Computers Down on the Farm

An Honors Thesis (ID 499)

by

Jacqueline M. Reese

Thesis Director

Margaret Simsic

Margaret Simsic

Ball State University

Muncie, Indiana

February, 1986

Expected date of graduation Winter 1986

Table of Contents

Acknowledgements

I would like to thank all the people who spent time with me to explain how they utilize computers in their businesses. Their help and patience are greatly appreciated.

Thanks to Dennis Bell, Mary Howell, Sue Cross of Farmers Elevator, Ron Bell of Callahan Enterprises, Thomas Warfield of Hybrid Concepts and the many other people I spoke with during my visits.

Jacque Reese

Introduction

The American farmer has failed to share in the general economic recovery of the past year. Serious debt problems have plagued the agriculture industry and have forced many farm families to give up farming. Even though the number of farms has shrunk from 6 million in 1933 to 2.5 million today, there is evidence that the American family farm is here to stay. The efficient, at least, will survive.

As technology continues to increase the ability of each person to grow food, the number of farmers could shrink to only a few hundred thousand. The American farmer, considered the most productive in the world, can now grow enough food to feed 80 persons or more.

One of the reasons some farmers are currently in trouble is that they did not keep adequate records. With few statistics available for decision making, management capabilities were limited and they were unable to adjust to changes in the economy.

The farmers who will survive the current financial situation are those who are good business people. They are professionals who keep good records, analyze them and review their progress. They make their operations efficient.

Any manufacturing company interested in turning a profit has an efficient plant and good administration.

There is no doubt that American farmers are the most efficient food producers in the world. Now farmers are discovering, as many other businesses have, the value of computers for administrative and production control purposes.

Scientific advancements in genetics and chemical technology have changed agriculture from a mostly manual labor occupation to a more technically oriented business. Farmers are faced with a large amount of information from which they must make decisions. Some are learning that computers can be extremely helpful in the decision making process because of their capacity to store and manipulate large amounts of data. They are discovering that computers are an invaluable tool to help them survive in a very competitive marketplace.

In this paper, I describe five different midwestern agricultural businesses that have found computers to be an important part of their operations. The situations range from a small family farm to a company that specializes in a new technique of corn breeding methods. They all have in common, though, the belief that their businesses would not be as efficient and profitable without the use of computers.

Dennis Bell

A Small Family Farm

The first situation I would like to present is the case of a small family farm. Dennis Bell farms a few hundred acres in Brazil, Indiana raising corn, soybeans, wheat, and seed corn. He found that keeping manual records of his farming operations was nearly an impossible task because of the amount of time that was needed to keep the records accurate. In 1983, he decided to purchase a microcomputer to help him with his record keeping.

The computer Dennis currently uses is a Tandy 2000 with 256K of memory. He has two 720K disk drives and an Epson Printer. He uses a software spreadsheet package called Mutli-Plan by Microsoft. With this program he has developed a variety of reports that assist him in keeping accurate records. Following is a summary of these reports (see Appendix A for samples of each report).

One of the most useful reports Dennis has developed is a monthly expense worksheet which shows the date incurred, to whom it was paid, the check number, the amount, and categorized columns for each type of expense. This provides an easy way to keep track of costs during the month. Another report shows a yearly summary of itemized costs with totals for each

category. A statement of financial condition report was modeled after the form used at the local bank. It shows a summary of the assets and liabilities. Another very useful report is the cash flow report. It is broken down by months and categories, with totals for each month as well as in each category. Income, credit line, and interest are also stated.

Reports for calculating prices for field chemicals is also a useful reference. The herbicide comparison report lists the types of herbicides and calculates their cost and total number of units needed. A price comparison is shown at the bottom displaying the various herbicides and their prices from different suppliers. A fertilizer report breaks down the price per acre for fertilizer. A cash rent report shows a summary of cash rent acres with totals and average rent calculated. The amortization table is a useful worksheet when purchases of new equipment are being comtemplated.

A farm break down report shows total acres with categories for various crops, soil analysis values, and fertilizer rates. Fertilizer totals are shown at the bottom. The farm land investment sheet presents a yearly break down of land costs, payments, taxes, income, investment, and return on investment. To easily keep track of summer employees, a detasseling record sheet shows wage information for each worker.

It includes dates and hours worked, hourly wage, total wages, and net wages. An analysis of cost per acre is also included at the bottom.

Dennis has created spreadsheets for some important financial reports. The profit and loss statement shows itemized income sources, expense sources, and includes a worksheet for inventory adjustment. A budget report helps project yearly expenses. It breaks down income from various crops and gives break even prices, shows itemized expenses and their totals, and shows itemized fixed costs. A resource management report shows detailed information about time allotments for various jobs, information about the land, employees, machinery, and an analysis of equipment efficiency.

In addition to these reports, Dennis also subscribes to Agri-Star, a farm information service which he accesses through a modem. It provides him with market advice, weather reports, and the Chicago Board of Trade. He pays a monthly fee for this service plus a set amount for each report.

All this information helps Dennis run his farm in a better and more efficient way. By having easy access to accurate and timely information, he can make more informed decisions on such important issues as major equipment purchases, number of employees, and what crops to plant. It also provides him with more

information than he could possibly keep through manual records.

Dennis is happy with his system and is always looking for ways to create better reports. He hopes to replace his Tandy machine with an IBM PCjr in the near future. He feels that the computer gives him an edge in the industry which has seen so many small farms fail in the recent years.

David and Mary Howell Farms

A Large, Multiple-Entity Farming Operation

The Howell's farm 4,000 acres of grain and vegetable crops near Middletown, Indiana. Their operation includes commercial corn, soybeans, popcorn, wheat, sunflowers, apples, strawberries, sweet corn, and broccoli. The also own separate corporations which operate as grain elevators and seed, chemical, and fertilizer suppliers primarily serving their family operations. They have come to depend on their computer system to not only keep the books balanced but to provide detailed records of such things as crop yields and fertilizer and insecticide applied. They use this information to let them see how profitable or unprofitable their efforts have been.

