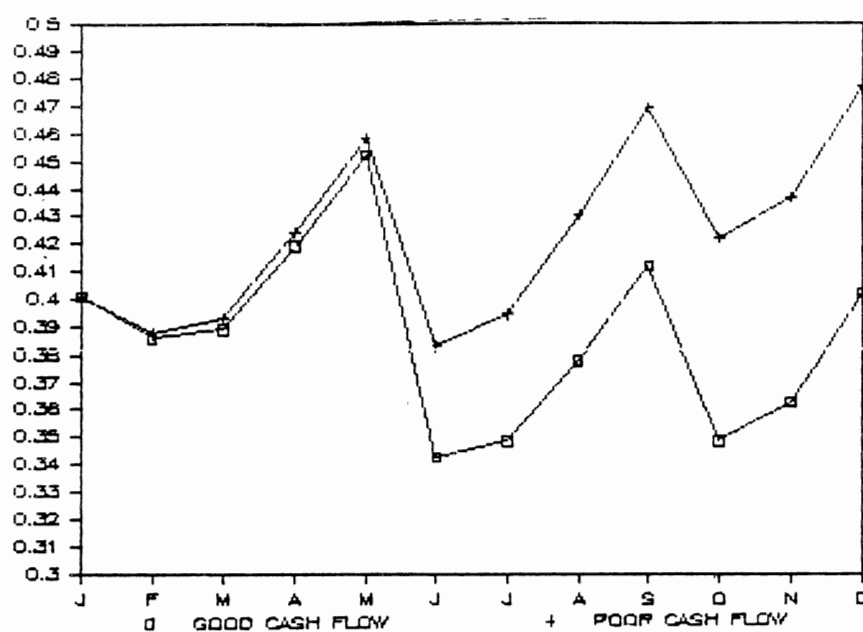


Figure 24. Total Debt Ratio: Medium Equity Situation

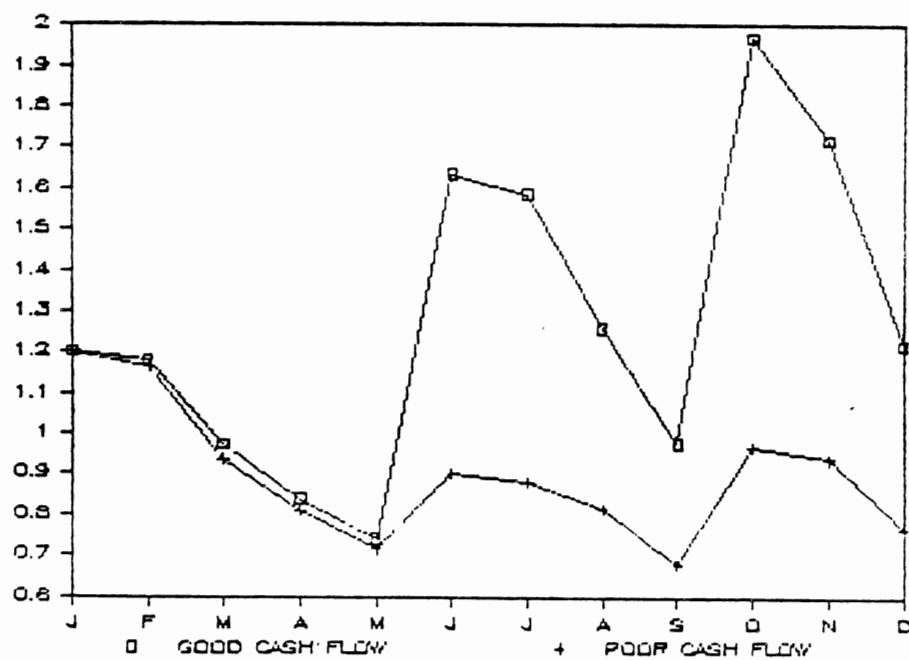


Figure 25. Current Ratio: Medium Equity Situation

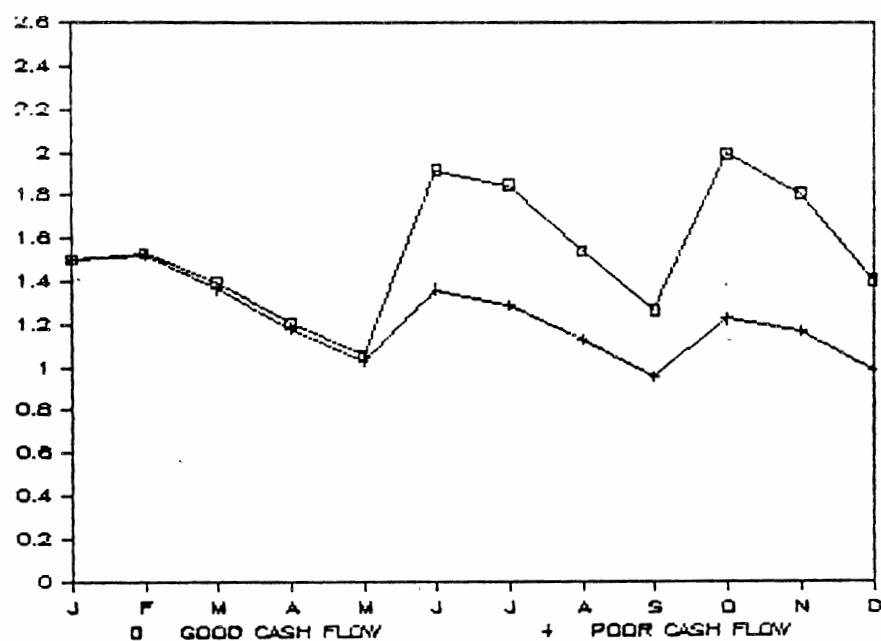


Figure 26. Working Asset Ratio: Medium Equity Situation

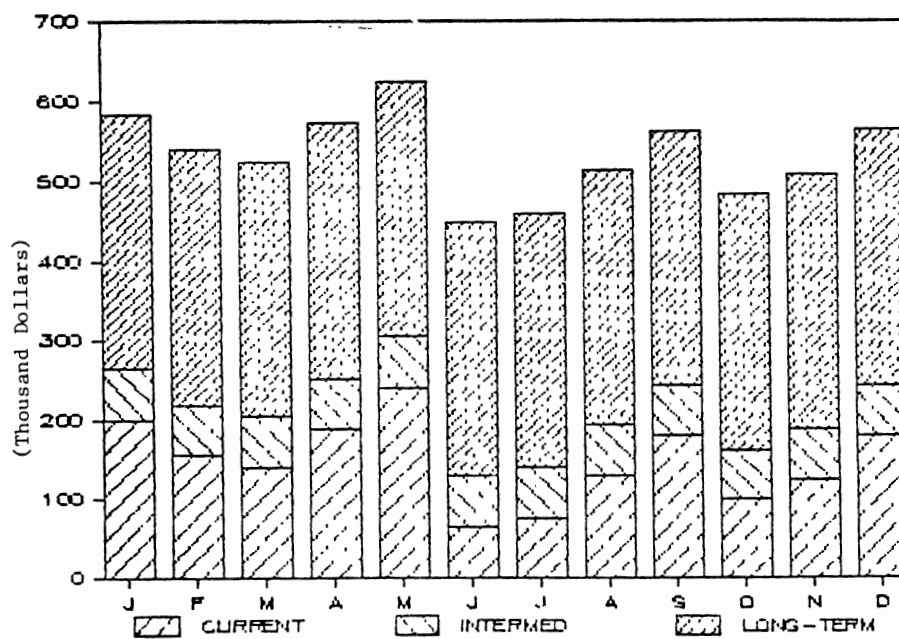


Figure 27. Liability Structure: Medium Equity and Good Cash Flow

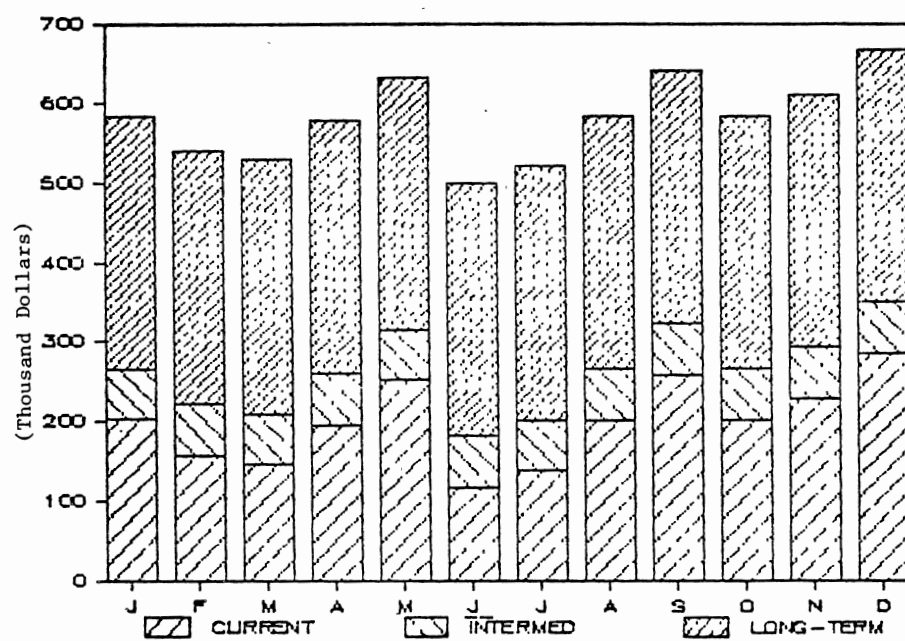


Figure 28. Liability Structure: Medium Equity and Poor Cash Flow

to the low and medium equity positions, these trends were relatively insignificant, although in a declining direction. The Debt to Equity ratio, representing total liabilities divided by net worth, showed a great deal of variability within the year, reaching its minimum in June after harvest, reaching peaks in May, September, and its maximum value in December, when many of its debts were scheduled for repayment (figure 29). As measured by the coefficient of variation, the Debt to Equity ratio had a high degree of variability: .144 for the poor cash flow, and .182 for the stronger cash flow situation (Tables 12 and 13).

The operating debt was \$150,000 at the beginning of the year for both situations. Operating debt also displayed much variability within the year, reaching peak values in May, September and December, and reaching a minimum value after harvest in June. By the end of the year, the outstanding debt decreased to \$110,134 for the good cash flow, a 26.6% decrease. For the poor production situation, the outstanding operating debt increased by \$62,558 during the year, ending at \$212,558 (figure 30). This 41.7% increase should provide a clear signal to the farm manager and to the lender that, despite high levels of equity, this business does not have the profitability to be able to continue in business without recourse to possible sale of assets, which would result in a decline in the equity level in the long-run.

The Net Capital Ratio, seen in figure 31, showed the greatest amount of variability for the high equity situation. This ratio measures the solvency of the business and is computed as total assets divided by total liabilities. The coefficient of variation was .135

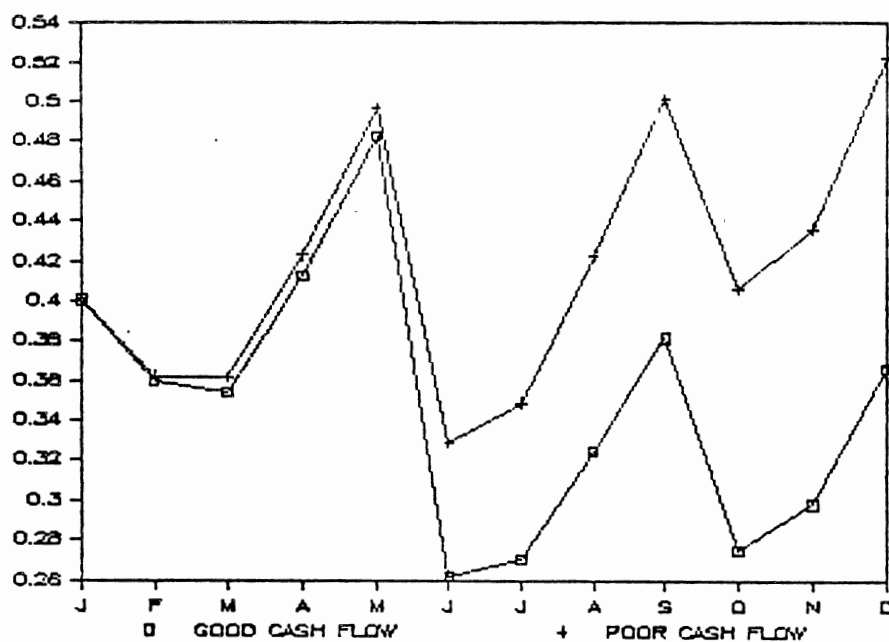


Figure 29. Debt to Equity Ratio: High Equity Situation

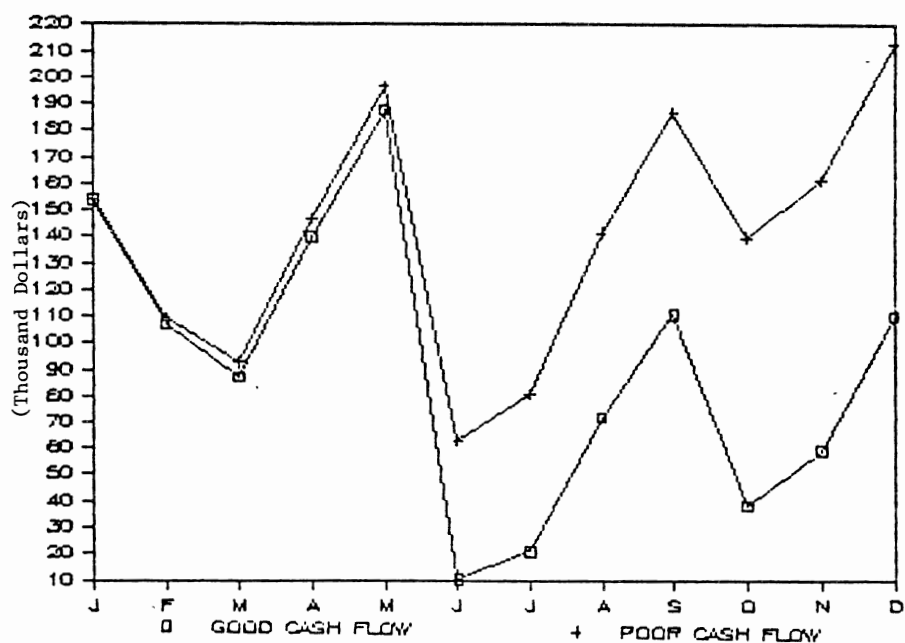


Figure 30. Outstanding Operating Debt: High Equity Situation

Table 12. Monthly Financial Analysis Worksheet for High Equity, Good Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: High Equity Good Cash Flow Variable Interest Rate														
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December	January 1
CASH FLOW CRITERIA:														
Operating Debt	150000	153709	106852	87267	139838	187907	10172	20833	71769	110530	38163	59073	110134	110134
% Change from Previous Month		2.41	-43.85	-22.44	37.59	25.50	-1747.30	51.17	70.97	35.07	-189.63	35.40	94.68	
NET WORTH CRITERIA:														
CURRENT ASSETS														
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110350	118357	61950	0	0	0	0	0	0	0	82422	89555	96955	96955
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125	40125
Cash Investment in Growing Crops	73734	74589	77348	98492	125766	151455	67410	79824	123837	132719	44920	73743	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500	7500
Total Current Assets	234092	242446	183798	136492	158916	179405	105560	120624	164137	176819	194342	213798	219323	219323
INTERMEDIATE ASSETS														
Breeding Livestock	44400	44583	44766	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600	46600
Machinery & Equipment	87406	84218	81030	77842	74654	71466	68278	65090	61902	58714	55526	52338	49153	49153
Other Intermediate Assets	27800	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500	28500
Total Intermediate Assets	158006	155926	153046	150166	147286	144406	141526	138646	135766	132886	130006	127126	124253	124253
LONG TERM ASSETS														
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39844	39728	39592	39456	39320	39184	39048	38912	38776	38640	38500	38500
Total Long Term Assets	1061000	1061000	1060844	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059500	1059500
TOTAL ASSETS	1453898	1459372	1397708	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076	1403076
CURRENT LIABILITIES														
Notes Payable	150000	153709	106852	87267	139838	187907	10172	20833	71769	110530	38163	59073	110134	110134
Interest Due	26401	6266	3738	5400	6326	9808	8325	8220	10039	12466	11109	13119	15472	19315
Principal due: Intermediate Debts	14680	14680	14680	14680	11210	11210	11210	7610	7610	7610	3875	3875	3875	1700
Principal due: Long Term Debts	36256	36256	36190	36124	36057	35989	35921	35853	35783	35714	35643	35572	35501	40024
Other Current Liabilities	5000	2800	4600	5400	2500	2300	2100	4900	4700	8500	5800	6600	7500	7500
Total Current Liabilities	232537	213711	166040	148871	195931	247214	67728	77414	129901	174820	94590	118239	172482	193982
INTERMEDIATE LIABILITIES	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	19707
LONG TERM LIABILITIES	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	126860
TOTAL LIABILITIES	436136	417310	349659	352470	399530	450813	271327	281015	333500	378419	298189	321838	376081	340549
NET WORTH	1017762	1042062	1028049	994916	967264	933654	1036079	1038439	1026451	990398	1085935	1078726	1026995	1062527
RATIOS:														
Current Ratio	1.01	1.13	1.11	0.92	0.81	0.73	1.56	1.56	1.26	1.01	2.05	1.81	1.27	1.13
Working Asset Ratio	1.46	1.59	1.66	1.54	1.32	1.14	2.37	2.27	1.80	1.46	2.47	2.20	1.64	1.61
Net Capital Ratio	3.33	3.50	3.78	3.82	3.42	3.07	4.82	4.70	4.08	3.62	4.64	4.35	3.73	4.12
Debt to Equity Ratio	0.43	0.40	0.36	0.35	0.41	0.48	0.26	0.27	0.32	0.38	0.27	0.30	0.37	0.32
Total Debt Ratio	0.30	0.29	0.26	0.26	0.29	0.33	0.21	0.21	0.25	0.28	0.22	0.23	0.27	0.24
Per Cent Equity	70.00	71.40	73.55	73.84	70.77	67.44	79.25	78.70	75.48	72.35	78.46	77.02	73.20	75.73
Debt and Asset Structure Ratios:														
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.16	0.16
Intermed. Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.76	0.79	0.78	0.77	0.81	0.80	0.78	0.77	0.77	0.76	0.76	0.76
Current Liab: Total Liab	0.53	0.51	0.45	0.42	0.49	0.55	0.25	0.28	0.39	0.46	0.32	0.37	0.46	0.57
Intermed. Liab: Total Liab	0.08	0.09	0.10	0.10	0.09	0.08	0.14	0.13	0.11	0.10	0.12	0.11	0.10	0.08
Long Term Liab: Total Liab	0.38	0.40	0.45	0.47	0.42	0.37	0.62	0.59	0.58	0.44	0.56	0.52	0.44	0.37