The Howell's purchased their first computer in 1981 and bought a software package from an Oregon farm. After a year, they scrapped the software because it did not fit their needs. They then started from scratch in writing their present computer system which took about three years to complete. The current system is written in COBOL and runs on an NCR 8200 minicomputer under IMOS (Interactive Multi-Programming Operating System). The Howell's employ two full-time programmers who wrote and maintain the system for them. Although their primary goal was not to create a saleable software

product, the system is marketed under the name of Honey Creek Informational Systems and is endorsed by NCR. They also have a recently completed version for the IBM PCXT with a 10 megabyte hard disk. On site instruction is provided to purchasers to ensure the new user mastery of the system.

The system is partitioned into seven basic sections. These are payroll, general ledger, field, grain, equipment, accounts receivable, and accounts payable. A data flow diagram showing the relationships between each area is included in Appendix B.

The Farm Payroll System (FPRS) can handle almost any type of payroll operation. It was designed for multiple corporations, cooperatives, departments, or farms with weekly, bi-weekly, monthly or semi-monthly payroll capabilities for hourly, salaried, salaried/hourly with overtime, or for commisioned personnel. It provides a transaction journal, payroll register, check register, and quarterly and yearly register as well as W-2's.

The Farm Equipment System (FEQS) is designed to meet the record keeping and reporting requirements of most agri-businesses. It is designed to account for all equipment as well as any fixed assets, and to maintain repair or improvement records for them. It also depreciates the equipment on a monthly basis.

The Grain Accounting and Inventory System (GRAIS) is designed to provide accurate records and reports for grain companies, elevators, cooperatives, or individual farms. Elevator scale tickets specify information such as type of storage, contracts, and from which farm and field the grain was harvested.

The Agriculture General Ledger System (AGLS) is designed to meet the general ledger record keeping requirements and financial reporting of most commercial, retail, and financial users. Provisions are available to integrate this system to all other accounting systems at the magnetic media level.

The Farm Accounts Payable System (FAPS) is designed to handle all accounts payable transactions and to provide the necessary reports and maintenance work for any farming or grain operation. The system records vendors, prepares a cash requirements report, and posts invoices to the ledger.

The Farm Accounts Receivables and Billing System (FARBS) is an integrated network system designed to provide the facilities to maintain a customer accounts receivable system and produce customer billing invoices for most agri-businesses. On-line inquiry for customer credit status and history provide valuable aids for making daily credit decisions. Automatic updating of the general ledger file is also provided.

The Field Analysis System (FDAS) is a field production/history system which includes evaluation of field expenses, production, and profit/loss on a per field basis. Each field has an individual record with the ability to budget all costs which provides a valuable tool in planning field strategies. Costs are automatically updated from payables and payroll or can be posted manually. Production is updated from the grain system to each field. Gross sales per field may be analyzed and per acre/units are also provided so that a producer may see the results of different varieties, crops, or other variations.

A few examples of some of the reports produced by these systems are included in Appendix B.

Even with the help of the computer, the tremendous amount of record keeping is still a time comsuming task. The Howell's employ a full-time operator who assists in preparing the data and entering it into the computer. Although all the units work as an integrated system, each one can stand alone as a separate subsystem.

The software system was conceived and designed by a production farmer for the sole reason of increasing his efficiency and profitability. The cost of being a pioneer in this software area was quite high but the Howell's feel that the resulting system was well worth the expense.

Farmers Elevator Company of Oakville, Inc.

An Elevator Company

The Farmers Elevator Company is a mid-sized elevator corporation located in Oakville, Indiana. Their primary business activity is grain storage and drying. They also sell and apply fertilizer and insecticide as well as provide soil, cost, and feed analysis for area farmers. The elevator began using a computer in 1977 to help them more efficiently keep track of accounts. The system has saved them countless hours of manual paperwork and, in the long run, has saved them money by being able to have complete and accurate records at their fingertips.

The system that the elevator currently runs on is a Data General NOVA 3 minicomputer. It uses two 35 megabyte disk drives and has three printers and three terminals attached to the system. When the company first began looking for a computer system to assist them in thier operations, they could find no suitable software to meet their needs. They then decided to have a customized system written for them by ADC Consulatants of Ft. Myers, Florida. The current system is written in Fortran IV. Since the elevator employs no programmers of its own, all maintenance and problems must be solved over the phone. This can be a rather

inconvenient arrangement at times but the elevator, in general, is pleased with the system.

The major use of the system is to keep track of accounts, including issuing checks for purchased grain, and handling grain contracts. The grain purchase contract is filled out by the farmer and the elevator. It includes the terms of the contract such as quantity, grade, price, and time of delivery. All of this information is then entered into the computer from the contract.

Another important form is the scale ticket. This is the form that is completed each time a farmer brings in grain or takes it out. It includes the date, time, weight, grade, and discounts. It also states where the grain will be credited, such as if it will go towards the fulfillment of a contract or just into storage. All this information is also entered into the computer.

These inputs are used to update each individual account. A farmer, at any time, can get a detailed look at his status with the elevator. Accounts can be accessed by the farmer's name or address. An individual grain balance listing is generated and can be printed out. This listing shows both contract and market grain and lists the scale ticket number, date, weight, gross bushels, net bushels, gross price, net price, total due, and current due. The agreement number from the purchase contract is also listed for

contract grain. Ticket numbers are listed in order at the bottom of the listing by type as well as the amount of payment and check number paid by.

A very important report for the elevator is the final position report. This report is usually run daily after business for the day has closed. It lists the elevator's position for corn, soybeans, wheat, and oats. Total inventory for each grain is adjusted and obligated grain is calculated and subtracted from the total inventory to produce the free grain total. Contracts are also taken into consideration and a final net position for the day is listed at the bottom of the report. This report allows the elevator management to get an overall view of the status of the grain inventory on a daily basis.

Another service provided by the elevator is a soil test recommendation. A TRS-80 Model III microcomputer is used to do the analysis. Soil samples are collected from the farmer's fields and sent to a laboratory for analysis. The results of the analysis are then entered into the computer program which then provides the farmer with recommendations for the application of fertilizers. A sample of this form as well as the ones mentioned above are available in Appendix C.

Although the entering of information into the system from scale tickets and purchase agreements is still a rather time consuming task, especially during

busy harvest seasons, the accuracy and convenience of the automated accounts is certainly a large benefit over the previous manual system. In the near future, the elevator hopes to be able to upgrade their system by purchasing new hardware and converting the current programs to Fortran 77.

Callahan Enterprises, Inc.

A Seed Research and Production Company

Callahan Enterprises is a seed research and production company headquartered in Westfield, Indiana. The research area is continually conducting tests to develop grains, such as corn, wheat, and soybeans, that produce a greater yield and are more disease resistant. The company also markets their own hybrid seed corn, wheat, and soybeans. Although the computer is utilized for the daily bookkeeping tasks, its major use is the storage and analysis of research data. With the amount of data generated by the various tests done by the breeders in the research area, the computer has become an invaluable tool. Without it, the analysis of such a large amount of information would be a nearly impossible task.

The computer the company currently uses is an IBM System 34. They have two printers, one which they use for reports and the other they use to print forms. Four terminals are also attached to the system as well as an IBM PC which is linked to the system and can act as another terminal. Since the company employs no programmers of its own, all programming for their system was done by an independent consultant. The consultant visits the facilities approximately once a month to meet with the users and make any necesary

changes. Problems in between visits are usually handled over the phone.

During each summer, various test plots are planted across the midwest. The first task is to determine the plot layout. Plots are made up of short rows planted next to each other with an aisle in between each group of rows. Each group of rows is called a range. An example map of a plot layout is in Appendix D. For each row, a single envelope of seed must be prepared and labeled. Once the number of rows and ranges for a plot has been determined, the computer can print labels for the envelopes. The labels show the range, row, and entry numbers as well as the location number and the test number. An example of the printed labels is in Appendix D.

As the plants begin to mature over the course of the summer, various data are collected on them. The computer generates a field observation form with the variety's pedigree listed according to range and row numbers. These forms are taken into the test plots and used to record the plant statistics. A sample form for corn in Appendix D shows spaces available to record population, plant and ear height, and general comments. These forms are then brought back to the offices and this data is entered into the computer.

Once the plants are ready for harvest another form is used to record more information. The harvest form

generated by the computer is arranged according to row and then range since the harvesting machine runs the length of the field by rows. A sample form for corn is in Appendix D which lists test, plot, range, row, and entry numbers as well as spaces to record weight, moisture content, stalk and root lodging, dropped ears, and a section for coded problems. The key for the problems category is listed across the top of the page. These statistics are also entered into the computer after the harvest is complete.

Several reports are then run to allow the breeders to analyze the test results. The detailed test analysis report is basically a summary of the information collected on the field observation forms and the harvest forms. It lists the varieties by pedigree with an average of the representations for each. The test summary by yield report lists the varieties by their yield, from highest to lowest. It also includes the same categories from the detailed test analysis with only the representations averages listed for each variety. Averages for all varieties in the test are listed at the bottom. The final report is a spreadsheet analysis of all experiment locations. The locations are listed across the top of the report and the varieties are listed for each with averages for all locations for each variety and all varieties for

each location. Examples of each of these reports can be found in Appendix D.

After all these reports have been completed, the company publishes the performance test books, one each for corn, soybeans, and wheat. These books list the yield results for all test plots the company planted throughout the midwestern states including two and three year averages. All the pages of the performance tests are computer generated from the data entered from the harvest forms. The books are made available to anyone in the seed trade business and allow them to view the results of the company's test plots. A sample page from a soybean book is in Appendix D.

Research data is also collected from cooperators. Cooperators are farmers who agree to plant several varieties in side-by-side strips and record information about them. This allows the company to receive additional yield information from numerous locations around the midwest. The researchers have more data on how specific varieties perform under a wide variety of conditions.

The cooperators fill out and send forms to the company at planting and at harvest. The information is entered into the computer after harvest and is compiled into regional yield bulletins. These booklets list the yield results for all the cooperators in a specific region of the midwest. They are distributed to seed

dealers and farmers to help them compare their yield results with farmers in their geographic area. A sample page from the corn section of a booklet is in Appendix D.

From all the statistics that have been gathered over the years, from both test plots and cooperators, the company has recently developed a varietal recommendation program. The program is called Matchmaker and was written to run on an IBM PC. Information from a form filled out by the farmer is entered into the computer and then a report is generated that shows the variety recommended and seed requirements for the specified field. Optional cost information is also included at the bottom of the report with costs per acre and per bushel of estimated yield levels. The program is distributed to any dealer with a compatible computer to use as a marketing tool. The company also takes the program to any seed or farming shows so that within less than fifteen minutes a farmer can receive their own varietal recommendation report. Even though the program has not been in use for a very long period of time, the company has been receiving a very good response from dealers and farmers. Examples of the forms and reports are in Appendix D.

As has been shown in the previous pages, Callahan Enterprises utilizes the computer for many tasks.

Besides the normal bookkeeping tasks such as customer accounts and payroll, the computer is an invaluable tool for the research area. It is used for not only the storage and organization of large amounts of plant data but also assists them in compiling the mass of information into useable forms so that it can be easily analyzed by the breeders. The widespread use and portablility of personal computers has also allowed the company to develop a powerful new marketing tool. In the near future, it will be necessary for the company to purchase a larger computer system due to the amount of growth they have experienced in recent years.

Hybrid Concepts

A Genetic Corn Research Company

Hybrid Concepts, located in Illinois, is a unique company founded by Thomas Warfield. The company specializes in a new technique of corn breeding methods. These methods use the computer as a tool to allow the analysis of various yield components of a plant so that a characteristic yield potential for a hybrid may be determined.