Table 13. Monthly Financial Analysis Worksheet for High Equity, Poor Cash Flow Situation

MONTHLY FINANCIAL ANALYSIS WORKSHEET: High Equity Poor Cash Flow Variable Interest Rate														
CRITERIA:	January 1st	January 31	February	March	April	May	June	July	August	September	October	November	December	January 1
CASH FLOW CRITERIA:														
Operating Debt	150000	153878	108953	92595	146834	194345	62595	80829	141431	184922	139922	161429	212558	212558
% Change from Previous Month		2.52	-41.23	-17.67	36.94	25.22	-213.68	22.56	42.85	24.34	-33.59	13.32	24.05	
NET WORTH CRITERIA:														
CURRENT ASSETS														
Cash & Checking	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Market Livestock & Products	110358	118357	61950	0	0	0	0	0	0	0	82422	89555	96955	96955
Stored Crops, Feed, Supplies	41500	41500	36500	30000	25000	20000	30000	32500	32000	35000	38500	42000	40125	40125
Cash Investment in Growing Crops	73734	74589	77348	98492	125766	151455	67410	79824	123837	132719	64920	73743	73743	73743
Other Current Assets	7000	7000	7000	7000	7150	7150	7150	7300	7300	7300	7500	7500	7500	7500
Total Current Assets	234092	242446	183798	136492	158916	179605	105560	120424	164137	174019	194342	213798	219323	219323
INTERMEDIATE ASSETS														
Breeding Livestock	44400	44583	44766	44949	45132	45315	45498	45681	45864	46047	46230	46413	46600	46600
Machinery & Equipment	87406	84218	81030	77842	74654	71466	68278	65090	61902	58714	55526	52338	49153	49153
Other Intermediate Assets	27000	27125	27250	27375	27500	27625	27750	27875	28000	28125	28250	28375	28500	28500
Total Intermediate Assets	158806	155926	153046	150166	147286	144406	141526	138646	135766	132886	130006	127126	124253	124253
LONG TERM ASSETS														
Land	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000	1021000
Other Long Term Assets	40000	40000	39864	39728	39592	39456	39320	39184	39048	38912	38776	38640	38500	38500
Total Long Term Assets	1061000	1061000	1060864	1060728	1060592	1060456	1060320	1060184	1060048	1059912	1059776	1059640	1059500	1059500
TOTAL ASSETS	1453898	1459372	1397708	1347386	1366794	1384467	1307406	1319454	1359951	1368817	1384124	1400564	1403076	1403076
CURRENT LIABILITIES														
Notes Payable	150000	153878	108953	92595	146834	194345	62595	80829	141431	184922	139922	161429	212558	212558
Interest Due	26601	6266	3738	5400	6402	9977	8325	8835	11365	14622	11109	14412	18193	22036
Principal due: Intermediate Debts	14680	14680	14680	14680	11210	11210	11210	7610	7610	7610	3875	3875	3875	17009
: Long Term Debts	36256	36256	36190	36124	36057	35989	35921	35853	35783	35714	35643	35572	35501	40024
Other Current Liabilities	5000	2800	4600	5400	2500	2300	2100	4900	4700	8500	5800	6600	7500	7500
Total Current Liabilities	232537	213880	168161	154199	203003	255821	120151	138027	200889	253368	196349	221888	277627	299127
INTERMEDIATE LIABILITIES	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	36715	19707
LONG TERM LIABILITIES	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	166884	126860
TOTAL LIABILITIES	436136	417479	371760	357798	406602	459420	323750	341626	404468	456967	399948	425487	481226	445694
NET WORTH	1017762	1041893	1025948	989588	960192	925047	983656	977828	955463	911850	984176	975077	921850	957382
RATIOS:														
Current Ratio	1.01	1.13	1.09	0.89	0.78	0.70	0.88	0.87	0.82	0.69	0.99	0.96	0.79	0.73
Working Asset Ratio	1.46	1.59	1.64	1.50	1.28	1.11	1.58	1.48	1.26	1.06	1.39	1.32	1.09	1.08
Net Capital Ratio	3.33	3.50	3.76	3.77	3.36	3.01	4.04	3.86	3.36	3.00	3.46	3.29	2.92	3.15
Debt to Equity Ratio	0.43	0.40	0.36	0.36	0.42	0.50	0.33	0.35	0.42	0.50	0.41	0.44	0.52	0.47
Total Debt Ratio	0.30	0.29	0.27	0.27	0.30	0.33	0.25	0.26	0.30	0.33	0.29	0.30	0.34	0.32
Per Cent Equity	70.08	71.39	73.40	73.45	70.25	66.82	75.24	74.11	70.26	66.62	71.18	69.62	65.70	68.23
Debt and Asset Structure Ratios:														
Current Assets: Total Assets	0.16	0.17	0.13	0.10	0.12	0.13	0.08	0.09	0.12	0.13	0.14	0.15	0.16	0.16
Intermed. Assets: Total Assets	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09
Long Term Assets: Total Assets	0.73	0.73	0.76	0.79	0.78	0.77	0.81	0.80	0.78	0.77	0.77	0.76	0.76	0.76
Current Liab: Total Liab	0.53	0.51	0.45	0.43	0.50	0.56	0.37	0.40	0.50	0.55	0.49	0.52	0.58	0.67
Intermed. Liab: Total Liab	0.08	0.09	0.10	0.10	0.09	0.08	0.11	0.11	0.09	0.08	0.09	0.09	0.08	0.04
Long Term Liab: Total Liab	0.38	0.40	0.45	0.47	0.41	0.36	0.52	0.49	0.41	0.37	0.42	0.39	0.35	0.28

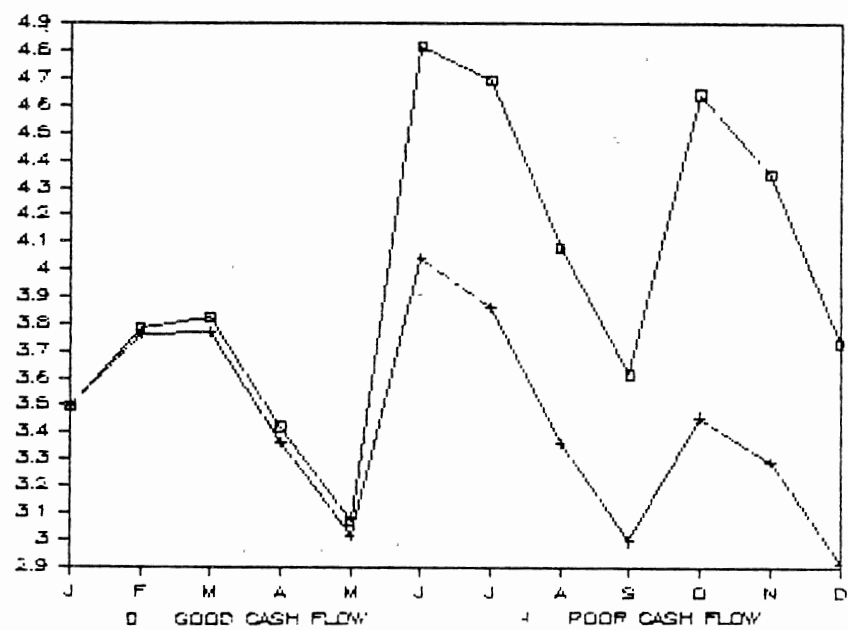


Figure 31. Net Capital Ratio: High Equity Situation

for the good cash flow, three times that of the low equity situation and 40% higher than the medium equity case. With the poor cash flow, the coefficient was .10 for the high equity case, compared to .072 for the medium and .054 for the low equity situation. The relative instability of this ratio for the high equity case might be a concern to a lender, although the overall solvency of this business is not in question.

The Current Ratio and Working Asset Ratio, both measures of liquidity, averaged 1.27 and 1.79 respectively for the good cash flow; .88 and 1.36 for the poor cash flow (figures 32 and 33). The fluctuations in the overall liability structure of this business can be seen in figures 34 and 35.

To summarize, three levels of equity were used in the development of this case farm to show the relationship between equity and certain financial ratios. All of the scenarios in this chapter had the same level and structure of assets. The variation in equity was achieved through varying debt levels. The level of equity affected the liquidity position of the business through the interest liability in the current section of the Net Worth Statement. For the lower leveraged operation, interest was not as significant an entry as in the higher leveraged operation. The level of equity affected the solvency of the business directly by the amount of total liabilities for each situation. A highly leveraged business is less solvent than one with a low level of indebtedness. The equity position affected profitability through the interest expense in the Income Statement. This expense was higher for the low equity business than for the high equity business.

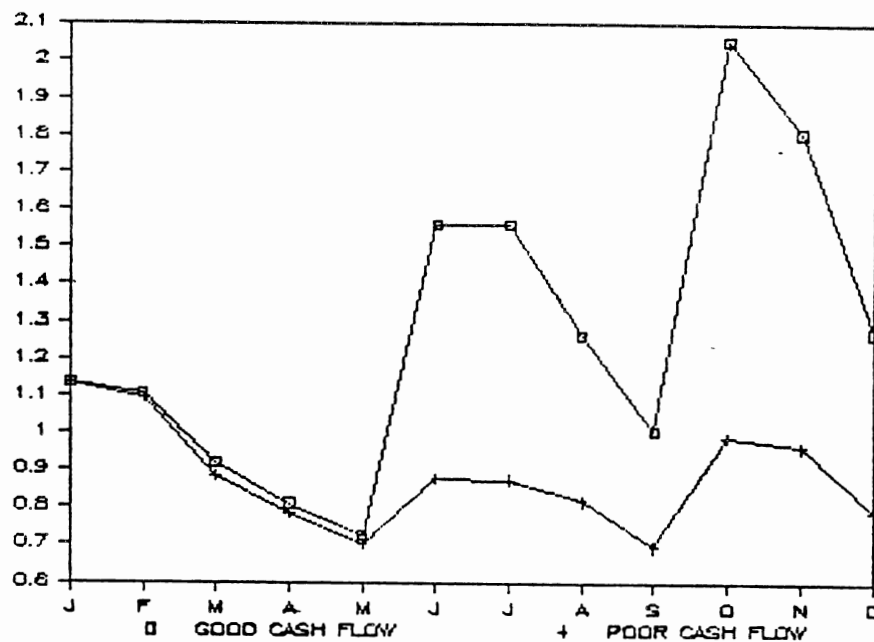


Figure 32. Current Ratio: High Equity Situation

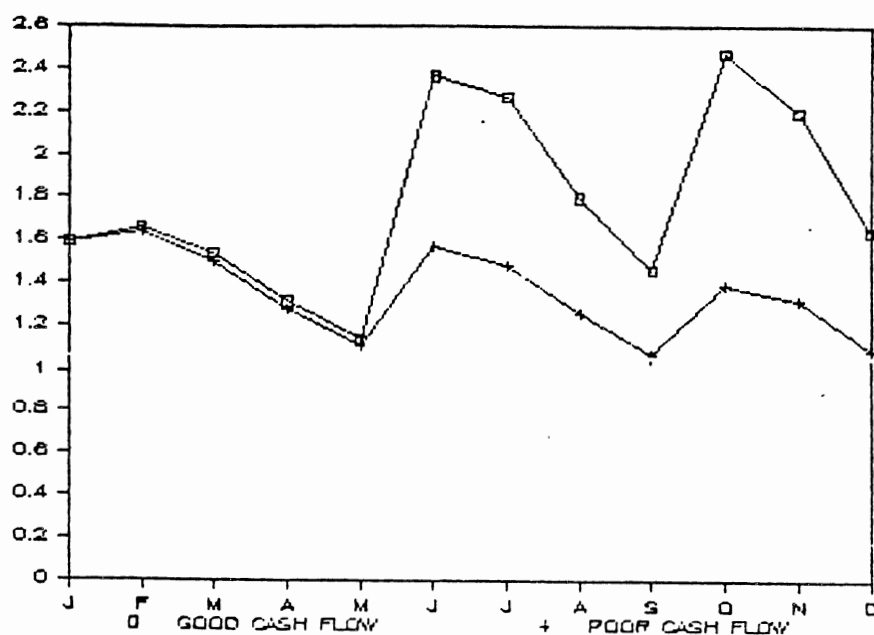


Figure 33. Working Asset Ratio: High Equity Situation

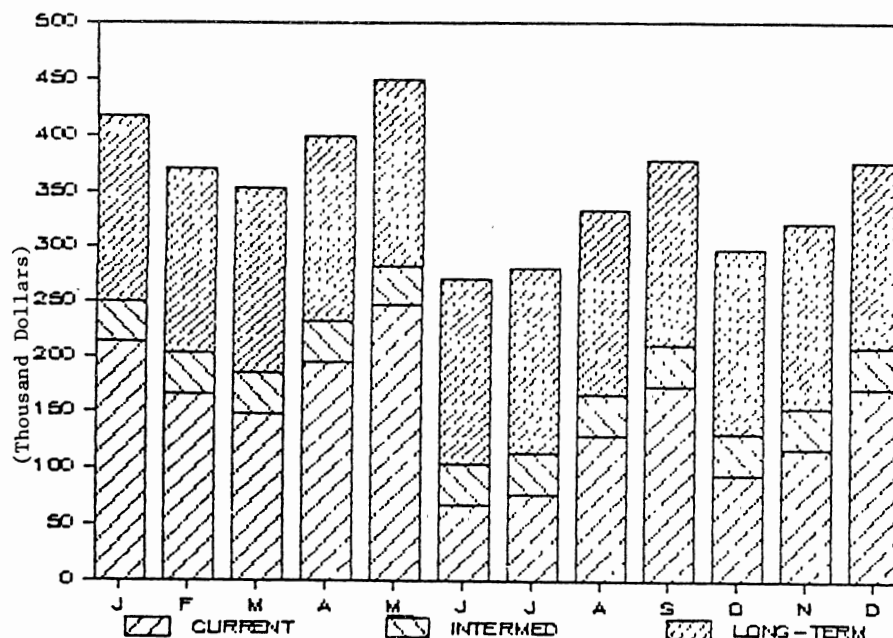


Figure 34. Liability Structure: High Equity and Good Cash Flow

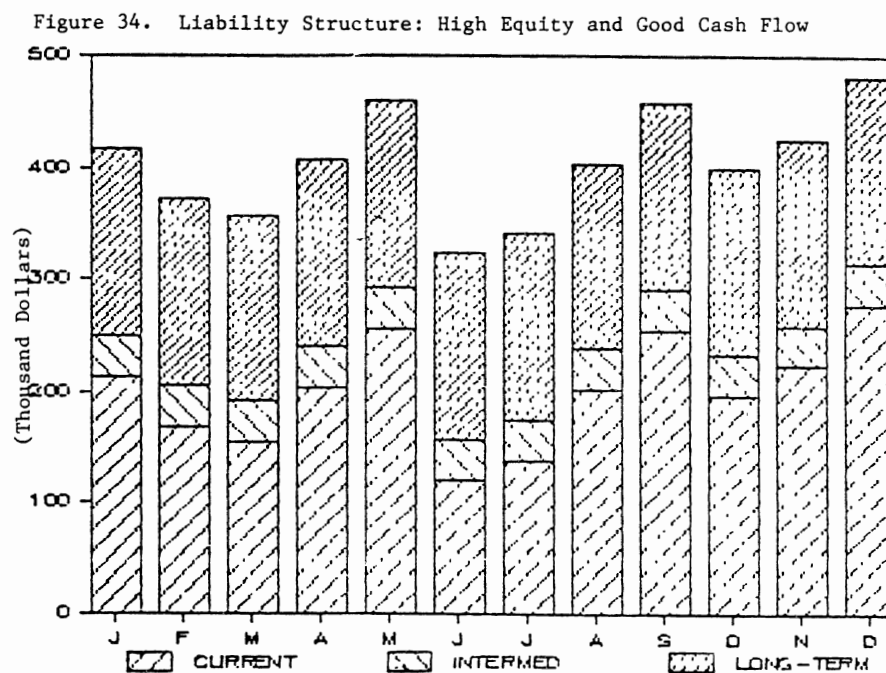


Figure 35. Liability Structure: High Equity and Poor Cash Flow

Two Cash Flow Statements were then developed for each equity position to show the importance of repayment ability in the financial evaluation of a business. While the most lucrative financial situation was that of the high equity farm with a good cash flow, this analysis showed that the low equity position with a good cash flow might be a better risk for a lender than the higher equity situations with poor cash flow projections.

The following chapter provides a summary of the problems addressed in this study and the procedures used in completing the analyses. A summary of the results is presented to draw some conclusions about the effects of equity levels and cash flow on the financial condition of a farm business.