Mr. Warfield first began collecting data for his program in 1965, well before computers had become available for personal use. He felt that there had to be a way to determine the yield potential of a hybrid using only the data taken from the inbred parent lines. In 1978, he purchased his first computer, a TRS-80 Model I and then a few years later he purchased a TRS-80 Model III on which his current system now runs. With the aid of the computer, he was able to quickly and easily analyze years of collected plant data through the use of a few simple programs he wrote himself in BASIC. He developed a technique to correctly select the best hybrids at least 80% of the time and reject approximately 60% of the possible hybrid combinations not worth further consideration.

Mr. Warfield sells his service to foundation and commercial seed companies. About 10 companies

participated in the program in 1984, the first year for the service to be marketed. Approximately 90% to 95% of thoses companies were satisfied with the results.

The company has three different plans for participation in the program. In the first plan, Hybrid Concepts is provided with seed for each inbred line. Hybrid Concepts grows the lines, takes field notes, ear data and processes all the information. The originating company is provided an evaluation report and a detailed analysis and recommendation on all inbred lines entered in the program. In the second plan, the originating company will grow the inbred lines and take the field notes. They will then send ear samples to Hybrid Concepts for analysis. Hybrid Concepts then processes the data and returns a report similar to the first plan. In the third plan, The originating company grows the inbred lines, takes the field notes and processes the ear samples. All data is sent to Hybrid Concepts for processing and an evaluation report is returned to the originator.

The Hybrid Concepts technique can greatly increase the efficiency of a corn breeding program. It increases the success rate in finding a better yielding hybrid and at the same time reduces the number of plants and lines that must be searched to do so. It provides the corn breeder with a certain direction in his research.

Without the use of the computer technology, this type of research would be impossible. The massive amounts of plant data that must be analyzed and evaluated simply could not be managed without the aid of the computer. Although the technique is not presently widely used, it promises to be an important element in corn breeding in the near future. The Hybrid Concepts service is rather expensive but the savings in less field testing of hybrids is several times the cost of the program.

Mr. Warfield will possibly prepare a version of his software for marketing in the next few years. Currently, he is still in the process of fine tuning his program and any details of it and the reports seem to be a closely guarded secret.

Summary

The situations I have presented in this paper display the variety of ways computers have become involved in agriculture in recent years. In these uncertain and difficult times for the farmer, the comupter has helped him in various ways. He can easily keep track of his financial records to help him better determine the most profitable ways to manage his farm. He can analyze the efficiency of equipment and personnel so that he can run a more economical business. Through the computer's use at grain elevators, it can provide the farmer with accurate, easily accessable records of his account and prompt payments when requested. Soil analysis and recommendations for the best combinations of fertilizers help the farmer get the most from his fields. Through the use of computers in seed research, farmers are provided with higher yielding crops so they can produce more from their land. They also receive guidance in choosing the best hybrids to plant in their fields. Seed research is also aided by computer to help it become more efficient and less costly. Even though computers can greatly assist farmers in these ways there are still uncontrollable variables such as weather and market prices for crops.

Conclusions

Today's farmer must be a shrewd businessman to survive in the industry. By taking advantage of available computer technology, he can help himself run a more efficient and hopefully more profitable business. Unlike a few years ago, farmers must operate in a very competitive marketplace and are faced with a large amount of information from which they must make decisions. The capabilities of computer technology allow them to organize and evaluate this information so that they can make informed decisions. Those who do not accept these advantages may find themselves in the growing number of failed farms.

APPENDIX A
Dennis Bell Sample Reports

DIRT UNLIMITED 1985 BUDGET

							CASH-FLOW BREAKEVEN		NET PROFIT BREAKEVEN	
	ACRES	YIELD	BUSHELS	PRICE	TOTAL	PROF/ACR	PRICE	YIELD	PRICE	YIELD
CORN ACRES=	630	125	69375	2.55	176906	-3	2.47	120.86	2.57	126.22
BEAN ACRES=	497	40	16880	6.5	109720	24	5.57	34.26	5.91	36.36
WHEAT ACRES=	0	50	0	3.5	0	-47	4.17	59.62	4.45	63.53
SEED CORN 1=	140	70	9800	12	117600	49	11.10	64.74	11.29	65.88
SEED CORN 2=	0	55	0	15	0	34	14.13	51.80	14.37	52.71
CONSERVATION	68	107	65549.55	0.48	31463.8	38				
SHARE INCOME					12562.5					
TOTAL ACRES=	1335	CORN	BEAN	SEED	GROSS	INCOME	448253			
1/3-2/3 ACRES		0	0	0	CASH	INCOME	27466.6			
50/50 ACRES	310	150	150	0	NET	PROFIT	9208.58			

	CORN		SOYBEANS		WHEAT		SEED CORN		TOTAL
EXPENSE	$/ACRE	TOTAL	$/ACRE	TOTAL	$/ACRE	TOTAL	$/ACRE	TOTAL	COSTS
REPAIRS	21	13230	18	8946	9	0	25	3500	25676
LABOR	26	16380	21	10437	15	0	125	17500	44317
FUEL	14	8820	12	5964	9	0	20	2800	17584
SEED	19	11970	14	6958	16	0	60	8400	27328
HERBICIDES	12.5	7875	22	10934	0	0	12.5	1750	20559
INSECTICIDES	7	4410	3	1491	0	0	7	980	6881
FERTILIZER	65	40950	10	4970	45	0	70	9800	55720
DRYING	15	9450		0	0	0	315	44100	53550
OPER INTEREST	23	14490	17	8449	9	0	37	5143.95	28083
VAR. COSTS	202.5	127575	117	58149	103	0	671	93974	279698
TOTAL COSTS	321.86		236.36		222.36		790.60		

FIXED COSTS			AMORTIZATION		
		PAYMENT	INT	YEARS	PAYMENT
MISC	3300	167000	0.13	35	22015
UTILITIES	5500				
TAXES	8000				
LICENSE	1000				
INSURANCE	3100	PRINC	INT		
CASH RENT	49280				
J LAND CONTRAC	8400	2662	5738		
P 160	5000	4500	500		
MUTUAL FED	26000	1482	24518		
LAND BANK	1896	1182	714		
OTHER	0	0	0		
NEW HOLLAND	1600	600	1000		
PCA	6012	4276	1736		
FLB	22000	1750	20250		
DEPRECIATION	34710				
TOTAL FIXED	141088	16452	54456		
PER/ACRE	105.684				
TOTAL NET	159346				
PER/ACRE	119.36				

PROFIT AND LOSS STATEMEMENT

DIRT UNLIMITED

	1/9/85	1/9/86
CATTLE	57000	45000
BASIS CONTRACT		10725
OLD CORN& BEANS		37563
OLD SEED CORN		61833
WHEAT	4412	
NEW CORN	73675	187945
NEW BEANS	94413	112320
SEED CORN	0	0
ASCS SEALING PROCEEDS	68549	
ASCS DEFICIENCY	27000	30000
MISC&UNCLE BYRON	22105	17000
TOTAL CASH FARM INCOME	347154	457386
LESS RESALE PURCHASES		
LESS BREEDING PURCHASES		
LIVESTOCK INVENTORY CHANGE	-3605	0
CROP & FEED INV CHANGE	42116	-40976
ACCOUNTS RECEIVABLE CHANGE	66333	-5576
VALUE OF FARM PRODUCTION	451998	410834
FARM OPERATING EXPENSE		
LABOR	37400	42205
REPAIRS	31200	25280
INTEREST	72682	89794
RENT	62369	49280
FEED	0	
SEED AND PLANTS	31280	24840
FERTILIZER AND LIME	55424	54350
SPRAY AND CHEMICALS	26440	27835
CUSTOM HIRE		
SUPPLIES		
BREEDING		
GAS-OIL-FUEL	16540	16500
TAXES	8505	8500
INSURANCE-UTIL-LICENSE	9380	9380
MARKETING	1234	1000
SEED PROCESSING	17700	16920
DRYING	12000	9600
MISC	2039	2300
TOTAL CASH FARM OPERATING	384193	377784
PREPAID EXPENSE CHANGE	11200	
ACCOUNTS PAYABLE CHANGE	2731	-10946
MACH & EQUIP DEPRECIATION	38798	39000
BUILDING &EQUIP DEPR		
TOTAL FARM OPER EXPENSE	436922	405838
NET FARM EARNINGS	15076	4996
PLUS NON FARM INCOME		
LESS FAMILY LIVING/INC TAX		
NET EARNINGS	15076	4996

WORKSHEET

ACTUAL

	LIVESTOCK	CROP/FEED	RECIEVABLES	PREPAID EXP	PAYABLES
ENDING INVENTORY	0	44756	78333	10800	25946
LESS:					
BEGINNING					
INVENTORY	3605	2640	12000	22200	23215
NET					
ADJUSTMENT	-3605	42116	66333	-11400	2731

PROJECTED

	LIVESTOCK	CROP/FEED	RECEIVABLES	PREPAID EXP	PAYABLES
ENDING INVENTORY	0	0	72757	10800	15000
LESS:					
BEGINNING					
INVENTORY	0	40976	78333	10800	25946
NET					
ADJUSTMENT	0	-40976	-5576	0	-10946

DECEMBER EXPENSES

DATE	TO WHOM PAID	CHECK NO.	AMOUNT	LABOR	REPAIRS	SEED WORK	UTILITY	FUEL	RENT	SEED	FERT	HERB	TAXES
1	FRANCIS SPENCER	2383	1330						1330				
1	PAUL CORNWELL	2384	840						840				
1	DORIS RAY	2385	1000						1000				
1	AL MORLAN	2386	800						800				
1	GLEN PELL	2387	4180						4180				
1	LENA HILL	2390	4378.25						4378.25				
3	RON PELL	2391	20	20									
5	BUREAU OF VEHICLES	2392	25.75										
6	BRAZIL AUTOMOTIVE	2393	13.76		13.76								
10	WILSON GRAIN	2398	1010.11		1010.11								
10	ILLIANA	2399	100		100								
10	BURKE	2400	15.7		15.7								
11	PELLS	1752	18.53		18.53								
14	DENNY BELL	1753	250	250									
17	DENNY BELL	1754	150	150									
17	HOOD HYDRAULIC	2394	22.92		22.92								
18	RON PELL	2395	20	20									
18	RON PELL	1756	150	150									
18	BRAZIL AUTOMOTIVE	1757	105.57		105.57								
20	RON PELL	1751	300	300									
20	SHAFFERS	1758	45.79		45.79								
20	BEDWELL	1759	160.75		160.75								
20	LAWSON WELDING	1760	83		83								
20	CLAY TELEPHONE	1761	108.31				108.31						
20	PARKE CO REMC	1762	329.65				329.65						
20	OTTO'S	1763	5226.96					5226.96					
20	DENNY BELL	1764	120	120									
20	BRAZIL FIRST BANK	1765	211.01										
20	STEARLEY	1766	1000		1000								
11-13	PARKE CO REMC	2367	411.09				411.09						
27	DENNY BELL	1769	200	200									
27	RON PELL	1767	130	130									
27	PCA	1768	65000										
28	HARGER FARMS	1770	17795.08										
29	KERRY BELL	1771	79.95				79.95						
31	GIRTON IMPL	1772	78.62		78.62								
31	FLOYD PECK	1773	62.71				62.71						
			105773.5	1340	2654.75	0	991.71	5226.96	12528.25	0	0	0	0
			105773.5										