CHAPTER V

SUMMARY AND CONCLUSIONS

The goals of this project were to develop an integrated financial program available to farmers and agricultural lenders on a microcomputer, and to use that system to identify some of the ways credit allocation to the farm sector could be improved. An important aspect of financial management is to have a system which allows the farm manager to control and analyze the performance of the business for purposes of evaluation by lenders, reporting to government agencies and others, and as an aid in the decision making process. Only from a thorough understanding of the past can managers adequately plan for the future.

Credit is a necessary ingredient in most farm management strategies, but in order to be effective, lenders must be responsive to the overall financial condition of each farm business. The premise that loans can be made on the basis of equity alone is an obvious fallacy, leading to a long-run decline in the net worth of many farm businesses.

Integrated Farm Financial Statements for the Microcomputer

Integrated Farm Financial Statements (IFFS), a system of agricultural financial worksheets designed for the microcomputer, was a

product of this study. Full documentation of the program in a user's manual format was incorporated into the project. An integrated approach to financial management was taken in the programming of the IFFS system to show the interrelationships between the production and financial aspects of the farm business.

The Cash Flow Statement was easily adapted to the microcomputer program because of its tabular structure and repetitive entries and formulas. The Cash Flow Statement records all cash inflows and outflows of the farm business during the year. It can be constructed from previous years' records, tax forms, budgets, or other sources of information. In the IFFS system, income and expense items can be entered directly into the Cash Flow worksheet from the keyboard. Also, the IFFS program includes sixty budgets which represent the major crop and livestock enterprises in various regions of Oklahoma. The information from these budgets can be loaded directly into the Cash Flow worksheet in the IFFS program which can save a significant amount of time for the farm manager.

The full utilization of cash flow analysis as a management tool has not been attained in many cases because of the lack of predictive or planning budgets, and regular and timely adjustments to those plans. For many businesses, a budget is prepared at the beginning of the planning horizon, on January 1 or at the beginning of the crop year. However, few managers have interim budgets to reflect adjustments which are needed within the year. The budgets in the IFFS system can be revised at any time during the year, and monthly comparisons of the actual figures to budgeted figures can be obtained to indicate how the business is performing. These types of

comparisons serve as "red flags" both to the operator and lender and should provide useful insights into the trends of the business.

The planning budgets could be adjusted in the following situations: unanticipated capital purchases; major repairs or improvements; additional financing needs; windfall gains from marketing strategies, speculation or inheritance; addition or elimination of an enterprise; natural disaster; changes in government programs and policies; changes in financing terms, especially with variable rate loans; or unusual family expenses or income. Changes such as these have entailed hours of pencil-erasing and revisions in the past. Often the adjustments have been handled in shortcut methods resulting in poor management and lack of control. In the IFFS system, once the budgets have been adjusted, a revised farm plan can be formulated and the resulting implications on the major financial statements and ratios analyzed.

The Cash Flow Summary calculates the cash position of the business at the end of each month to determine when operating credit is needed. The operating loan balance increases when there is a cash deficit during the month. Principal and calculated interest on the loan are repaid when there is a cash surplus in the month. This information can help the farm manager and lender establish repayment schedules for existing loans, and determine the repayment capacity of the business for new loans.

The Monitor Statement is another financial statement available in the IFFS program. This worksheet compares actual cash flow data to projected figures. Monitoring is done on a monthly basis as well as on a cumulative basis. This statement provides warnings to the farm

manager and lender of potential cash flow problems when the business is not performing as planned.

The Net Worth Statement provides a summary of the financial position of the business at one point in time. It summarizes the assets and liabilities of the business, and calculates the amount of owner equity or net worth. There are several Net Worth Statements in the IFFS system. The formats vary in the detail provided in the statement, as well as in the method of valuing the assets. In several of the statements, full detail is provided for the market and breeding livestock, and for pasture and cropland acreages. This format might be useful to the lender when complete information on the business assets is required for collateral. The two methods of valuation are Market Value and Modified Cost. The Market Value is based on current appraisals of the assets. Modified Cost is based on the cost or basis of the asset, less accumulated depreciation. This method would generally result in lower figures as the effects of inflation on the Balance Sheet are eliminated.

The IFFS includes Balance Sheet Supporting Schedules which provide more detail on the assets, liabilities and debt structure of the business. There are Supporting Schedules for securities; accounts and notes receivable; livestock and products; crops, feed and supplies; breeding livestock; real estate; and machinery and equipment. Information from these schedules can be loaded directly into any of the Net Worth Statements in the system.

The Income Statement is also included in the IFFS program. This statement measures the profitability of the business in a given year. It summarizes cash receipts and expenses, and adjustments for changes

in inventory and capital items. This statement is completed automatically with information from the Cash Flow and Net Worth Statements.

Several financial ratios are calculated from the financial statements in the IFFS system. These include the Current Ratio, Working Asset Ratio, Debt Structure Ratio, Net Capital Ratio, Debt to Equity Ratio, Total Debt Ratio, Per Cent Equity, Debt Servicing Ratio, Return on Equity and Return on Investment.

Another worksheet available in this system is the Spread Sheet. This contains information from all three of the major financial statements and several of the financial ratios on an annual basis. This statement provides a summary of the changing structure and growth of the business from year to year.

Case Farm Analyses

Several case farms were developed with their financial statements evaluated on the microcomputer program. The microcomputer allowed a number of "what-if?" situations to be done in a fraction of the time it would have taken with conventional accounting techniques. The farm scenarios were evaluated on the basis of liquidity, solvency, profitability, and overall trends of the business. First, four farms were analyzed on the basis of these criteria. Table 14 provides a comparative analysis of the financial data for these farms. Then a detailed analysis of one farm was completed with variations in the equity position, interest rate and cash flow assumptions. A summary of the financial data for each of these situations can be found in Tables 8 through 13 in Chapter IV.

Table 14 Spread Sheet (as of December 31)

	Southeastern	North Central	Southwest	West South Central
NET WORTH STATEMENT				
CURRENT ASSETS				
1. Cash & Other Liquid Assets	18800	34400	7060	18450
2. Mkt. Livestock & Products: Rsd.	.....	16416	16416	17938
3. Mkt. Livestock: Purchased	.....	32832	32832	53813
4. Stored Crops, Feed & Supplies	4000	18250	42000	11850
5. Cash Investments: Growing Crops	.....	27744	25702	7974
6. Prepaid Expenses & Other Assets	.....	.....	.....	.....
7. Total Current Assets	22800	129642	124010	110225
INTERMEDIATE ASSETS				
8. Notes Receivable	.....	.....	.....	.....
9. Breeding Livestock: Raised	26400	20700	26400	51150
10. Breeding Livestock: Purchased	.....	.....	.....	.....
11. Vehicles	8000	9000	4500	7000
12. Machinery & Equipment	14232	53228	91155	38160
13. Other Intermediate Assets	19100	29000	6250	13200
14. Total Intermediate Assets	67932	111928	128505	109510
FIXED ASSETS				
15. Contracts & Notes Receivable	.....	.....	.....	.....
16. Buildings & Improvements	36300	62500	34000	52500
17. Land	160000	550000	640000	332000
18. Other Fixed Assets	.....	.....	.....	.....
19. Total Fixed Assets	196300	612500	674000	384500
20. TOTAL ASSETS	287032	354070	926515	504235
CURRENT LIABILITIES				
21. Accounts & Notes Payable	9086	181884	54276	69778
22. Interest Due	7098	26322	25968	16210
23. Estimated Taxes Due	2750	7700	4180	5500
24. Accrued Expenses	.....	.....	.....	.....
25. Principal Due in 12 Mos: Inter.	3949	12128	6149	11917
26. Long-Term	3133	9755	4097	5897
27. Other Current Liabilities	.....	.....	.....	.....
28. Total Current Liabilities	26816	237789	94670	109382
INTERMEDIATE LIABILITIES				
29. Notes Payable	9377	36213	38117	23231
30. Other Intermediate Liabilities	.....	.....	.....	.....
31. Total Intermediate Liabilities	9377	36213	38117	23231
LONG TERM LIABILITIES				
32. Mortgages & Notes Payable	61174	195939	424291	114557
33. Other Long Term Liabilities	.....	.....	.....	.....
34. Total Long Term Liabilities	61174	195939	424291	114557
35. TOTAL LIABILITIES	96567	469941	557078	247090
36. NET WORTH	190465	384129	369437	257145
37. TOTAL LIABILITIES & NET WORTH	287032	354070	926515	504235
INCOME STATEMENT				
38. Gross Receipts from Farming	59268	136676	184680	238979
39. Total Cash Expenses less Interest	43750	132995	140986	190676
40. Interest Expense	10234	50520	34849	31614
41. Net Cash Income from Operations	5384	-46839	8845	16689
42. Adjustments for Accrued Items	.....	.....	.....	.....
& Changes in Inventory	903	-598	5169	9486
43. Adjustments for Capital Items	-23385	-29939	-6595	-15605
44. Net Farm Income	-17098	-77376	7419	10570
45. Opportunity Return to Labor & Mgmt.	15800	18800	19000	15000
FINANCIAL RATIOS				
LIQUIDITY MEASURES				
46. Current Ratio	0.88	0.55	1.31	1.01
47. Working Asset Ratio	2.56	0.88	1.70	1.66
48. Debt Structure Ratio	0.27	0.51	0.17	0.44
SOLVENCY MEASURES				
49. Net Capital Ratio	2.97	1.32	1.36	2.04
50. Total Debt Ratio	0.34	0.55	0.60	0.49
51. Debt to Equity Ratio	1.51	1.22	1.51	1.76
52. Per Cent Equity	66.36	44.98	39.37	51.00
PROFITABILITY MEASURES				
53. Return on Investment	-0.08	-0.07	0.02	0.03
54. Return on Equity	-0.16	-0.22	-0.03	-0.02

Southeastern Oklahoma Farm Situation

This was the smallest farm unit analyzed with 200 acres of cropland, 250 acres of native pasture, and 50 cows. It had the lowest net worth of the four case farms, at \$190,465, and the highest percent equity at 66.36%. It had the lowest production levels of the four, with gross receipts from farming of \$59,368. The Current Ratio of .88 pointed towards potential cash flow problems. However, with a Working Asset Ratio of 2.56, this farm showed the strongest liquidity position of the four when both current and intermediate assets and liabilities were considered. All of the farms reported a negative Return on Equity, but the Southeastern farm had the second highest rate of return of the four at $-.16$. The Net Farm Income of $-\$17,098$ was not a major concern because it was largely the result of the high depreciation expense of machinery and equipment.

North Central Oklahoma Farm Situation

This farm included 680 acres of wheat, 50 acres of bermuda grass, 250 acres of native pasture, 200 stockers and 50 cows. It was the most solvent of the four farms analyzed, with a net worth of \$384,129 at the end of the year. However, the equity position of the owners of this business had declined during the year, from 55.25% at the beginning of the year, to 44.98% by December 31. This farm had serious liquidity problems with a Current Ratio of .55 and a Working Asset Ratio of .88. It was also the least profitable operation, with a Net Farm Income of $-\$77,376$.

Southwestern Oklahoma Farm Situation

This farm was the largest operation of the four, with 980 acres owned and 700 rented acres. The major crop and livestock enterprises were cotton, wheat, stockers and cows. The farm was large enough to attain economies of size, but with the lowest percent equity of 39.87%, it could typify that of a newly established operator. Most of the financing of this farm was at concessionary rates and terms available through the Farmers Home Administration. The Net Farm Income of \$7,419 could not have been achieved without the subsidized interest rate which kept the interest expense much lower than it would have been with conventional sources of credit. This farm was in a better liquidity position than the other farms evaluated, with a Current Ratio of 1.31 and a Working Asset Ratio of 1.9.

West South Central Oklahoma Farm Situation

The resources of this farm included 200 stockers, 100 cows, 200 acres of wheat, 400 acres of bermuda grass, and 280 acres of native pasture. 45% of the land was rented on a cash rent agreement. This farm had the highest annual off-farm income of \$25,000 which suggests a part-time manager with a large amount of hired, seasonal labor. The percent equity increased during the year from 46% to 51%, an increase of 7.9%. This reflects a positive trend and growth of the business. The business did not have serious liquidity problems, with a Current Ratio of 1.01 and a Working Asset Ratio of 1.66. The West South Central farm was the most profitable of the four with a Net Farm Income of \$10,570.

Northwestern Oklahoma Farm Situation

The Northwestern farm was analyzed in more detail than the other four farm situations. Three levels of equity were considered, and two cash flow scenarios. This was a large operation, with 2,167 acres of cropland and 500 acres of native pasture. The major crop and livestock enterprises included wheat, grain sorghum, corn, alfalfa, stocker steers and cows. All of the crops, except 227 acres of grain sorghum, were grown on irrigated land.

Low Equity Situation

This farm operation began the year with a net worth of \$587,361 representing 40.2% of total assets. This decreased to 35.9% of total assets under the good cash flow scenario, and to 28.4% with the poor cash flow. This decline was less significant in the good cash flow situation with a net decrease of 14.3% in net worth during the year. The outstanding operating debt exhibited a great deal of variability in the low equity situation. Operating debt increased 8.4% during the year with the good cash flow, and it increased 76.7% with the poor cash flow. The low equity position combined with a poor cash flow resulted in a business with severe financial stress. The overall financial position of the stronger cash flow situation did not significantly deteriorate during the year. Net Farm Income of -\$3,281 does not represent a serious earnings problem because it includes a large amount of depreciation of machinery and equipment.

Medium Equity Situation

This farm situation had a net worth of \$874,326 at the beginning

of the year. Net Worth decreased by 4% during the year under the good cash flow situation, and it decreased by 16% under the poor cash flow. There was a great deal of variability in the debt to equity level during the year, but the net change was insignificant during the year with the stronger cash flow. The operating debt decreased by 24.7% during the year with the good cash flow scenario and it increased 43.5% with the poor cash flow. This increase in outstanding operating debt and a Net Farm Income of -\$105,601 for the poor cash flow reflect the deficit in cash receipts which would provide strong warning signals to both the farm manager and lender. The better cash flow situation was profitable with a Net Farm Income of \$19,062 for the year.

High Equity Situation

The percent equity of this farm situation was 71.4% at the beginning of the year. Per cent equity increased to 73.2% by the end for the good cash flow scenario, and it decreased to 65.7% for the poor cash flow. Both levels indicate a solvent business, but with the poor cash flow there is a declining trend in solvency during the year. The Net Capital Ratio is an indication of the solvency of the business. This ratio showed the greatest amount of variability during the year with both cash flow scenarios. Although this business is solvent, the variability might be a concern to both the farm manager and the lender. The operating debt showed a great deal of variability during the year, reflecting the seasonal nature of the business in the cash inflows and outflows. For the good cash flow, the operating debt decreased 26.6% during the year. For the poor cash flow, the

outstanding operating debt increased 41.7%. This increase in operating debt reflects a serious earnings problem and the lack of profitability of the business.

To summarize, a high level of equity is certainly an advantage in most businesses, and it was shown that the high equity case farm exhibited a stronger financial base than the medium or low equity farms. However, by having both good and poor cash flow scenarios, it was shown that in the long-run, even high levels of equity do not assure continued solvency or profitability. The high equity situation with the poor cash flow deteriorated much more than the low equity situation with the good cash flow. This was seen most clearly in the change in outstanding operating debt which increased 41.7% for the high equity, poor cash flow scenario during the year. Outstanding operating debt increased less significantly, only 8.4% in the low equity, good cash flow scenario. Under the medium equity, good cash flow scenario, operating debt decreased by 24.7% during the year. This reduction is a strong sign of profitability and should be emphasized in the financial review of this business. The high equity situation had a higher net worth than the other farm situations, but this level decreased by 11.5% during the year under the poor cash flow scenario. Under the medium equity, good cash flow farm situation, net worth decreased by 4% during the year.

In conclusion, it is obvious that lenders should pay close attention to the cash flow statement of its borrowers to prevent deterioration of owner equity and possible bankruptcy in the long-run. While low equity situations represent higher risks to the agricultural lender, with a strong earnings capability, they could be safer in the

long-run than some of the poorly managed, unprofitable higher equity farms.

Implications For Further Study

One aspect of financial management which was not covered under the Integrated Farm Financial Statements was risk management. It would be possible to incorporate a risk model within this program, so enterprise selection and decision making could be based on liquidity, profitability, and solvency as well as the risk exposure of the business. The relationship between risk and liquidity could also be developed thoroughly. How the farm manager prepares for the unknown, as a risk-lover or a risk-avorter, has an impact on the liquidity position, and hence on the Balance Sheet, of the business. A business with a very high Current Ratio could indicate a risk-adverse manager, preparing for any unforeseen expenses by having a high proportion of easily liquidated, short term assets. The risk-adverse manager could also have an excess of current assets in place of the generally more productive, and depreciable intermediate and long-term assets in an attempt to reduce risk. These are management strategies which could have an adverse effect on the earnings potential of the business.

The allocation of credit in agriculture might be improved if financial standards were developed for the different agricultural enterprises and regions of the country as has been done by other industries in the United States. Standards or norms are just guidelines, and effective financial analysis must be performed on an individual basis to evaluate the unique aspects of each farm situation. However, for lenders, investors, beginning farmers and others, some guidelines to

serve as benchmarks would be desirable. The Almanac of Business and Financial Ratios publishes a table of financial ratios for agricultural production, based on the size of the business assets. These ratios are for the entire farm sector in the country and, as such, are too general to be of much assistance.