RESOURCE MANAGEMENT ANALYSIS

SPRING AND SUMMER FIELD TIME AVAILIBILITY

	OUR GOOD WEEK DAYS	PLAN HOURS PER DAY	TOTAL HOURS
LAND PREPARATION			
MAR 15-APR 4	4.90	9.00	41.00
APR 5-APR 25	6.50	9.00	58.00
PLANTING & LAND PREPARATION			
APR 26-MAY 2	2.10	12.00	25.00
MAY 3-MAY 9	2.10	12.00	25.00
MAY 10-MAY 16	2.70	12.00	32.00
MAY 17-MAY 23	2.70	12.00	32.00
MAY 24-MAY 30	3.30	12.00	40.00
MAY 31-JUNE 6	3.30	12.00	40.00
JUNE7-JUNE13	3.30	12.00	40.00
POST PLANT			
MAY 31-JUNE 6	3.30	12.00	40.00
JUNE7-JUNE13	3.30	12.00	40.00
JUNE14-JUNE20	3.30	12.00	40.00
FALL FIELD TIME			
SEPT 13-SEPT26	7.00	10.00	70.00
SEPT 27-OCT17	10.90	10.00	109.00
OCT 18-NOV 7	10.20	10.00	102.00
NOV 8-NOV 28	9.90	10.00	99.00
NOV 29-DEC 18	5.00	10.00	50.00

FARM INFORMATION

	CORN	BEANS
ACRES	800	333
YIELD	120	35
PRICE	3	7
VAR COSTS		
PER ACRE	174	115
OWNED ACRES	460	
FIXED COSTS		
PER ACRE	232	
RENTED ACRES	725	
AVG RENT	88	
RENTABLE ACRES		
RENT/ACRE	90	
SALARIES	26000	
FULLTIME HELP	2	
PART-TIME		
WAGE/HR	5.00	
NUMBER OF		
TRACTORS	3	
AVG SOIL		
DRAINAGE	1	
RATE 1-5,1=WELL,5=POOR		
WORK SUNDAYS		
1=YES,2=NO	2	

TABLE

YOUR PLAN OPTIMUM

NET PROFIT
CORN ACRES 800
BEAN ACRES 333
ACRES RENTED IN
ACRES RENTED OUT

VALUE OF AN EXTRA HOUR OF

	LABOR	TILLAGE	PLANTING	HARVEST
MAR -APR 4				
APR APR 25				
APR -MAY 2				
MAY MAY 9				
MAY -MAY 16				
MAY -MAY 23				
MAY -MAY 30				
MAY -JUNE 6				
JUNE-JUN 13				
JUNE-JUN20				
SEPT-SEPT 26				
SEPT-OCT 17				
OCT -NOV 7				
NOV -NOV 28				
NOV2-DEC 18				

FALL LAND PREPARATION	WIDTH OF MACHINE	SPEED OF OPERATION	FIELD EFFICIENCY	FIELD CAPACITY	NUMBER OF TRIPS FOR EACH CROP: CORN	BEANS	NUMBER OF UNITS	MAN PER FIELD HOUR
DISK CHISEL	10.50	5.50	0.80	5.60	1		1	1.02
				0.00				
				0.00				
				0.00				
SPRING LAND PREPARATION								
DISK&ANHYDROUS	20.00	5.00	0.70	8.48	1		1	1.15
DISK	20.00	6.00	0.80	11.64		1	1	1.02
				0.00				
				0.00				
PLANTING PREPARATION								
FIELD CULTIVATE	21.00	5.50	0.75	10.50	1	1	1	1.10
PLANT	30.00	5.00	0.69	12.55	1	1	1	1.16
				0.00				
				0.00				
				0.00				
POST-PLANTING								
CULTIVATE	15.00	4.00	0.80	5.82	1	2	1	1.04
				0.00	3			
				0.00				
COMBINE CAPACITY								
CORN	15.00	3.50	0.66	4.20	1		1	2.20
BEANS	15.00	4.00	0.66	4.80		1	1	2.20
				0.00				
				0.00				

HERBICIDES

	CORN ACRES 770						BEAN ACRES 500					
ACRES		$/UNIT	UN/AC	$/ACRE	TOTAL	UNITS		$/UNIT	UNIT/ACR	$/ACRE	ACRES	TOTAL	UNITS
300	BICEP	16.99	0.75	12.74	3822.8	225	LASSO	17.98	0.50	8.99		0.00	0.00
0	LASSO-ATTR	13.00	0.88	11.38	0	0	DUAL	42.49	0.25	10.62	0.00	0.00	0.00
470	SUTAZINE	13.85	0.88	12.12	5695.8	411.25	TREFLAN	22.51	0.25	5.63	0.00	0.00	0.00
	ATTREX	7.55	0.33	2.51	0	0	SONOLAN	20.65	0.38	7.74	400.00	3097.50	150.00
	GENERIC	6.95	0.33	2.29	0	0	LEXONE	16.14	0.50	8.07	440.00	3550.80	220.00
	NINE-0	1.76	1.55	2.73	0	0	BASAGRAN	73.12	0.08	6.09	250.00	1523.33	20.83
	ATTREX 80W	1.43	1.75	2.50	0	0						---	
	GEN 80W	1.34	1.75	2.35	0	0						9172	SOYBEAN CO
	BLADEX 4L	16.32	0.33	5.39	0	0						16.34	COST/ACRE
	BLADEX 80W	3.70	1.75	6.48	0	0							
	LASSO	18.70	0.50	9.35	0	0							
	DUAL	42.95	0.25	10.74	0	0							
	GENATE PLU	17.90	0.50	8.95	0	0							
	SUTAN	18.58	0.50	9.29	0	0							
460	LORSBAN	1.22	8.00	9.76	4489.6	3680							
	COUNTER	1.32		0.00	0	0							
0	PARAQUAT	40.34	0.13	5.04	0	0							
	ROUNDUP	70.50	0.13	8.81	0	0							
110	BANVEL	47.86	0.06	2.99	329.04	6.875							
110	2-4D	9.25	0.06	0.56	61.05	6.6							