Designing the financial structure of the business so that it could be timed with the cash inflows and outflows was a goal of this program. In addition, properly structuring debt repayment with the acquisition of capital items, such as new equipment and additional land, could be incorporated into the financial analysis of this program. The lending policies of credit institutions including the rates and terms of their loans to farmers, should reflect the repayment ability and financial condition of the individual. Short term, operating loans which are repaid from cash receipts can often be made despite a borrower's low net worth. Longer term loans often entail more planning and risk, but are generally better secured than the operating loan.

A final suggestion for future research would be to incorporate a record-keeping system into the Integrated Farm Financial Statements program. This would save time for the farm manager from gathering past production and financial data needed in the program. There are many computerized record systems on the market which could be integrated with the IFFS worksheets in a spread sheet format, so data could be automatically accessed for financial analyses.

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APPENDICES

APPENDIX A

SAMPLE OUTPUT: OK PRODUCER

EXAMPLES 2 AND 3

Table 15. Net Worth Statement: Example 2

NET WORTH STATEMENT							
ASSETS	Beginning Balance	Ending Balance	Net Change	LIABILITIES	Beginning Balance	Ending Balance	Net Change
CURRENT ASSETS				CURRENT LIABILITIES			
1. Cash & Checking	2000	2000	0	37. Accounts Payable	1200	1120	-80
2. Savings & Time Certificates	500	530	30	38. Notes Payable	50000	48721	-1279
3. Marketable Bonds & Securities			0	Interest Due:			
4. Accounts Receivable	850	1000	150	39. Current Liabilities	895	971	76
5. Cash Value Life Insurance	600	600	0	40. Intermediate Liabilities	5600	5523	-77
6. Other			0	41. Long Term Liabilities	8362	8072	-290
7. TOTAL (lines 1 thru 6)	3950	4130	180	Taxes Due:			
Market Livestock & Products:				42. Real Estate & Personal Property	990	1000	10
8. Raised Livestock			0	43. Employee Payroll Withholding			0
9. Purchased Livestock	53550	55080	1530	44. Personal & Self-Employment	2100	2200	100
10. Stored Crops, Feed, Supplies	23454	24900	1446	45. Other Accrued Expenses	480	480	0
11. Cash Investment Growing Crops	8000	8400	400	46. Contingent Tax Liability	0	0	0
12. Prepaid Expenses			0	<< Tax Rates: 0.00>>			
13. Other Current Assets			0	Principal Due in 12 mos:			
14.			0	47. Intermediate Liabilities	6050	7729	1679
15.			0	48. Long Term Liabilities	2465	2755	290
16.			0	49. Other Current Liabilities			0
17.			0	50.			0
18. TOTAL CURRENT ASSETS	88954	92510	3556	51. TOTAL CURRENT LIABILITIES	78142	78570	428
INTERMEDIATE ASSETS				INTERMEDIATE LIABILITIES			
19. Notes Receivable	0	0	0	52. Notes Payable	33950	31721	-2229
Breeding Livestock:				(Principal Due Beyond 12 Mos.)			
20. Raised Livestock	25100	24700	-400	Contingent Tax Liability:			0
21. Purchased Livestock	1500	1440	-60	53. From Sale of Machinery			0
22. Vehicles	5000	3950	-1050	54. From Sale of Breeding Livestk	0	0	0
Machinery & Equipment:				55. Other			0
Cost or Basis				56. TOTAL CONTINGENT TAX LIABILITY	0	0	0
23. Less Accum. Depreciation	46760	38650	-8110	57. Other Intermediate Liabilities			0
24. Securities Not Readily Mktable.	2750	2750	0	58.			0
25. Other Intermediate Assets			0	59.			0
26.			0	60.			0
27. TOTAL INTERMEDIATE ASSETS	81110	71490	-9620	61. TOTAL INTERMEDIATE LIABILITIES	33950	31721	-2229
FIXED ASSETS				LONG TERM LIABILITIES			
28. Contracts & Notes Receivable			0	62. Mortgages & Notes Payable	73830	71075	-2755
29. Buildings & Improvements	2400	8400	6000	(Principal Due Beyond 12 Mos.)			
Land				Contingent Tax Liability:			
30. Cropland:	324000	324000	0	63. From Sale of Real Estate			0
31. Pasture:	36000	36000	0	64. Other			0
32.			0	65. TOTAL CONTINGENT TAX LIABILITY	0	0	0
33. Non-Farm Investments			0	66. Other Long Term Liabilities			0
34. Other Long Term Assets			0	67.			0
			0	68.			0
35. TOTAL FIXED ASSETS	362400	368400	6000	69. TOTAL LONG TERM LIABILITIES	73830	71075	-2755
				70. TOTAL LIABILITIES	185922	181366	-4556
36. TOTAL ASSETS	532464	532400	-64	71. NET WORTH	346542	351034	4492
				72. TOTAL LIABILITIES & NET WORTH	532464	532400	-64

Table 17. Income Statement and Financial Ratios:
Example 2

INCOME STATEMENT					FINANCIAL RATIOS		
A. OPERATING RECEIPTS					B. CASH FARM EXPENSES		
Livestock Sales & Products:					Hired Labor	268	
Raised market livestock	13785				Mach. & Equip. Repairs	1687	
	0				Building & Fence Repairs	282	
Livestock purchased for resale:	72174				Cash Interest	17274	
Livestock products					Feed Purchased	4784	
					Seed, Plants, Other	1928	
Subtotals:	85959				Fertilizer, lime, chemicals	14812	
					Machinery Hire	14996	
Crop Sales	38488				Supplies	776	
	12688				Breeding Fees	0	
					Vet. fees, medicine	1585	
Subtotals:	51888				Gas, fuel, oil, lubricants	3949	
					Storage, Warehousing	488	
Other Farm Income:					Taxes: Real Est. & Pers. Prop.	996	
Government payments	3228				Insurance	558	
Custom Work					Utilities (farm share)	498	
Dividends, Refunds					Cash Rent & Leases	488	
Cash Rent					Freight, Trucking	1842	
Other	538				Conservation Expenses	0	
					Miscellaneous Expenses	158	
Subtotals:	3758					1843	
GROSS RECEIPTS FROM FARMING	148789				Livestk. purchased for resale	51888	
					TOTAL CASH EXPENSES	118348	
B. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:					C. NET CASH INCOME FROM OPERATIONS		
1. Accounts & Notes Receivable:		Notes & Accounts	Other	Other		22349	
Ending Inventory	1888						
Beginning Inventory	-858						
Change	158		0	0		158	
2. Accounts Payable & Accrued Expenses:		Accounts	Taxes	Interest	Other		
Beginning Inventory	1288		998	14857	488		
Ending Inventory	1128		1888	14544	488		
Change	88		-18	291	0		361
3. Prepaid Expenses:		Ending Inventory	Beginning Inventory				
		0	0				0
4. Inventories:							
		Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops			
Ending Inventory	5588		24988	9488			
Beginning Inventory	53258		23454	8888			
Change	1538		1444	488			3374
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
		Breeding Livst. Vehicles	Mach. & Equip.	Improvements			
Ending Inventory	26148		3758	38458	8488		
Sales	2125		0	0	0		
Subtotals:	28273		3758	38458	8488		
Beginning Inventory	26688		5888	44748	2488		
Purchases	0		0	0	7388		
Subtotals:	26688		5888	44748	9988		
Change	1445		-1858	-8118	-1588		-8995
F. VALUE OF FARM PRODUCTS USED IN THE HOME							0
G. NET FARM INCOME							17242

Table 18. Net Worth Statement: Example 3

NET WORTH STATEMENT							
ASSETS	Beginning Balance	Ending Balance	Net Change	LIABILITIES	Beginning Balance	Ending Balance	Net Change
CURRENT ASSETS				CURRENT LIABILITIES			
1. Cash & Checking	3000	2000	-1000	37. Accounts Payable	1200	1120	-80
2. Savings & Time Certificates	500	530	30	38. Notes Payable	50000	47660	-2340
3. Marketable Bonds & Securities			0	Interest Due:			
4. Accounts Receivable	850	1000	150	39. Current Liabilities	895	943	48
5. Cash Value Life Insurance	500	600	0	40. Intermediate Liabilities	5600	5523	-77
6. Other			0	41. Long Term Liabilities	8362	8072	-290
7. TOTAL (lines 1 thru 6)	4950	4130	-820	Taxes Due:			
Market Livestock & Products:				42. Real Estate & Personal Property	990	1000	10
8. Raised Livestock			0	43. Employee Payroll Withholding			0
9. Purchased Livestock	53550	55080	1530	44. Personal & Self-Employment	2100	2200	100
10. Stored Crops, Feed, Supplies	23454	24900	1446	45. Other Accrued Expenses	480	480	0
11. Cash Investment Growing Crops	8000	8400	400	46. Contingent Tax Liability	0	0	0
12. Prepaid Expenses			0	((Tax Rates: 0.00))			
13. Other Current Assets			0	Principal Due in 12 mos:			
14.			0	47. Intermediate Liabilities	6050	7729	1679
15.			0	48. Long Term Liabilities	2465	2755	290
16.			0	49. Other Current Liabilities			0
17.			0	50.			0
18. TOTAL CURRENT ASSETS	89954	92510	2556	51. TOTAL CURRENT LIABILITIES	78142	77482	-660
INTERMEDIATE ASSETS				INTERMEDIATE LIABILITIES			
19. Notes Receivable	0	0	0	52. Notes Payable	33950	31721	-2229
Breeding Livestock:				(Principal Due Beyond 12 Mos.)			
20. Raised Livestock	25100	24700	-400	Contingent Tax Liability:			
21. Purchased Livestock	1500	1440	-60	53. From Sale of Machinery			0
22. Vehicles	5000	3950	-1050	54. From Sale of Breeding Livestk	0	0	0
Machinery & Equipment:				55. Other			0
Cost or Basis				56. TOTAL CONTINGENT TAX LIABILITY	0	0	0
23. Less Accum. Depreciation	46760	38650	-8110	57. Other Intermediate Liabilities			0
24. Securities Not Readily Mktable.	2750	2750	0	58.			0
25. Other Intermediate Assets			0	59.			0
26.			0	60.			0
27. TOTAL INTERMEDIATE ASSETS	81110	71490	-9620	61. TOTAL INTERMEDIATE LIABILITIES	33950	31721	-2229
FIXED ASSETS				LONG TERM LIABILITIES			
28. Contracts & Notes Receivable			0	62. Mortgages & Notes Payable	73830	71075	-2755
29. Buildings & Improvements	2400	8400	6000	(Principal Due Beyond 12 Mos.)			
Land				Contingent Tax Liability:			
30. Cropland:	324000	324000	0	63. From Sale of Real Estate			0
31. Pasture:	36000	36000	0	64. Other			0
32.			0	65. TOTAL CONTINGENT TAX LIABILITY	0	0	0
33. Non-Farm Investments			0	66. Other Long Term Liabilities			0
34. Other Long Term Assets			0	67.			0
			0	68.			0
35. TOTAL FIXED ASSETS	362400	368400	6000	69. TOTAL LONG TERM LIABILITIES	73830	71075	-2755
				70. TOTAL LIABILITIES	185922	180278	-5644
36. TOTAL ASSETS	533464	532400	-1064	71. NET WORTH	347542	352122	4580
				72. TOTAL LIABILITIES & NET WORTH	533464	532400	-1064

Table 19. Cash Flow Statement: Example 3

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
((OPERATING RECEIPTS))													
1. Livestock sales	0	0	0	0	0	0	0	0	0	13785	0	0	13785
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased livestock	0	0	72174	0	0	0	0	0	0	0	0	0	72174
4. Crop Sales	0	0	0	0	0	38488	0	0	0	0	0	0	38488
5.	0	0	0	0	2888	2888	2188	2188	2888	0	0	0	12880
6. Government payments	0	0	0	0	0	0	0	0	0	3228	0	0	3228
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	558	558
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	0	0	72174	0	2888	41288	2188	2188	2888	17885	0	558	148789
((CAPITAL SALES))													
10. Breeding livestock	425	0	858	0	0	0	0	0	425	425	0	0	1125
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER INFLOWS))													
13. Wages and salaries	0	0	0	0	288	288	288	288	0	0	0	0	888
14. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	0	0	0	0	0	0	0	0	0	0	0	3488	3488
16. TOTAL CASH INFLOW	425	0	73024	0	3888	41488	2388	2388	3225	17438	0	4138	147234
((OPERATING EXPENSES))													
17. Hired labor	0	0	0	0	0	0	0	0	248	0	0	0	248
18. Repairs: Mach. & Equip.	54	98	18	16	41	323	197	197	585	51	49	49	1487
19. Buildings & Fences	25	25	25	22	22	22	22	22	22	25	25	25	282
20. Feed	534	494	525	354	18	18	18	18	18	1988	312	533	4784
21. Seeds, plants	0	0	0	0	0	0	0	0	1928	0	0	0	1928
22. Fertilizer, Lime, Chem.	0	432	488	588	248	0	0	0	7248	0	0	0	14812
23. Machine Hire	0	1448	148	0	1828	8178	848	848	2488	0	0	0	14998
24. Supplies	0	0	38	0	135	148	188	115	138	184	0	0	798
25. Vet. Medicine, Breed fee	73	32	42	53	248	45	0	0	878	95	25	25	1585
26. Fuel, oil, lubricants	145	277	54	74	147	744	394	394	1223	143	154	154	3949
27. Storage, Warehousing	88	88	88	88	88	0	0	0	0	0	0	0	488
28. Taxes- R.E. & Pers. Prop	0	0	428	0	0	0	0	0	0	0	0	578	998
29. Insurance	0	0	258	0	0	0	0	0	388	0	0	0	558
30. Utilities	42	42	48	48	48	48	48	48	48	42	42	42	498
31. Rents, leases	488	0	0	0	0	0	0	0	0	0	0	0	488
32. Freight, trucking	54	0	118	0	0	0	0	0	54	828	0	0	1842
33. Miscellaneous	88	0	0	58	0	0	0	0	0	0	28	0	158
34.	0	0	1843	0	0	0	0	0	0	0	0	0	1843
35. Livestock purchases	0	0	0	0	0	0	0	0	51888	0	0	0	51888
36. TOTAL CASH EXPENSES	1591	8917	3229	1189	2815	9534	1625	1648	13944	35251	497	1408	181344
((CAPITAL EXPENSES (total cost)))													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	7588	0	0	0	0	0	0	0	0	7588
((OTHER OUTFLOWS))													
40. Family living	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	15988
41. Income Tax	0	0	0	2188	0	0	0	0	0	0	0	0	2188
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate interest	0	0	0	0	0	0	0	0	0	0	0	5684	5684
45. principal	0	0	0	0	0	0	0	0	0	0	0	4858	4858
46. Long Term interest	1418	0	0	0	0	0	4952	0	0	0	0	0	8342
47. principal	2888	0	0	0	0	0	385	0	0	0	0	0	2443
48. Total Cash Outflows	4331	18167	4479	12839	3245	18784	18212	2898	15216	54561	1947	14388	148141
((NEW BORROWING))													
49. Intermediate	0	0	0	3588	0	0	0	0	0	0	0	0	3588
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
((CASH FLOW SUMMARY))													
Int. Rate ((15.58))													
Minimum Cash Balance ((2988))													
51. Beginning Cash Balance	3888	2888	2888	2381	2889	2888	24829	18117	17527	5334	2889	2888	2888
52. Inflows- Outflows (16-48)	-5984	-18167	48545	-12839	-245	28414	-7912	-598	-11991	-39471	-1947	-18178	-987
53. Cash Position (49+50+51+52)	-2096	-18167	78545	-4158	1725	32414	18117	17527	5834	-33535	53	-9178	
54. New Borrowings: Operating	4984	18167	0	4158	245	0	0	0	0	35335	1947	18178	39154
55. New Borrowings: Inter. & Long Term	0	0	0	3588	0	0	0	0	0	0	0	0	3588
((Accrued Int. due on Oper. Loan))													
56. Interest pay'ts. on Oper. Loan	1541	2258	3891	0	38	162	0	0	0	0	459	943	
57. Principal pay'ts. on Oper. Loan	0	0	3891	0	0	162	0	0	0	0	0	0	3253
58. Ending Cash Balance	2888	2888	2381	2888	2888	24829	18117	17527	5334	2889	2888	2888	2888
59. Outstanding Operating Debt	54984	45873	0	4158	4423	0	0	0	0	33335	37482	47648	
60. Outstanding Intermediate Debt	48888	48888	48888	45588	45588	45588	45588	45588	45588	45588	45588	39458	
61. Outstanding Long Term Debt	74215	74215	74215	74215	74215	74215	73838	73838	73838	73838	73838	73838	

APPENDIX B

BUDGET WORKSHEETS

Table 21. Additional Information Budget

CASHFLOW OF ADDITIONAL INFORMATION		TOTALS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	#Error#
															##Check##
<< CAPITAL SALES >>															
1. Breeding Livestock		0													0
2. Machinery, Equipment		0													0
3. Buildings, Land		0													0
<< OTHER INFLOWS >>															
4. Wages and Salaries		0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Investments		0													0
6.		0													0
<< CAPITAL EXPENSES (Total Cost) >>															
7. Breeding livestock		0													0
8. Machinery, Equipment		0													0
9. Buildings, Fences, Land		0													0
<< OTHER OUTFLOWS >>															
10. Family Living		0	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Income Tax		0													0
12. Investments		0													0
13.		0													0
<< SCHEDULED DEBT PAYMENTS >>															
INTERMEDIATE:															
14.	int.	0													0
Total debt=	prin.	0													0
15.	int.	0													0
Total debt=	prin.	0													0
LONG TERM:															
16.	int.	0													0
Total debt=	prin.	0													0
17.	int.	0													0
Total debt=	prin.	0													0
<< NEW BORROWING-INTERMEDIATE >>															
18.		0													0
19.		0													0
<< NEW BORROWING-LONG TERM >>															
20.		0													0
21.		0													0
22. OUTSTANDING OPERATING DEBT															
23. OUTSTANDING OPERATING INTEREST															
24. BEGINNING CASH BALANCE															

Table 22. Crop and Livestock Enterprise Budget

ENTERPRISE BUDGET WORKSHEET

Enterprise: Budget Identification Number:
 Number of acres: Number of head:

			PER HEAD OR ACRE	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Error check
((OPERATING RECEIPTS))																	
Livestock sales:																	
Description	unit	price	quantity														
1.				0.00	0												0
2.				0.00	0												0
3.				0.00	0												0
4.				0.00	0												0
Crop Sales:																	
Description	unit	price	quantity														
5.				0.00	0												0
6.				0.00	0												0
7. Other farm income (per head or acre)				0.00	0												0
8.				0.00	0												0
9.				0.00	0												0
10. Total Cash Operating Receipts				0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
((OPERATING EXPENSES))																	
17. Hired labor				0.00	0												0
18. Repairs: Machinery & Equipment				0.00	0												0
19. Buildings & Fences				0.00	0												0
20. Feed				0.00	0												0
21. Seeds, plants				0.00	0												0
22. Fertilizer, Lime, Chemicals				0.00	0												0
23. Machine Hire				0.00	0												0
24. Supplies				0.00	0												0
25. Vet. Medicine, Breeding fees				0.00	0												0
26. Fuel, oil, lubricants				0.00	0												0
27. Storage, Warehousing				0.00	0												0
28. Taxes (Real Estate & Personal Prop.)				0.00	0												0
29. Insurance (Property, Liability, Crop)				0.00	0												0
30. Utilities				0.00	0												0
31. Rents, leases				0.00	0												0
32. Freight, trucking				0.00	0												0
33. Miscellaneous				0.00	0												0
34.				0.00	0												0
Livestock purchased for resale																	
Description	unit	price	quantity														
35.				0.00	0												0
36.				0.00	0												0
37. Total Cash Operating Expenses				0.00	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C

CASE FARMS FINANCIAL DATA

Table 23. Net Worth Statement: Southeastern Oklahoma

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	500	1000	500	29. Accounts Payable	3000	3000	0
2. Savings & Time Certificates	5000	5300	300	30. Notes Payable	3554	6086	2532
3. Marketable Bonds & Securities			0	31. Interest Due: Current	498	11	-487
4. Accounts Receivable			0	32. Intermediate	2022	1599	-423
5. Cash Value Life Insurance	12500	12500	0	33. Long Term	5731	5488	-243
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock			0	34. Real Estate & Personal Property	2500	2750	250
7. Purchased Livestock			0	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	4000	4000	0	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops			0	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	22000	22800	800	39. Intermediate Liabilities	3526	3949	423
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	2890	3133	243
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	26600	26600	0	43. TOTAL CURRENT LIABILITIES	23721	26016	2295
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	9000	8000	-1000	44. Notes Payable	13326	9377	-3949
17. Machinery & Equipment	35417	14232	-21185	45. Contingent Tax Liability			0
18. Securities Not Readily Marketable	6300	6300	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	7500	12800	5300	47.			0
20. TOTAL INTERMEDIATE ASSETS	84817	67932	-16885	48. TOTAL INTERMEDIATE LIABILITIES	13326	9377	-3949
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	64307	61174	-3133
22. Buildings & Improvements	37500	36300	-1200	50. Contingent Tax Liability			0
23. Cropland	60000	60000	0	51. Other Long Term Liabilities			0
24. Pasture	100000	100000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	64307	61174	-3133
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	101354	96567	-4787
27. TOTAL FIXED ASSETS	197500	196300	-1200	55. NET WORTH	202963	190465	-12498
28. TOTAL ASSETS	304317	287032	-17285	56. TOTAL LIABILITIES & NET WORTH	304317	287032	-17285

Table 25. Income Statement and Financial Ratios:
Southeastern Oklahoma

INCOME STATEMENT					FINANCIAL RATIOS		
A. OPERATING RECEIPTS					3. CASH FARM EXPENSES		
Livestock Sales & Products:					Hired Labor	3632	Current Ratio= $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ = .3763891
Paired market livestock	13041				Mach. & Equip. Repairs	1019	
	0				Building & Fence Repairs	123	Working Asset Ratio= $\frac{\text{Current} + \text{Int. Assets}}{\text{Current} + \text{Int. Liabilities}}$ = 2.563569
Livestock purchased for resale:	0				Cash Interest	10234	
Livestock products					Feed Purchased	2452	Debt Structure Ratio= $\frac{\text{Current Liabilities}}{\text{Total Liabilities}}$ = .2694876
					Seed, Plants, Other	1974	
					Fertilizer, lime, chemicals	14001	Net Capital Ratio= $\frac{\text{Total Assets}}{\text{Total Liabilities}}$ = 2.972746
Subtotal:	13041				Machinery Hire	16105	
					Supplies	0	Debt to Equity Ratio= $\frac{\text{Total Liabilities}}{\text{Net Worth}}$ = .5070853
Crop Sales:	46327				Breeding Fees	0	
	0				Vet. fees, medicine	650	Total Debt Ratio= $\frac{\text{Total Liabilities}}{\text{Total Assets}}$ = .3364323
					Gas, fuel, oil, lubricants	1793	
					Storage, Warehousing	0	Per Cent Equity= $\frac{\text{Net Worth} \times 100}{\text{Total Assets}}$ = 66.35677
					Taxes: Real Est. & Pers. Prop	103	
Subtotal:	46327				Insurance	0	Debt Servicing Ratio= $\frac{\text{Total Debt Payments}}{\text{Net Cash Flow} \div \text{Time}}$ = -2.92117
					Utilities (farm share)	0	
Other Farm Income:					Cash Rent & Leases	0	Opportunity Return to Labor & Management = :5000 (Insert an estimated value in Q148)
Government payments	0				Freight, Trucking	158	
Custom Work					Conservation Expenses	0	ROE= $\frac{\text{Net Farm Income} - \text{Opportunity Return to Labor \& Management}}{\text{Average Equity}}$ = -.163178
Dividends, Refunds					Miscellaneous Expenses	1740	
Cash Rent						0	ROI= $\frac{\text{Net Farm Income} + \text{Interest} - \text{Opportunity Return to Labor \& Management}}{\text{Average Total Assets}}$ = -.077846
Other	0				Livestk. purchased for resale	0	
Subtotal:	0				TOTAL CASH EXPENSES	53984	
GROSS RECEIPTS FROM FARMING	59368						
C. NET CASH INCOME FROM OPERATIONS						5384	
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:							
1. Accounts & Notes Receivables:							
	Accounts	Notes & Other	Other				
Ending Inventory	0						
Beginning Inventory	0						
Change	0	0	0	0			
2. Accounts Payable & Accrued Expenses:							
	Accounts	Taxes	Interest	Other			
Beginning Inventory	3800	2500	8251	0			
Ending Inventory	3000	2750	7098	0			
Change	0	-250	1153	0		903	
3. Prepaid Expenses:							
	Ending Inventory	Beginning Inventory					
	0	0				0	
4. Inventories:							
	Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops				
Ending Inventory	0	4000	0				
Beginning Inventory	0	4000	0				
Change	0	0	0	0			
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
	Breeding Livestk.	Vehicles	Mach. & Equip.	Improvements			
Ending Inventory	26600	8000	14232	36300			
Sales	0	0	0	0			
Subtotal:	26600	8000	14232	36300			
Beginning Inventory	26600	9000	35417	37500			
Purchases	0	0	0	0			
Subtotal:	26600	9000	35417	37500			
Change	0	-1000	-21185	-1200		-23385	
F. VALUE OF FARM PRODUCTS USED IN THE HOME						0	
G. NET FARM INCOME						-17098	

Table 26. Net Worth Statement: North Central Oklahoma

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1000	1000	0	29. Accounts Payable	5000	5000	0
2. Savings & Time Certificates	17500	18400	900	30. Notes Payable	100000	176884	76884
3. Marketable Bonds & Securities			0	31. Interest Due: Current	13500	3124	-10376
4. Accounts Receivable			0	32. Intermediate	8503	6981	-1522
5. Cash Value Life Insurance	15000	15000	0	33. Long Term	17032	16217	-815
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	15465	16416	951	34. Real Estate & Personal Property	7000	7700	700
7. Purchased Livestock	46394	32832	-13562	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	18250	18250	0	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	27744	27744	0	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	141353	129642	-11711	39. Intermediate Liabilities	10606	12128	1522
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	8937	9755	818
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	20700	20700	0	43. TOTAL CURRENT LIABILITIES	170578	237789	67211
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	10000	9000	-1000	44. Notes Payable	48342	36213	-12129
17. Machinery & Equipment	79667	53228	-26439	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	15000	15000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	7500	14000	6500	47.			0
20. TOTAL INTERMEDIATE ASSETS	132867	111928	-20939	48. TOTAL INTERMEDIATE LIABILITIES	48342	36213	-12129
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	205695	195939	-9756
22. Buildings & Improvements	65000	62500	-2500	50. Contingent Tax Liability			0
23. Cropland	375000	375000	0	51. Other Long Term Liabilities			0
24. Pasture	175000	175000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	205695	195939	-9756
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	424615	469941	45326
27. TOTAL FIXED ASSETS	615000	612500	-2500	55. NET WORTH	464605	384129	-80476
28. TOTAL ASSETS	889220	854070	-35150	56. TOTAL LIABILITIES & NET WORTH	889220	854070	-35150

Table 28. Income Statement and Financial Ratios:
North Central Oklahoma

INCOME STATEMENT				FINANCIAL RATIOS	
A. OPERATING RECEIPTS				Current Ratio= Current Assets =	
Livestock Sales & Products:				Current Liabilities	
Raised market livestock	101170			Working Asset Ratio= Current+Int.Assets =	
Livestock purchased for resale:	0			Current+Int.Liabilities	
Livestock products				Debt Structure Ratio= Current Liabilities =	
Subtotal:	101170			Total Liabilities	
Crop Sales:	35306			Net Capital Ratio= Total Assets =	
Subtotal:	35306			Total Liabilities	
Other Farm Income:				Debt to Equity Ratio= Total Liabilities =	
Government payments	0			Net Worth	
Custom Work				Total Debt Ratio= Total Liabilities =	
Dividends, Refunds				Total Assets	
Cash Rent				Per Cent Equity= Net Worth * 100 =	
Other	0			Total Assets	
Subtotal:	0			Debt Servicing Ratio= Total Debt Payments =	
GROSS RECEIPTS FROM FARMING	136676			Net Cash Farm Income	
B. CASH FARM EXPENSES				Opportunity Return to Labor & Management =	
Hired Labor	11960			(Insert an estimated value in Q148)	
Mach. & Equip. Repairs	5494			ROE= Net Farm Income- Opportunity Return to Labor & Management =	
Building & Fence Repairs	302			Average Equity	
Cash Interest	50528			ROI= Net Farm Income+ Interest- Opportunity Return to Labor & Management =	
Feed Purchased	9563			Average Total Assets	
Seed, Plants, Other	3040				
Fertilizer, lime, chemicals	19229				
Machinery Hire	12744				
Supplies	0				
Breeding Fees	0				
Vet. fees, medicine	1002				
Gas, fuel, oil, lubricants	9623				
Storage, Warehousing	0				
Taxes: Real Est. & Pers. Prop	124				
Insurance	0				
Utilities (farm share)	0				
Cash Rent & Leases	0				
Freight, Trucking	840				
Conservation Expenses	0				
Miscellaneous Expenses	1075				
Livestk. purchased for resale	58000				
TOTAL CASH EXPENSES	183515				
C. NET CASH INCOME FROM OPERATIONS					
			-46839		
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:					
1. Accounts & Notes Receivable:					
Accounts	Notes & Accounts	Other	Other		
Ending Inventory	0				
Beginning Inventory	0				
Change	0	0	0		0
2. Accounts Payable & Accrued Expenses:					
Accounts	Taxes	Interest	Other		
Beginning Inventory	5000	7000	39835	0	
Ending Inventory	5000	7700	26322	0	
Change	0	-700	12713	0	12013
3. Prepaid Expenses:					
Ending Inventory	0	Beginning Inventory	0		0
4. Inventories:					
Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops			
Ending Inventory	49248	18250	27744		
Beginning Inventory	61859	18250	27744		
Change	-12611	0	0		-12611
E. ADJUSTMENTS FOR CAPITAL ITEMS:					
Breeding Livestk.	Vehicles	Mach. & Equip.	Improvements		
Ending Inventory	20700	9000	53228	62500	
Sales	0	0	0	0	
Subtotal:	20700	9000	53228	62500	
Beginning Inventory	20700	10000	79667	65000	
Purchases	0	0	0	0	
Subtotal:	20700	10000	79667	65000	
Change	0	-1000	-26439	-2500	-29939
F. VALUE OF FARM PRODUCTS USED IN THE HOME					0
G. NET FARM INCOME					-77376

Table 30. Cash Flow Statement: Southwestern Oklahoma

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
((OPERATING RECEIPTS))													
1. Livestock sales:	0	343	54528	0	0	686	0	0	0	11068	0	0	66625
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased lvsck	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	59105	0	0	0	0	58950	0	118055
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	0	343	54528	0	0	59791	0	0	0	11068	58950	0	184680
((CAPITAL SALES))													
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER INFLOWS))													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	1000	1343	55528	1000	1000	60791	1000	1000	1000	12068	59950	1000	196680
((OPERATING EXPENSES))													
17. Hired labor	606	688	218	142	1378	1432	1040	492	415	1078	2123	1001	10613
18. Repairs: Mach. & Equip.	230	269	0	50	1410	1677	1281	648	234	2069	1463	1271	10604
19. Buildings & Fences	5	5	5	0	0	0	0	0	0	5	5	5	32
20. Feed	33	33	0	0	0	0	0	0	0	1161	33	33	1293
21. Seeds, plants	0	0	0	0	2700	0	0	0	3825	0	0	0	6525
22. Fertilizer, Lime, Chem.	0	10634	0	3682	1663	0	0	0	11001	0	0	0	26980
23. Machine Hire	0	3600	0	0	0	14256	0	0	0	0	0	0	17856
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	0	0	0	0	0	473	0	0	473
26. Fuel, oil, lubricants	457	807	0	348	2595	2814	2213	863	710	1976	2767	1294	16843
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	0	0
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	5	5	0	0	0	0	0	0	0	5	5	5	25
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	0	0	0	0	0	0	0	0	0	353	0	0	353
33. Miscellaneous	0	0	720	0	0	0	0	0	0	0	7468	0	8388
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	41004	0	0	41004
36. TOTAL CASH EXPENSES	1336	16041	943	4223	9746	20180	4534	2003	16185	48123	14064	3609	140986
((CAPITAL EXPENSES (total cost)))													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER OUTFLOWS))													
40. Family living	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	18000
41. Income Tax	0	0	0	2000	0	0	0	0	0	0	0	0	2000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	0	0	0	0	0	0	0	0	0	3625	3625
45. principal	0	0	0	0	0	0	0	0	0	0	0	5734	5734
46. Long Term: interest	0	0	0	0	0	1415	0	0	0	10859	0	10418	22692
47. principal	0	0	0	0	0	344	0	0	0	1904	0	1639	3887
48. Total Cash Outflows	2836	17541	2443	7723	11246	23439	6034	3503	17685	62386	15564	26525	196924
((NEW BORROWING))													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
((CASH FLOW SUMMARY))													
Int. Rate= ((14.00))													
Minimum Cash Balance= ((1000))													
51. Beginning Cash Balance	500	1000	1000	1000	1000	1000	8383	3349	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-1836	-16198	53085	-6723	-10246	37352	-5034	-2503	-16685	-50318	44386	-25525	-244
53. Cash Position (49+50+51+52)	-1336	-15198	54085	-5723	-9246	38352	3349	847	-15685	-49318	45386	-24525	
54. New Borrowings: Operating	2336	16198	0	6723	10246	0	0	153	16685	50318	0	25525	128184
55. New Borrowings: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0	0
((Accrued Int. due on Oper. Loan))													
56. Interest pay'ts. on Oper. Loan	5667	6161	6843	143	365	707	0	0	2	198	982	277	
57. Principal pay'ts. on Oper. Loan	0	0	6843	0	0	707	0	0	0	0	982	0	8532
58. Ending Cash Balance	1000	1000	1000	1000	1000	8383	3349	1000	1000	1000	1000	1000	118908
59. Outstanding Operating Debt	42336	58534	12293	19016	29262	0	0	153	16838	67156	23751	49276	
60. Outstanding Intermediate Debt	50000	50000	50000	50000	50000	50000	50000	50000	50000	50000	50000	44266	
61. Outstanding Long Term Debt	432275	432275	432275	432275	432275	431931	431931	431931	431931	430027	430027	428388	

Table 35. Net Worth Statement: Northwest Farm: Low Equity and Good Cash Flow

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1500	1000	-500	29. Accounts Payable	10000	11500	1500
2. Savings & Time Certificates	2000	2500	500	30. Notes Payable	150000	162644	12644
3. Marketable Bonds & Securities			0	31. Interest Due: Current	10000	2015	-7985
4. Accounts Receivable			0	32. Intermediate	26131	21850	-4281
5. Cash Value Life Insurance	5000	5000	0	33. Long Term	42386	40394	-1992
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	36786	27440	-9346	34. Real Estate & Personal Property	5000	6000	1000
7. Purchased Livestock	73572	69515	-4057	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	41500	40125	-1375	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	73734	73743	9	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	234092	219323	-14769	39. Intermediate Liabilities	30120	34401	4281
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	19805	21796	1991
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	44400	46600	2200	43. TOTAL CURRENT LIABILITIES	293442	300599	7157
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	5000	4500	-500	44. Notes Payable	169880	135479	-34401
17. Machinery & Equipment	87406	49153	-38253	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	12000	12000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	10000	12000	2000	47.			0
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553	48. TOTAL INTERMEDIATE LIABILITIES	169880	135479	-34401
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	468195	446399	-21796
22. Buildings & Improvements	40000	38500	-1500	50. Contingent Tax Liability			0
23. Cropland	896000	896000	0	51. Other Long Term Liabilities			0
24. Pasture	125000	125000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	468195	446399	-21796
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	931517	882478	-49039
27. TOTAL FIXED ASSETS	1061000	1059500	-1500	55. NET WORTH	522381	520598	-1783
28. TOTAL ASSETS	1453898	1403076	-50822	56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 36. Cash Flow Statement: Northwest Farm: Low Equity
and Good Cash Flow