					14008								
		COST/ACRE		18.19		22180	TOTAL COSTS						

		KINCAID	KOVA	IND	CROPCAR	JEFF
BICEP	2.5'S	16.99	17.48	16.99		16.77
LASSO-ATRA	2.5'S	13.98	14.10	14.08	13	
SUTAZINE	2.5'S	14.70		14.5	13.85	14.32
EXTRAZINE						
BLADEX		16.32	16.37	16.48		
ATTREX		7.55		7.6		7.40
GENERIC		6.95				6.73
NINE-0		1.76		1.67		1.62
SUTAN		18.58				
GENATE PLU		17.90		18		
LASSO		18.70		18.92	18.28	18.34
DUAL		42.95		44.47		43.46
SONOLAN		20.65	20.97	20.42		19.90
TREFLAN		22.51		26.26		22.01
LEXONE		16.14	16.93	16.44		16.05
BASAGRAN		73.12		74.48		72.49
LORSBAN		1.21	1.23	1.25		
COUNTER		1.30	1.28	1.37		
PARAQUAT		40.34		40.61		
ROUNDUP		70.50				
BRONCO		24.79				
BANVEL		47.86		45.12		
2-4D		9.25		7.77		
BROOT						
FURADAN						

		FERTILIZER ANALYSIS			
POUNDS	N	P	K	$/TON	PRICE/ACRE
0	6	18	6	148.5	0.00
200	0	0	60	115.9	11.59
175	18	46	0	222.3	19.45
200	28	0	0	104	10.40
130	82	0	0	222	14.43
65	10	34	0	192	0.00
			APPLICATION/ACRE		4.00
					59.87
	LBS/ACRE	LBS/ACRE	LBS/ACRE		
	200.6	102.6	120		

NAME	ACRES	CASH RENT PRICE	SPRING RENT	FALL RENT	TOTAL
HILL	110	80	4400	4400	8800
SPENCER	40	70	1400	1400	2800
CORNWALL	24	70	840	840	1680
PELL	76	110	4180	4180	8360
KROUT	32	100	1600	1600	3200
MORLAN	18	80	720	720	1440
REINOEHL	200	80	0	16000	16000
BROWN	50	100	2500	2500	5000
	550		15640	31640	47280
				AVG RENT	85.96

AMORTIZATION

AMOUNT	INTEREST	YEARS	PAYMENT
12000.00	0.010	36.00	398.57

	BALANCE	INT RATE	PAYMENT	INTEREST	PRINCIPAL
1	12000.00	0.010	398.57	120.00	278.57
2	11721.43	0.010	398.57	117.21	281.36
3	11440.07	0.010	398.57	114.40	284.17
4	11155.90	0.010	398.57	111.56	287.01
5	10868.89	0.010	398.57	108.69	289.88
6	10579.00	0.010	398.57	105.79	292.78
7	10286.22	0.010	398.57	102.86	295.71
8	9990.51	0.010	398.57	99.91	298.67
9	9691.85	0.010	398.57	96.92	301.65
10	9390.19	0.010	398.57	93.90	304.67
11	9085.52	0.010	398.57	90.86	307.72
12	8777.81	0.010	398.57	87.78	310.79
13	8467.01	0.010	398.57	84.67	313.90
14	8153.11	0.010	398.57	81.53	317.04
15	7836.07	0.010	398.57	78.36	320.21
16	7515.86	0.010	398.57	75.16	323.41
17	7192.45	0.010	398.57	71.92	326.65
18	6865.80	0.010	398.57	68.66	329.91
19	6535.89	0.010	398.57	65.36	333.21
20	6202.67	0.010	398.57	62.03	336.54
21	5866.13	0.010	398.57	58.66	339.91
22	5526.22	0.010	398.57	55.26	343.31
23	5182.91	0.010	398.57	51.83	346.74
24	4836.17	0.010	398.57	48.36	350.21
25	4485.96	0.010	398.57	44.86	353.71
26	4132.24	0.010	398.57	41.32	357.25
27	3774.99	0.010	398.57	37.75	360.82
28	3414.17	0.010	398.57	34.14	364.43
29	3049.74	0.010	398.57	30.50	368.07
30	2681.67	0.010	398.57	26.82	371.76
31	2309.91	0.010	398.57	23.10	375.47
32	1934.44	0.010	398.57	19.34	379.23
33	1555.21	0.010	398.57	15.55	383.02
34	1172.19	0.010	398.57	11.72	386.85
35	785.34	0.010	398.57	7.85	390.72
36	394.63	0.010	398.57	3.95	394.63
37	0.00	0.010	398.57	0.00	398.57