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
((OPERATING RECEIPTS))													
1. Livestock sales:	1017	61950	63307	0	0	0	0	0	612	21326	0	0	148212
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased lvsck	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	221273	24000	24000	24000	169899	0	0	463171
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	1017	61950	63307	0	0	221273	24000	24000	24612	191225	0	0	611384
((CAPITAL SALES))													
1. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER INFLOWS))													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	6000	12000
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	2017	62950	64307	1000	1000	228273	25000	25000	25612	192225	1000	7000	635384
((OPERATING EXPENSES))													
17. Hired labor	1164	2448	4169	5073	8574	9149	6943	6080	10638	835	5082	989	61143
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5462	4706	8186	31	2289	29	38661
19. Buildings & Fences	206	206	206	92	92	92	92	92	92	206	206	206	1786
20. Feed	1002	922	980	645	17	17	17	17	17	3083	576	1002	8297
21. Seeds, plants	0	0	0	6500	0	2761	0	0	5100	0	0	0	14361
22. Fertilizer, Lime, Chem.	722	722	20419	13969	10447	0	4914	48937	0	0	0	0	100131
23. Machine Hire	0	0	440	0	0	0	0	0	0	19231	0	0	19671
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	0	1050	0	0	1431
26. Fuel, oil, lubricants	691	2144	6147	13067	22836	18631	16085	13953	23675	341	11599	366	129535
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	255	255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	0	9	9	9	45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	106	0	106	0	0	0	0	0	0	1023	0	0	1235
33. Miscellaneous	0	0	1305	4152	0	0	0	0	9120	0	0	0	14577
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	89352	0	0	89352
36. TOTAL CASH EXPENSES	4077	7868	35750	46422	46920	37542	33512	73785	56828	115161	19761	2856	480481
((CAPITAL EXPENSES (total cost)))													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER OUTFLOWS))													
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	2813	0	0	10754	0	0	2615	0	0	9951	26133
45. principal	0	0	2585	0	0	11976	0	0	2782	0	0	12777	30120
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	37833	42386
47. principal	66	66	67	68	68	69	69	70	70	71	72	19050	19806
48. Total Cash Outflows	6226	10017	43298	53572	49068	62421	35661	75935	64373	117310	21910	84134	623926
((NEW BORROWING))													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
((CASH FLOW SUMMARY))													
Int. Rate= ((variable))													
Minimum Cash Balance= ((1000))													
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4209	52933	21009	-52572	-48068	165851	-10661	-50935	-38761	74915	-20910	-77134	11458
53. Cash Position: (49+50+51+52)	-2709	53933	22009	-51572	-47068	166851	-9661	-49935	-37761	75915	-19910	-76134	302750
54. New Borrowing: Operating	3709	0	0	52572	48068	0	10661	50935	38761	0	20910	77134	0
55. New Borrowing: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0	0
56. Accrued Int. due on Oper. Loan	11688	13577	1525	1344	3310	5754	416	961	2117	3746	821	2015	24602
57. Interest pay'ts. on Oper. Loan	0	13577	1525	0	0	5754	0	0	0	3746	0	0	24602
58. Principal pay'ts. on Oper. Loan	0	39357	19484	0	0	160097	0	0	0	71168	0	0	290107
59. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
59. Outstanding Operating Debt	153709	114352	94868	147439	195508	35410	46071	97007	135768	64600	85510	162644	0
60. Outstanding Intermediate Debt	200000	200000	197415	197415	197415	185439	185439	185439	182657	182657	182657	169880	0
61. Outstanding Long Term Debt	497934	487868	487801	487733	487665	487596	487527	487457	487387	487316	487244	487174	0

Table 38. Net Worth Statement: Northwest Farm: Low Equity and Poor Cash Flow

NET WORTH STATEMENT				NET WORTH STATEMENT			
	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1500	1000	-500	29. Accounts Payable	10000	11500	1500
2. Savings & Time Certificates	2000	2500	500	30. Notes Payable	150000	265068	115068
3. Marketable Bonds & Securities			0	31. Interest Due: Current	10000	4736	-5264
4. Accounts Receivable			0	32. Intermediate	26131	21850	-4281
5. Cash Value Life Insurance	5000	5000	0	33. Long Term	42386	40394	-1992
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	36786	27440	-9346	34. Real Estate & Personal Property	5000	6000	1000
7. Purchased Livestock	73572	69515	-4057	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	41500	40125	-1375	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	73734	73743	9	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	234092	219323	-14769	39. Intermediate Liabilities	30120	34401	4281
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	19805	21796	1991
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	44400	46600	2200	43. TOTAL CURRENT LIABILITIES	293442	405746	112304
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	5000	4500	-500	44. Notes Payable	169880	135479	-34401
17. Machinery & Equipment	87406	49153	-38253	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	12000	12000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	10000	12000	2000	47.			0
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553	48. TOTAL INTERMEDIATE LIABILITIES	169880	135479	-34401
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	468195	446399	-21796
22. Buildings & Improvements	40000	38500	-1500	50. Contingent Tax Liability			0
23. Cropland	896000	896000	0	51. Other Long Term Liabilities			0
24. Pasture	125000	125000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	468195	446399	-21796
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	931517	987623	56106
27. TOTAL FIXED ASSETS	1061000	1059500	-1500	55. NET WORTH	522381	415453	-106928
28. TOTAL ASSETS	1453898	1403076	-50822	56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 39. Cash Flow Statement: Northwest Farm: Low Equity and Poor Cash Flow

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<< OPERATING RECEIPTS >>													
1. Livestock sales:	969	60180	61472	0	0	0	0	0	571	29348	0	0	14354
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased lvs	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	178485	17231	17231	17231	147530	0	0	3777
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	969	60180	61472	0	0	178485	17231	17231	17802	167878	0	0	521248
<< CAPITAL SALES >>													
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER INFLOWS >>													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	6000	12000
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	1969	61180	62472	1000	1000	185485	18231	18231	18802	168878	1000	7000	545248
<< OPERATING EXPENSES >>													
17. Hired labor	1164	2448	4169	5073	8574	9149	6943	6080	10638	835	5082	989	61142
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5462	4706	8186	31	2289	29	38661
19. Buildings & Fences	206	206	206	92	92	92	92	92	92	206	206	206	1736
20. Feed	1052	968	1029	678	18	18	18	18	18	3237	605	1052	8712
21. Seeds, plants	0	0	0	6825	0	2899	0	0	5355	0	0	0	15079
22. Fertilizer, Lime, Chem.	759	759	21440	14667	10970	0	5160	51384	0	0	0	0	105136
23. Machine Hire	0	0	440	0	0	0	0	0	0	19231	0	0	19671
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	0	1050	0	0	1431
26. Fuel, oil, lubricants	726	2221	6443	13677	23756	19415	16641	14403	24859	358	12167	384	135051
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	255	255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	0	9	9	9	45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	106	0	106	0	0	0	0	0	0	1023	0	0	1235
33. Miscellaneous	0	0	1305	4152	0	0	0	0	7600	0	0	0	13057
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	88128	0	0	88128
36. TOTAL CASH EXPENSES	4197	6027	37115	48089	48363	38465	34316	76683	56747	114108	20357	2925	489392
<< CAPITAL EXPENSES (total cost) >>													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER OUTFLOWS >>													
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	2813	0	0	10754	0	0	2615	0	0	9951	26133
45. principal	0	0	2585	0	0	11976	0	0	2782	0	0	12777	38120
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	37833	42386
47. principal	66	66	67	68	68	69	69	70	70	71	72	19050	19886
48. Total Cash Outflows	6347	10176	44663	55238	50511	63345	36465	78833	64293	116258	22507	84202	632837
<< NEW BORROWING >>													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
<< CASH FLOW SUMMARY >>													
Int. Rate= <<variable>>													
Minimum Cash Balance= << 1000>>													
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4378	51004	17809	-54238	-49511	122141	-18234	-60602	-45491	52620	-21507	-77202	-87589
53. Cash Position (49+50+51+52)	-2878	52004	18809	-53238	-48511	123141	-17234	-59602	-44491	53620	-20507	-76202	-87589
54. New Borrowing: Operating	3878	0	0	54238	49511	0	18234	60602	45491	0	21507	77202	330664
55. New Borrowing: Inter. & Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
<< Accrued Int. due on Oper. Loan >>													
56. Interest pay'ts. on Oper. Loan	11688	13579	1553	1419	3479	6028	1032	2287	4273	6819	2114	4736	
57. Principal pay'ts. on Oper. Loan	0	13579	1553	0	0	6028	0	0	0	6819	0	0	27979
58. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
59. Outstanding Operating Debt	153878	116453	100196	154435	203946	87833	106067	166669	212160	166359	187866	265068	
60. Outstanding Intermediate Debt	200000	200000	197415	197415	197415	185439	185439	185439	182657	182657	182657	169880	
61. Outstanding Long Term Debt	487934	487868	487801	487733	487665	487596	487527	487457	487387	487316	487244	468194	

Table 40. Income Statement and Financial Ratios: Northwest Farm:
Low Equity and Poor Cash Flow

INCOME STATEMENT				FINANCIAL RATIOS			
A. OPERATING RECEIPTS				B. CASH FARM EXPENSES			
Livestock Sales & Products:				Hired Labor	61143	Current Ratio=	Current Assets = .5405432
Raised market livestock	143540			Mach. & Equip. Repairs	38661		
	0			Building & Fence Repairs	1786		Current Liabilities
Livestock purchased for resale:	0			Cash Interest	96498	Working Asset Ratio=	Current+Int. Assets = .6348123
Livestock products				Feed Purchased	8712		Current+Int. Liabilities
				Seed, Plants, Other	15079		
Subtotal:	143540			Fertilizer, lime, chemicals	105138	Debt Structure Ratio=	Current Liabilities = .4108306
				Machinery Hire	19671		Total Liabilities
				Supplies	0		
Crop Sales:	377708			Breeding Fees	0	Net Capital Ratio=	Total Assets = 1.420468
	0			Vet. fees, medicine	1431		Total Liabilities
				Gas, fuel, oil, lubricants	135051	Debt to Equity Ratio=	Total Liabilities = 2.377216
				Storage, Warehousing	0		Net Worth
				Taxes: Real Est. & Pers. Prop.	253	Total Debt Ratio=	Total Liabilities = .7038981
				Insurance	0		Total Assets
Subtotal:	377708			Utilities (farm share)	45	Per Cent Equity=	Net Worth * 100 = 29.61019
				Cash Rent & Leases	0		Total Assets
Other Farm Income:				Freight, Trucking	1235	Debt Servicing Ratio=	Total Debt Payments = -.735045
Government payments	0			Conservation Expenses	0		Net Cash Farm Income
Custom Work				Miscellaneous Expenses	13057	Opportunity Return to Labor & Management =	20000
Dividends, Refunds					0	(Insert an estimated value in Q148)	
Cash Rent				Livestk. purchased for resale	88128	ROE=	Net Farm Income- Opportunity Return to Labor & Management = -.273881
Other	0						Average Equity
Subtotal:	0			TOTAL CASH EXPENSES	585890	ROI=	Net Farm Income+ Interest- Opportunity Return to Labor & Management = -.030429
GROSS RECEIPTS FROM FARMING	521248						Average Total Assets
C. NET CASH INCOME FROM OPERATIONS							
					-64642		
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:							
1. Accounts & Notes Receivable:		Notes & Accounts	Other	Other			
Ending Inventory	0						
Beginning Inventory	0						
Change	0	0	0	0	0		
2. Accounts Payable & Accrued Expenses:		Accounts	Taxes	Interest	Other		
Beginning Inventory	10800	5000	78517	0			
Ending Inventory	11500	6000	66980	0			
Change	-1500	-1000	11537	0	9037		
3. Prepaid Expenses:		Ending Inventory	Beginning Inventory				
		0	0	0	0		
4. Inventories:							
		Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops			
Ending Inventory	96955	40125	73743				
Beginning Inventory	110358	41500	73734				
Change	-13403	-1375	9	-14769			
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
		Breeding Livestk.	Vehicles	Mach. & Equip.	Improvements		
Ending Inventory	46600	4500	49153	38500			
Sales	0	0	0	0	0		
Subtotal:	46600	4500	49153	38500			
Beginning Inventory	44400	5000	87406	40000			
Purchases	0	0	0	0	0		
Subtotal:	44400	5000	87406	40000			
Change	2200	-500	-38253	-1500	-38053		
F. VALUE OF FARM PRODUCTS USED IN THE HOME					0		
G. NET FARM INCOME					-108428		

Table 41. Net Worth Statement: Northwest Farm: Medium Equity and Good Cash Flow

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1500	1000	-500	29. Accounts Payable	5000	6500	1500
2. Savings & Time Certificates	2000	2500	500	30. Notes Payable	150000	112896	-37104
3. Marketable Bonds & Securities			0	31. Interest Due: Current	5000	1383	-3617
4. Accounts Receivable			0	32. Intermediate	10654	8919	-1735
5. Cash Value Life Insurance	5000	5000	0	33. Long Term	34886	32956	-1930
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	36786	27440	-9346	34. Real Estate & Personal Property	5000	6000	1000
7. Purchased Livestock	73572	69515	-4057	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	41500	40125	-1375	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	73734	73743	9	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	234092	219323	-14769	39. Intermediate Liabilities	10935	12670	1735
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	18563	20492	1929
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	44400	46600	2200	43. TOTAL CURRENT LIABILITIES	240038	201816	-38222
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	5000	4500	-500	44. Notes Payable	64065	51395	-12670
17. Machinery & Equipment	87406	49153	-38253	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	12000	12000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	10000	12000	2000	47.			0
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553	48. TOTAL INTERMEDIATE LIABILITIES	64065	51395	-12670
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	319437	298945	-20492
22. Buildings & Improvements	40000	38500	-1500	50. Contingent Tax Liability			0
23. Cropland	896000	896000	0	51. Other Long Term Liabilities			0
24. Pasture	125000	125000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	319437	298945	-20492
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	623540	552156	-71384
27. TOTAL FIXED ASSETS	1061000	1059500	-1500	55. NET WORTH	830358	850920	20562
28. TOTAL ASSETS	1453898	1403076	-50822	56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 42. Cash Flow Statement: Northwest Farm: Medium Equity and Good Cash Flow

WHOLEFARM CASHFLOW STATEMENT												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC TOTAL:
<< OPERATING RECEIPTS >>												
1. Livestock sales:	1017	61950	63307	0	0	0	0	0	612	21326	0	0 148211
2.	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased livestock	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	221273	24000	24000	24000	169899	0	0 46311
5.	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	1017	61950	63307	0	0	221273	24000	24000	24612	191225	0	0 611384
<< CAPITAL SALES >>												
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER INFLOWS >>												
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	6000 12000
15.	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	2017	62950	64307	1000	1000	228273	25000	25000	25612	192225	1000	7000 635384
<< OPERATING EXPENSES >>												
17. Hired labor	1164	2448	4169	5073	8574	9149	6943	6080	10638	835	5082	989 61141
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5462	4704	8186	31	2289	29 3866
19. Buildings & Fences	206	206	206	92	92	92	92	92	206	206	206	178 178
20. Feed	1002	922	980	645	17	17	17	17	3083	576	1002	829 829
21. Seeds, plants	0	0	0	6500	0	2761	0	0	5100	0	0	0 1436
22. Fertilizer, Lime, Chem.	722	722	20419	13969	10447	0	4914	48937	0	0	0	0 10011
23. Machine Hire	0	0	440	0	0	0	0	0	19231	0	0	0 1967
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	1050	0	0	0 1431
26. Fuel, oil, lubricants	691	2144	6147	13047	22836	18431	14085	13953	23475	341	11599	366 129535
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	255 255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	9	9	9	45 45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	106	0	106	0	0	0	0	0	1023	0	0	0 1225
33. Miscellaneous	0	0	1305	4152	0	0	0	0	9120	0	0	0 145
34.	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	89352	0	0	0 89352
36. TOTAL CASH EXPENSES	4077	7868	35750	44422	46920	37542	33512	73785	56828	115161	19761	2856 480451
<< CAPITAL EXPENSES (total cost) >>												
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER OUTFLOWS >>												
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:												
44. Intermediate: interest	0	0	2813	0	0	2716	0	0	2615	0	0	2511 10655
45. principal	0	0	2585	0	0	2682	0	0	2782	0	0	2886 10925
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	30333 3488
47. principal	66	66	67	68	68	69	69	70	70	71	72	17808 18564
48. Total Cash Outflows	6226	10017	43298	53572	49048	45089	35461	75935	64373	117310	21910	58061 58052
<< NEW BORROWING >>												
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0
<< CASH FLOW SUMMARY >>												
Int. Rate= <<(variable)>>												
Minimum Cash Balance= << 1000 >>												
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4209	52933	21009	-52572	-48068	183183	-10661	-50935	-38761	74915	-20910	-51061 54863
53. Cash Position (49+50+51+52)	-2709	53933	22009	-51572	-47068	184183	-9661	-49935	-37761	75915	-19910	-50061
54. New Borrowing: Operating	3709	0	0	52572	48068	0	10661	50935	38761	0	20910	51061 27667
55. New Borrowing: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0
<< Accrued Int. due on Oper. Loan >>												
56. Interest pay'ns. on Oper. Loan	6688	8577	1458	1272	3170	5551	151	428	1315	2673	520	1383
57. Principal pay'ns. on Oper. Loan	0	8577	1458	0	0	5551	0	0	0	2673	0	0 1825
58. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
59. Outstanding Operating Debt	153709	109352	89801	142373	190441	12809	23470	74405	113167	40925	61835	112896
60. Outstanding Intermediate Debt	75000	75000	72415	72415	72415	69733	69733	69733	66951	66951	66951	64065
61. Outstanding Long Term Debt	337934	337868	337801	337733	337665	337596	337527	337457	337387	337316	337244	319436

Table 43. Income Statement and Financial Ratios: Northwest Farm:
Medium Equity and Good Cash Flow

INCOME STATEMENT				FINANCIAL RATIOS				
A. OPERATING RECEIPTS				B. CASH FARM EXPENSES				
Livestock Sales & Products:				Hired Labor	61143	Current Ratio=	Current Assets = 1.886747	
Raised market livestock	148212			Mach.& Equip.Repairs	38661			
	0			Building & Fence Repairs	1786		Current Liabilities	
Livestock purchased for resale:	0			Cash Interest	63800	Working Asset Ratio=	Current+Int.Assets = 1.356876	
Livestock products				Feed Purchased	8297		Current+Int.Liabilities	
				Seed, Plants, Other	14361			
				Fertilizer, lime, chemicals	180131	Debt Structure Ratio=	Current Liabilities = .3655855	
Subtotal:	148212			Machinery Hire	19671		Total Liabilities	
				Supplies	0			
Crop Sales:	463171			Breeding Fees	0	Net Capital Ratio=	Total Assets = 2.541886	
	0			Vet.fees, medicine	1431		Total Liabilities	
				Gas,fuel,oil,lubricants	129535	Debt to Equity Ratio=	Total Liabilities = .648895	
				Storage, Warehousing	0		Net Worth	
Subtotal:	463171			Taxes: Real Est.& Pers.Prop	255	Total Debt Ratio=	Total Liabilities = .3935325	
				Insurance	0		Total Assets	
Other Farm Income:				Utilities (farm share)	45	Per Cent Equity=	Net Worth * 100 = 66.64675	
Government payments	0			Cash Rent & Leases	0		Total Assets	
BYE/Donor Refunds	0			Freight, Trucking	1235	Debt Servicing Ratio=	Total Debt Payments = 22.71611	
Cash Rent	0			Conservation Expenses	0		Net Cash Farm Income	
Other	0			Miscellaneous Expenses	14570	Opportunity Return to Labor & Management =	25000	
				Lvstk.purchased for resale	89352	(Insert an estimated value in Q148)		
Subtotal:	0			TOTAL CASH EXPENSES	544281	ROE=	Net Farm Income- Opportunity Return to Labor & Management = -.801115	
GROSS RECEIPTS FROM FARMING	611384						Average Equity	
							ROI=	Net Farm Income+ Interest- Opportunity Return to Labor & Management = .038908
								Average Total Assets
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:				C. NET CASH INCOME FROM OPERATIONS				
1. Accounts & Notes Receivable:	Notes & Accounts	Other	Other		67103			
ending inventory	0							
Beginning inventory	0							
Change	0	0	0					
2. Accounts Payable & Accrued Expenses:	Accounts	Taxes	Interest	Other				
Beginning inventory	5000	5000	50540	0				
Ending inventory	6500	6000	43258	0				
Change	-1500	-1000	7282	0	4782			
3. Prepaid Expenses:	Ending inventory	Beginning inventory						
	0	0						
4. Inventories:	Mkt.Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops					
Ending inventory	96955	40125	73743					
Beginning inventory	110358	41500	73734					
Change	-13403	-1375	9	-14769				
E. ADJUSTMENTS FOR CAPITAL ITEMS:								
	Breeding Lvstk.	Vehicles	Mach.& Equip.	Improvements				
Ending inventory	46600	4500	49153	38500				
Sales	0	0	0	0				
Subtotal:	46600	4500	49153	38500				
Beginning inventory	44400	5000	87406	48000				
Purchases	0	0	0	0				
Subtotal:	44400	5000	87406	48000				
Change	2200	-500	-38253	-1500	-38053			
F. VALUE OF FARM PRODUCTS USED IN THE HOME					0			
G. NET FARM INCOME					10062			

Table 44. Net Worth Statement: Northwest Farm: Medium Equity and Poor Cash Flow

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----			
1. Cash & Checking	1500	1000	-500
2. Savings & Time Certificates	2000	2500	500
3. Marketable Bonds & Securities			0
4. Accounts Receivable			0
5. Cash Value Life Insurance	5000	5000	0
Market Livestock & Products:			
6. Raised Livestock	36786	27440	-9346
7. Purchased Livestock	73572	69515	-4057
8. Stored Crops, Feed, Supplies	41500	40125	-1375
9. Cash Investment Growing Crops	73734	73743	9
10. Prepaid Expenses			0
11. Other Current Assets			0
12. TOTAL CURRENT ASSETS	234092	219323	-14769
-----INTERMEDIATE ASSETS-----			
13. Notes Receivable			0
Breeding Livestock:			
14. Raised Livestock	44400	46600	2200
15. Purchased Livestock			0
16. Vehicles	5000	4500	-500
17. Machinery & Equipment	87406	49153	-38253
18. Securities Not Readily Mktable.	12000	12000	0
19. Other Intermediate Assets	10000	12000	2000
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553
-----FIXED ASSETS-----			
21. Contracts & Notes Receivable			0
22. Buildings & Improvements	40000	38500	-1500
23. Cropland	896000	896000	0
24. Pasture	125000	125000	0
25. Non-Farm Investments			0
26. Other Long Term Assets			0
27. TOTAL FIXED ASSETS	1061000	1059500	-1500
28. TOTAL ASSETS	1453898	1403076	-50822

	Beginning Balance	Ending Balance	Net Change
-----CURRENT LIABILITIES-----			
29. Accounts Payable	5000	6500	1500
30. Notes Payable	150000	215320	65320
31. Interest Due: Current	5000	4105	-895
32. Intermediate	10654	8919	-1735
33. Long Term	34886	32956	-1930
Taxes Due:			
34. Real Estate & Personal Property	5000	6000	1000
35. Employee Payroll Withholding			0
36. Personal & Self-Employment			0
37. Other Accrued Expenses			0
38. Contingent Tax Liability			0
Principal Due in 12 months:			
39. Intermediate Liabilities	10935	12670	1735
40. Long Term Liabilities	18563	20492	1929
41. Other Current Liabilities			0
42.			0
43. TOTAL CURRENT LIABILITIES	240038	306962	66924
-----INTERMEDIATE LIABILITIES-----			
44. Notes Payable	64065	51395	-12670
45. Contingent Tax Liability			0
46. Other Intermediate Liabilities			0
47.			0
48. TOTAL INTERMEDIATE LIABILITIES	64065	51395	-12670
-----LONG TERM LIABILITIES-----			
49. Mortgages & Notes Payable	319437	298945	-20492
50. Contingent Tax Liability			0
51. Other Long Term Liabilities			0
52.			0
53. TOTAL LONG TERM LIABILITIES	319437	298945	-20492
54. TOTAL LIABILITIES	623540	657302	33762
55. NET WORTH	830358	745774	-84584
56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 45. Cash Flow Statement: Northwest Farm: Medium Equity and Poor Cash Flow

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<< OPERATING RECEIPTS >>													
1. Livestock sales:	969	60180	61472	0	0	0	0	0	571	20348	0	0	143540
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	178485	17231	17231	17231	147530	0	0	377795
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	969	60180	61472	0	0	178485	17231	17231	17802	167878	0	0	521240
<< CAPITAL SALES >>													
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER INFLOWS >>													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	0	6000
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	1969	61180	62472	1000	1000	185485	18231	18231	18802	168878	1000	7000	545240
<< OPERATING EXPENSES >>													
17. Hired labor	1164	2448	4169	5073	8574	9149	6943	6080	10638	935	5082	989	61140
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5442	4704	8184	31	2289	29	38461
19. Buildings & Fences	204	204	204	92	92	92	92	92	92	204	204	204	1780
20. Feed	1052	968	1029	678	18	18	18	18	18	3237	605	1052	9710
21. Seeds, plants	0	0	0	6825	0	2899	0	0	5355	0	0	0	15070
22. Fertilizer, Lime, Chem.	759	759	21440	14667	10970	0	3160	31384	0	0	0	0	105120
23. Machine Hire	0	0	440	0	0	0	0	0	0	19231	0	0	19670
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	0	1050	0	0	1430
26. Fuel, oil, lubricants	726	2221	6443	13677	23756	19415	16441	14403	24859	358	12167	384	135051
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop.	0	0	0	0	0	0	0	0	0	0	0	255	255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	0	9	9	9	45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	104	0	104	0	0	0	0	0	0	1023	0	0	1225
33. Miscellaneous	0	0	1305	4152	0	0	0	0	7600	0	0	0	13050
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	88128	0	0	88128
36. TOTAL CASH EXPENSES	4197	8827	37115	48089	48363	38465	34316	76683	56747	114108	20357	2925	489390
<< CAPITAL EXPENSES (total cost) >>													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
<< OTHER OUTFLOWS >>													
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	2813	0	0	2716	0	0	2615	0	0	2511	10655
45. principal	0	0	2585	0	0	2682	0	0	2782	0	0	2886	10935
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	38333	34880
47. principal	66	66	67	68	68	69	69	70	70	71	72	17808	18564
48. Total Cash Outflows	6347	10176	44663	55238	50511	46013	36465	78833	64293	116258	22507	58129	589432
<< NEW BORROWING >>													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
<< CASH FLOW SUMMARY >>													
Int. Rate= ((variable))													
Minimum Cash Balance= ((1000))													
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4378	51004	17809	-54238	-49511	139473	-18234	-60402	-45491	52620	-21507	-51129	-44184
53. Cash Position (49+50+51+52)	-2878	52084	18809	-53238	-48511	140473	-17234	-59402	-44491	53620	-20507	-50129	-44184
54. New Borrowings: Operating	3878	0	0	54238	49511	0	18234	60402	45491	0	21507	51129	384591
55. New Borrowings: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0	0
<< Accrued Int. due on Oper. Loan >>													
56. Interest pay'ts. on Oper. Loan	0	8579	1486	0	0	5825	0	0	5746	0	0	0	21636
57. Principal pay'ts. on Oper. Loan	0	42425	16323	0	0	133647	0	0	46875	0	0	0	239271
58. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
59. Outstanding Operating Debt	153878	111453	95130	149368	198879	52232	83465	144068	189559	142684	164191	215320	
60. Outstanding Intermediate Debt	5000	75000	72415	72415	72415	69733	69733	69733	66951	66951	66951	64045	
61. Outstanding Long Term Debt	337934	337868	337801	337733	337665	337596	337527	337457	337387	337316	337244	319436	

Table 46. Income Statement and Financial Ratios: Northwest Farm:
Medium Equity and Poor Cash Flow

INCOME STATEMENT				FINANCIAL RATIOS			
A. OPERATING RECEIPTS				B. CASH FARM EXPENSES			
Livestock Sales & Products:				Hired Labor	61143		
Raised market livestock	143540			Mach. & Equip. Repairs	38661		
	0			Building & Fence Repairs	1786		
Livestock purchased for resale:	0			Cash Interest	67177		
Livestock products				Feed Purchased	8712		
				Seed, Plants, Other	15879		
				Fertilizer, lime, chemicals	105138		
Subtotal:	143540			Machinery Hire	19671		
				Supplies	0		
Crop Sales:	377708			Breeding Fees	0		
	0			Vet. fees, medicine	1431		
				Gas, fuel, oil, lubricants	135051		
				Storage, Warehousing	0		
				Taxes: Real Est. & Pers. Prop	235		
				Insurance	0		
Subtotal:	377708			Utilities (farm share)	45		
				Cash Rent & Leases	0		
Other Farm Income:				Freight, Trucking	1235		
Government payments	0			Conservation Expenses	0		
Custom Work				Miscellaneous Expenses	13057		
Dividends, Refunds					0		
Cash Rent				Livestk. purchased for resale	88128		
Other	0			TOTAL CASH EXPENSES	554549		
Subtotal:	0						
GROSS RECEIPTS FROM FARMING	521248						
				C. NET CASH INCOME FROM OPERATIONS			
							-35321
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:							
1. Accounts & Notes Receivable:		Notes & Accounts	Other				
Ending Inventory		0					
Beginning Inventory		0					
Change		0	0				0
2. Accounts Payable & Accrued Expenses:		Accounts	Taxes	Interest	Other		
Beginning Inventory		5000	5000	50540	0		
Ending Inventory		6500	6000	45980	0		
Change		-1500	-1000	4560	0		2060
3. Prepaid Expenses:		Ending Inventory	Beginning Inventory				
		0	0				0
4. Inventories:							
		Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops			
Ending Inventory		96955	48125	73743			
Beginning Inventory		110358	41508	73734			
Change		-13403	-1375	9			-14769
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
		Breeding Livestk.	Vehicles	Mach. & Equip.	Improvements		
Ending Inventory		46600	4500	49153	38500		
Sales		0	0	0	0		
Subtotal:		46600	4500	49153	38500		
Beginning Inventory		44480	5000	87486	40000		
Purchases		0	0	0	0		
Subtotal:		44480	5000	87486	40000		
Change		2200	-500	-38253	-1500		-38053
F. VALUE OF FARM PRODUCTS USED IN THE HOME							0
G. NET FARM INCOME							-84083

Current Ratio =	Current Assets	=	.7144949
	Current Liabilities		
Working Asset Ratio =	Current + Int. Assets	=	.9587526
	Current + Int. Liabilities		
Debt Structure Ratio =	Current Liabilities	=	.4678032
	Total Liabilities		
Net Capital Ratio =	Total Assets	=	2.134598
	Total Liabilities		
Debt to Equity Ratio =	Total Liabilities	=	.8813696
	Net Worth		
Total Debt Ratio =	Total Liabilities	=	.4684723
	Total Assets		
Per Cent Equity =	Net Worth * 100	=	53.15277
	Total Assets		
Debt Servicing Ratio =	Total Debt Payments	=	-.732112
	Net Cash Farm Income		
Opportunity Return to Labor & Management =			20000
	(Insert an estimated value in Q148)		
ROE = Net Farm Income - Opportunity Return to Labor & Management		=	-.134612
	Average Equity		
ROI = Net Farm Income + Interest - Opportunity Return to Labor & Management		=	-.830428
	Average Total Assets		

Table 47. Net Worth Statement: Northwest Farm: High Equity and Good Cash Flow

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1500	1000	-500	29. Accounts Payable	2000	4000	2000
2. Savings & Time Certificates	2000	2500	500	30. Notes Payable	150000	110134	-39866
3. Marketable Bonds & Securities			0	31. Interest Due: Current	2500	1310	-1190
4. Accounts Receivable			0	32. Intermediate	6908	4580	-2328
5. Cash Value Life Insurance	5000	5000	0	33. Long Term	17193	13425	-3768
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	36786	27440	-9346	34. Real Estate & Personal Property	3000	3500	500
7. Purchased Livestock	73572	69515	-4057	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	41500	40125	-1375	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	73734	73743	9	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	234092	219323	-14769	39. Intermediate Liabilities	14680	17009	2329
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	36256	40024	3768
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	44400	46600	2200	43. TOTAL CURRENT LIABILITIES	232537	193982	-38555
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	5000	4500	-500	44. Notes Payable	36715	19707	-17008
17. Machinery & Equipment	87406	49153	-38253	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	12000	12000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	10000	12000	2000	47.			0
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553	48. TOTAL INTERMEDIATE LIABILITIES	36715	19707	-17008
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	166884	126860	-40024
22. Buildings & Improvements	40000	38500	-1500	50. Contingent Tax Liability			0
23. Cropland	896000	896000	0	51. Other Long Term Liabilities			0
24. Pasture	125000	125000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	166884	126860	-40024
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	436136	340549	-95587
27. TOTAL FIXED ASSETS	1061000	1059500	-1500	55. NET WORTH	1017762	1062527	44765
28. TOTAL ASSETS	1453898	1403076	-50822	56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 48. Cash Flow Statement: Northwest Farm: High Equity
and Good Cash Flow

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
((OPERATING RECEIPTS))													
1. Livestock sales:	1017	61950	63307	0	0	0	0	0	512	21326	0	0	148211
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	221273	24000	24000	24000	169899	0	0	463171
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	1017	61950	63307	0	0	221273	24000	24000	24612	191225	0	0	611394
((CAPITAL SALES))													
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER INFLOWS))													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	0	6000
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	2017	62950	64307	1000	1000	228273	25000	25000	25612	192225	1000	7000	635394
((OPERATING EXPENSES))													
17. Hired labor	1144	2448	4169	5073	8574	9149	6943	6080	10638	835	5082	989	61143
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5462	4706	8186	31	2289	29	38661
19. Buildings, Fences	206	206	206	92	92	92	92	92	92	206	206	206	1786
20. Feed	1002	922	980	645	17	17	17	17	17	3083	576	1002	3297
21. Seeds, plants	0	0	0	6500	0	2761	0	0	5100	0	0	0	14361
22. Fertilizer, Lime, Chem.	722	722	20419	13969	10447	0	4914	48937	0	0	0	0	100131
23. Machine Hire	0	0	440	0	0	0	0	0	0	19231	0	0	19671
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	0	1050	0	0	1431
26. Fuel, oil, lubricants	691	2144	6147	13067	22836	18631	16085	13953	23675	341	11599	366	129535
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	255	255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	0	9	9	9	45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	106	0	106	0	0	0	0	0	0	1023	0	0	1225
33. Miscellaneous	0	0	1305	4152	0	0	0	0	9120	0	0	0	14577
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	89352	0	0	89352
36. TOTAL CASH EXPENSES	4077	7868	35750	46422	46920	37542	33512	73785	56828	115161	19761	2856	480481
((CAPITAL EXPENSES (total cost)))													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER OUTFLOWS))													
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	1927	0	0	1797	0	0	1662	0	0	1522	6998
45. principal	0	0	3470	0	0	3600	0	0	3735	0	0	3875	14600
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	12640	17193
47. principal	66	66	67	68	68	69	69	70	70	71	72	35501	36257
48. Total Cash Outflows	6226	10017	43297	53572	49068	45088	35661	75935	64373	117310	21910	58061	580519
((NEW BORROWING))													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
((CASH FLOW SUMMARY))													
Int. Rate= ((variable))													
Minimum Cash Balance= ((1000))													
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4209	52933	21010	-52572	-48068	183184	-10661	-50935	-38761	74915	-20910	-51061	54865
53. Cash Position (49+50+51+52)	-2709	53933	22010	-51572	-47068	184184	-9661	-49935	-37761	75915	-19910	-50061	51061
54. New Borrowing: Operating	3709	0	0	52572	48068	0	10661	50935	38761	0	20910	51061	276677
55. New Borrowing: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0	0
((Accrued Int. due on Oper. Loan))													
56. Interest pay'ts. on Oper. Loan	0	6077	1425	0	0	5450	0	0	0	2548	0	0	15499
57. Principal pay'ts. on Oper. Loan	0	46857	19585	0	0	177734	0	0	0	72367	0	0	316544
58. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
59. Outstanding Operating Debt	153709	106852	87267	139838	187907	10172	20833	71769	110530	38163	59073	110134	
60. Outstanding Intermediate Debt	51395	51395	47925	47925	47925	44325	44325	44325	40590	40590	40590	36715	
61. Outstanding Long Term Debt	203874	203008	202941	202873	202805	202736	202667	202597	202527	202456	202384	166883	

Table 49. Income Statement and Financial Ratios: Northwest Farm:
High Equity and Good Cash Flow

INCOME STATEMENT					FINANCIAL RATIOS		
A. OPERATING RECEIPTS					B. CASH FARM EXPENSES		
Livestock Sales & Products:					Hired Labor	61143	
Raised market livestock	148212				Mach. & Equip. Repairs	38461	
	0				Building & Fence Repairs	1786	
Livestock purchased for resale:	0				Cash Interest	39400	
Livestock products					Feed Purchased	8297	
					Seed, Plants, Other	14361	
Subtotal:	148212				Fertilizer, lime, chemicals	100131	
					Machinery Hire	19671	
Crop Sales:	463171				Supplies	0	
	0				Breeding Fees	0	
					Vet. fees, medicine	1431	
					Gas, fuel, oil, lubricants	129335	
					Storage, Warehousing	0	
					Taxes: Real Est. & Pers. Prop	255	
					Insurance	0	
Subtotal:	463171				Utilities (farm share)	45	
Other Farm Income:					Cash Rent & Leases	0	
Government payments	0				Freight, Trucking	1235	
Custom Work					Conservation Expenses	0	
Dividends, Refunds					Miscellaneous Expenses	14577	
Cash Rent					Livestock purchased for resale	89352	
Other	0				TOTAL CASH EXPENSES	520081	
Subtotal:	0						
GROSS RECEIPTS FROM FARMING	611384						
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:					C. NET CASH INCOME FROM OPERATIONS		
1. Accounts & Notes Receivable:	Notes & Accounts	Other	Other			91303	
Ending Inventory	0						
Beginning Inventory	0						
Change	0	0	0	0			
2. Accounts Payable & Accrued Expenses:	Accounts	Taxes	Interest	Other			
Beginning Inventory	2000	3000	26601	0			
Ending Inventory	4000	3500	19315	0			
Change	-2000	-500	7286	0		4786	
3. Prepaid Expenses:	Ending Inventory	Beginning Inventory					
	0	0				0	
4. Inventories:	Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops				
Ending Inventory	96955	40125	73743				
Beginning Inventory	110358	41500	73734				
Change	-13403	-1375	9	-14769			
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
	Breeding Livestock	Mach. & Vehicles	Improvements				
Ending Inventory	46600	4500	49153	38500			
Sales	0	0	0	0			
Subtotal:	46600	4500	49153	38500			
Beginning Inventory	44400	5000	87406	40000			
Purchases	0	0	0	0			
Subtotal:	44400	5000	87406	40000			
Change	2200	-500	-38253	-1500		-38053	
F. VALUE OF FARM PRODUCTS USED IN THE HOME						0	
G. NET FARM INCOME						43268	
					Current Ratio = Current Assets / Current Liabilities = 1.13063		
					Working Asset Ratio = Current + Int. Assets / Current + Int. Liabilities = 1.587832		
					Debt Structure Ratio = Current Liabilities / Total Liabilities = .5696155		
					Net Capital Ratio = Total Assets / Total Liabilities = 4.120041		
					Debt to Equity Ratio = Total Liabilities / Net Worth = .328586		
					Total Debt Ratio = Total Liabilities / Total Assets = .2427160		
					Per Cent Equity = Net Worth * 100 / Total Assets = 75.72840		
					Debt Servicing Ratio = Total Debt Payments / Net Cash Farm Income = 1.451320		
					Opportunity Return to Labor & Management = 20000 (Insert an estimated value in Q140)		
					ROE = Net Farm Income - Opportunity Return to Labor & Management / Average Equity = .0223695		
					ROI = Net Farm Income + Interest - Opportunity Return to Labor & Management / Average Total Assets = .0389059		

Table 50. Net Worth Statement: Northwest Farm: High Equity and Poor Cash Flow

NET WORTH STATEMENT	Beginning Balance	Ending Balance	Net Change		Beginning Balance	Ending Balance	Net Change
-----CURRENT ASSETS-----				-----CURRENT LIABILITIES-----			
1. Cash & Checking	1500	1000	-500	29. Accounts Payable	2000	4000	2000
2. Savings & Time Certificates	2000	2500	500	30. Notes Payable	150000	212558	62558
3. Marketable Bonds & Securities			0	31. Interest Due: Current	2500	4031	1531
4. Accounts Receivable			0	32. Intermediate	6908	4580	-2328
5. Cash Value Life Insurance	5000	5000	0	33. Long Term	17193	13425	-3768
Market Livestock & Products:				Taxes Due:			
6. Raised Livestock	36786	27440	-9346	34. Real Estate & Personal Property	3000	3500	500
7. Purchased Livestock	73572	69515	-4057	35. Employee Payroll Withholding			0
8. Stored Crops, Feed, Supplies	41500	40125	-1375	36. Personal & Self-Employment			0
9. Cash Investment Growing Crops	73734	73743	9	37. Other Accrued Expenses			0
10. Prepaid Expenses			0	38. Contingent Tax Liability			0
11. Other Current Assets			0	Principal Due in 12 months:			
12. TOTAL CURRENT ASSETS	234092	219323	-14769	39. Intermediate Liabilities	14680	17009	2329
-----INTERMEDIATE ASSETS-----				40. Long Term Liabilities	36256	40024	3768
13. Notes Receivable			0	41. Other Current Liabilities			0
Breeding Livestock:				42.			0
14. Raised Livestock	44400	46600	2200	43. TOTAL CURRENT LIABILITIES	232537	299127	66590
15. Purchased Livestock			0	-----INTERMEDIATE LIABILITIES-----			
16. Vehicles	5000	4500	-500	44. Notes Payable	36715	19707	-17008
17. Machinery & Equipment	87406	49153	-38253	45. Contingent Tax Liability			0
18. Securities Not Readily Mktable.	12000	12000	0	46. Other Intermediate Liabilities			0
19. Other Intermediate Assets	10000	12000	2000	47.			0
20. TOTAL INTERMEDIATE ASSETS	158806	124253	-34553	48. TOTAL INTERMEDIATE LIABILITIES	36715	19707	-17008
-----FIXED ASSETS-----				-----LONG TERM LIABILITIES-----			
21. Contracts & Notes Receivable			0	49. Mortgages & Notes Payable	166884	126860	-40024
22. Buildings & Improvements	40000	38500	-1500	50. Contingent Tax Liability			0
23. Cropland	896000	896000	0	51. Other Long Term Liabilities			0
24. Pasture	125000	125000	0	52.			0
25. Non-Farm Investments			0	53. TOTAL LONG TERM LIABILITIES	166884	126860	-40024
26. Other Long Term Assets			0	54. TOTAL LIABILITIES	436136	445694	9558
27. TOTAL FIXED ASSETS	1061000	1059500	-1500	55. NET WORTH	1017762	957382	-60380
28. TOTAL ASSETS	1453898	1403076	-50822	56. TOTAL LIABILITIES & NET WORTH	1453898	1403076	-50822

Table 51. Cash Flow Statement: Northwest Farm: High Equity and Poor Cash Flow

WHOLEFARM CASHFLOW STATEMENT													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
((OPERATING RECEIPTS))													
1. Livestock sales:	969	60180	61472	0	0	0	0	0	571	20348	0	0	143540
2.	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Sale of purchased livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales:	0	0	0	0	0	178485	17231	17231	17231	147530	0	0	377709
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other farm income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	969	60180	61472	0	0	178485	17231	17231	17802	167878	0	0	521246
((CAPITAL SALES))													
10. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Building, land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER INFLOWS))													
13. Wages and salaries	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
14. Investments	0	0	0	0	0	6000	0	0	0	0	0	0	6000
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	1969	61180	62472	1000	1000	185485	18231	18231	18802	168878	1000	7000	545246
((OPERATING EXPENSES))													
17. Hired labor	1164	2448	4169	5073	8574	9149	6943	6080	10638	835	5082	989	61143
18. Repairs: Mach. & Equip.	176	1417	1977	2924	4572	6892	5462	4706	9186	31	2289	29	38661
19. Buildings & Fences	206	206	206	92	92	92	92	92	92	206	206	206	1786
20. Feed	1052	968	1029	678	18	18	18	18	18	3237	605	1052	8712
21. Seeds, plants	0	0	0	6825	0	2899	0	0	5355	0	0	0	15079
22. Fertilizer, Lime, Chem.	759	759	21440	14667	10970	0	5160	51384	0	0	0	0	105132
23. Machine Hire	0	0	440	0	0	0	0	0	0	19231	0	0	19671
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet. Medicine, Breed fee	0	0	0	0	381	0	0	0	0	1050	0	0	1431
26. Fuel, oil, lubricants	726	2221	6443	13677	23756	19415	16641	14403	24859	358	12167	384	133051
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes- R.E. & Pers. Prop	0	0	0	0	0	0	0	0	0	0	0	255	255
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	9	9	0	0	0	0	0	0	0	9	9	9	45
31. Rents, leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight, trucking	106	0	106	0	0	0	0	0	0	1023	0	0	1225
33. Miscellaneous	0	0	1305	4152	0	0	0	0	7600	0	0	0	13057
34.	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Livestock purchases	0	0	0	0	0	0	0	0	0	38128	0	0	38128
36. TOTAL CASH EXPENSES	4197	8027	37115	48089	48363	38465	34316	76683	56747	114108	20357	2925	489392
((CAPITAL EXPENSES (total cost)))													
37. Breeding livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Machinery, Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Fences, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
((OTHER OUTFLOWS))													
40. Family living	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	20000
41. Income Tax	0	0	0	5000	0	0	0	0	0	0	0	0	5000
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Debt Payments:													
44. Intermediate: interest	0	0	1927	0	0	1797	0	0	1662	0	0	1522	6906
45. principal	0	0	3470	0	0	3600	0	0	3735	0	0	3875	14680
46. Long Term: interest	417	416	416	415	414	414	413	413	412	412	411	12640	17192
47. principal	66	66	67	68	68	69	69	70	70	71	72	35501	36257
48. Total Cash Outflows	6347	10176	44662	55238	50511	46012	36465	78833	64293	116258	22507	58129	589430
((NEW BORROWING))													
49. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
50. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
((CASH FLOW SUMMARY))													
Int. Rate= ((variable))													
Minimum Cash Balance= ((10000))													
51. Beginning Cash Balance	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
52. Inflows- Outflows (16-48)	-4378	51004	17810	-54238	-49511	139474	-18234	-60602	-45491	52620	-21507	-51129	-44182
53. Cash Position (49+50+51+52)	-2878	52004	18810	-53238	-48511	140474	-17234	-59602	-44491	53620	-20507	-50129	304591
54. New Borrowings: Operating	3878	0	0	54238	49511	0	18234	60602	45491	0	21507	51129	304591
55. New Borrowings: Inter. & LongTerm	0	0	0	0	0	0	0	0	0	0	0	0	0
56. Accrued Int. due on Oper. Loan	4188	6079	1453	1312	3270	5724	735	1692	3377	5620	1778	4031	18876
57. Interest pay'ts. on Oper. Loan	0	6079	1453	0	0	5724	0	0	0	5620	0	0	18876
58. Principal pay'ts. on Oper. Loan	0	44925	16357	0	0	133750	0	0	0	47080	0	0	242033
59. Ending Cash Balance	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
59. Outstanding Operating Debt	153878	108953	92595	146834	196345	62595	90829	141431	186922	139922	161429	212558	
60. Outstanding Intermediate Debt	51395	51395	47925	47925	47925	44325	44325	44325	40590	40590	40590	36715	
61. Outstanding Long Term Debt	203074	203008	202941	202973	202805	202736	202667	202597	202527	202456	202384	166883	

Table 52. Income Statement and Financial Ratios: Northwest Farm:
High Equity and Poor Cash Flow

INCOME STATEMENT					FINANCIAL RATIOS		
A. OPERATING RECEIPTS					B. CASH FARM EXPENSES		
Livestock Sales & Products:					Hired Labor	51143	
Raised market livestock	143540				Mach. & Equip. Repairs	38661	
	0				Building & Fence Repairs	1786	
Livestock purchased for resale:	0				Cash Interest	42977	
Livestock products					Feed Purchased	8712	
					Seed, Plants, Other	15079	
Subtotal:	143540				Fertilizer, lime, chemicals	195138	
					Machinery Hire	19671	
Crop Sales:	377708				Supplies	0	
	0				Breeding Fees	0	
					Vet. fees, medicine	1431	
					Gas, fuel, oil, lubricants	135051	
					Storage, Warehousing	0	
Subtotal:	377708				Taxes: Real Est. & Pers. Prop	255	
					Insurance	0	
Other Farm Income:					Utilities (farm share)	45	
Government payments	0				Cash Rent & Leases	0	
Custom Work					Freight, Trucking	1235	
Dividends, Refunds					Conservation Expenses	0	
Cash Rent					Miscellaneous Expenses	13057	
Other	0				Lvstk. purchased for resale	98128	
Subtotal:	0				TOTAL CASH EXPENSES	532369	
GROSS RECEIPTS FROM FARMING	521248						
					C. NET CASH INCOME FROM OPERATIONS		
							-11121
D. ADJUSTMENTS FOR ACCRUED ITEMS AND INVENTORY CHANGES:							
1. Accounts & Notes Receivable:							
		Notes & Accounts	Other	Other			
Ending Inventory	0						
Beginning Inventory	0						
Change	0		0	0			0
2. Accounts Payable & Accrued Expenses:							
		Accounts	Taxes	Interest	Other		
Beginning Inventory	2000		3000	26601	0		
Ending Inventory	4000		3500	22036	0		
Change	-2000		-500	4565	0		2065
3. Prepaid Expenses:							
		Ending Inventory	Beginning Inventory				
		0	0				0
4. Inventories:							
		Mkt. Livestock & Products	Stored Crops, Feed & Supplies	Growing Crops			
Ending Inventory	96955		40125	73743			
Beginning Inventory	110358		41500	73734			
Change	-13403		-1375	9			-14769
E. ADJUSTMENTS FOR CAPITAL ITEMS:							
		Breeding Lvstk.	Vehicles	Mach. & Equip.	Improvements		
Ending Inventory	46600		4500	49153	38500		
Sales	0		0	0	0		
Subtotal:	46600		4500	49153	38500		
Beginning Inventory	44480		5000	87406	40000		
Purchases	0		0	0	0		
Subtotal:	44480		5000	87406	40000		
Change	2200		-500	-38253	-1500		-38053
F. VALUE OF FARM PRODUCTS USED IN THE HOME							0
G. NET FARM INCOME							-51879

Current Ratio =	Current Assets	=	.73321	3
	Current Liabilities			
Working Asset Ratio =	Current + Int. Assets	=	1.077602	
	Current + Int. Liabilities			
Debt Structure Ratio =	Current Liabilities	=	.6711426	
	Total Liabilities			
Net Capital Ratio =	Total Assets	=	3.148070	
	Total Liabilities			
Debt to Equity Ratio =	Total Liabilities	=	.4655341	
	Net Worth			
Total Debt Ratio =	Total Liabilities	=	.3176548	
	Total Assets			
Per Cent Equity =	Net Worth * 100	=	68.23451	
	Total Assets			
Debt Servicing Ratio =	Total Debt Payments	=	-1.03701	
	Net Cash Farm Income			
Opportunity Return to Labor & Management =			20000	
	(Insert an estimated value in Q148)			
ROE = Net Farm Income - Opportunity Return to Labor & Management		=	-.082909	
	Average Equity			
ROI = Net Farm Income + Interest - Opportunity Return to Labor & Management		=	-.030429	
	Average Total Assets			

VITA 2

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Master of Science

Thesis: AN INTEGRATED APPROACH TO FINANCIAL MANAGEMENT
IN AGRICULTURE

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