FARM	FIELD	C BASE	SEED C	CORN	BEANS	WHEAT	CONS	TOTAL	FERTILITY				FERTILIIZER RATTES					
BELL		315.6	140	113	175		0	456	P	K	PH	P	P205	18-46-0	0-44-0	K	0-0-60	TOTAL
	1WH			25	0	0		25	26M	230H	6.5	70	132	3304	0	60	100	2500
	2SS		90	0	90	0		180	40H	230H	6.5	70	132	11896	0	60	100	18000
	3PELL		50	22	18		28	118	54H	160M	6.6	90	176	12647	1405	120	200	16000
	4CRAFTAN		0	25	67			92	20L	200M	6.2	90	176	4391	0	90	150	3750
	5CHARLIE			41			0	41	20M	140L	7	90	176	7202	0	120	200	8200
REINHOEL		90.9		0	0	0	0	201										
	6SB		0	23	0			23	28M	150L	6.2	70	132	3040	0	120	200	4600
	7WP		0	20	0			20	14L	140L	7	90	176	3513	0	140	233	4667
	8EH			0	30			30	10VL	70VL	6.4	90	176	0	5270	120	200	6000
	9NS		0	23		0		23	30M	200M	6.2	70	132	3040	0	90	150	3450
	10H			0	45			45	10VL	200M	6.2	90	176	0	7904	60	100	4500
	11AW				8			8	12L	130L	6.4	90	176	0	1405	120	200	1600
	11.5T			12	12			24	12L	160M	6.1	90	176	2108	2108	140	233	5600
	12B			10		0		10	12L	92L	6.7	90	176	1757	0	120	200	2000
	13SF				8		10	18	10VL	144L	6.5	100	197	0	1579	140	233	1867
SPENCER		35.2					0	0										
	14S			35.2	0		3.9	39.1	22M	110L	6.9	70	132	4653	0	120	200	7040
CORNWALL		22.1						0										
	15C			22	0		2.5	24.5	20M	110L	6.9	70	132	2908	0	120	200	4400
KROUT		33					0	0										
	16K			29.7	0		3.3	33	22M	200M	6.1	70	132	3926	0	90	150	4455
G PELL		55.6					6.2	6.2										
	17NH			40	0			40	20M	155M	6.7	70	132	5287	0	90	150	6000
	18EH			16				16	20M	140L	6.7	70	132	2115	0	90	150	2400
	19WH				14			14	20M	150M	6.2	70	132	0	1850	90	150	2100
HOLMES		6.6						0										
	20H			9				9	10VL	110L	6.4	70	132	1190	0	120	200	1800
BROWN		38.1					4.7	4.7										
	21M			37.6	11			48.6	?	?	6.2	90	176	6605	1932	120	200	9720
HILL		93					10.4	10.4										
	22BH			65	0			65	8VL	180M	6.4	90	176	11417	0	90	150	9750
	23CL			0	30				14L	164M	5.6	90	176	0	5270	90	150	4500
MORLAN		0		0														
	29S			18					?	?		90	176	3162	0	90	150	2700
SMITH																		
	30AH			0	40				59H	800VH	5.8	125	252	0	0	145	242	0
	31SRR			0	52				28M	670VH	6.4	125	252	0	0	145	242	0
	32ERR			52					38H	520VH	6.4	125	252	13090	0	145	242	12584
	33EH			72	0				50H	320VH	6.9	125	252	18125	0	145	242	17424
	34WH			13	72				51VH	300H	6.3	125	150	1950	10800	145	150	12750
	35AMP			18					73VH	450VH	5.2	125	125	2250	0	145	150	2700
		3	140	628.5	497	0	69	1334						---				---
														129574	39523			183056

	TONS			
	19.76	155	0-44-0	3063
768.5	64.79	222	18-46-0	14383
768.5	91.53	116	K	10617
768.5	26.9	189	STARTER	5084
768.5	76.85	104	N	7992
768.5	49.95	222	28%	11089

				52229

FARM LAND INVESTMENT

400 ACRES COST	400000		
TILLABLE ACRES	250		
30 % DOWN PAYMENT	120000		
AMOUNT FINANCED	280000		
AMORTIZED PAYMENT	35161.18	0.11 INTEREST	20 YEARS
PROP. TAXES PER YEAR	1750	---	----
INTEREST FIRST YEAR	30800		
INCOME PER YEAR	31250	125 $/ACRE LAND RENT	
TAX LOSS FIRST YEAR	1300	390 LESS TAXES	
YEARLY NET CAPITAL INVESTMENT	5271.1783		
RETURN ON INVESTMENT WITH NO INFLATION	0.074725		

1984 DETASSELING

DATES

	SOC. SEC. NO.	ADDRESS	7-24	7-25	7-26	7-27	7-28	7-31	8-2	8-3	TOTAL	$/HR	WAGES	AFTER TAX
LISA ALBRIGHT	313-88-3530	RR 17 BOX 441C	5.5	3.5	7.5	8.5	7	7	8	8	55	3.7	203.5	189.8655
TODD ALLEN		RR 14 BOX 1126	6.5	3.5	7.5	9.5	7		8.5	8	49.5	4	198	184.734
TROY ALLEN		RR 14 BOX 1126	6.5	3.5	7.5	8.5	7	7	8.5	8	56.5	4	226	210.858
MISSY ARCHER		104 W. KRUZAN	5.5	3.5	7.5	8.5	7	7	8	8	55	3.7	203.5	189.8655
TOBY ARCHER	310-92-6491	104 W. KRUZAN	5.5	3.5	7.5	8.5	7	7	8.5	8	55.5	3.7	205.35	191.59155
ROB CARTER	308-86-7459	275 N MURPHY AVE	6.5		5.5						12	3.7	44.4	41.4252
CATHY COLLINS								5			5	3.7	18.5	17.2605
BRAD CRAMER	317-84-7730	RR 13 BOX 307	6.5	3.5	7.5	8.5	7	7	8.5	8	56.5	4	226	210.858
DENNY FARKAS	325-62-0502	512 RINGO DRIVE		3.5	7.5	8.5		7	5		31.5	3.7	116.55	108.74115
TIM FARKAS		512 RINGO DRIVE		3.5	7.5	8.5		7	5		31.5	3.7	116.55	108.74115
BRIAN FOOKES	263-69-8337	275 N. VANDALIA	5.5	3.5		8.5	7	7	8.5		40	4	160	149.28
JOE FOOKES	263-69-9279	275 N. VANDALIA	5.5	3.5			7	7	8.5		31.5	4	126	117.558
STEVE FRYE	349-58-8252	RR1 CARBON				8.5	7	7	8.5	8	39	3.7	144.3	134.6319
AGNES GURCHIEK	315-74-3519	RR13 BOX 303	3	3.5		8.5	7	7	0	8	37	3.7	136.9	127.7277
TOM GURCHIEK	316-38-9198	RR13 BOX 303	3	3.5		8.5	7	7	8.5	8	45.5	3.7	168.35	157.07055
BRIAN HAMILTON	305-86-0368	309 E RIDGE						4.5			4.5	3.7	16.65	15.53445
LORIE HAMILTON	305-86-0367	309 E RIDGE						4.5			4.5	3.7	16.65	15.53445
TONY HORSLEY	317-88-0044	RR 13 BOX 380						5		8	13	3.7	48.1	44.8773
GIB LANHAM	303-78-0158	RR 11 BOX 227	4.5	3.5		5		7	5	8	33	4	132	123.156
DAWN LEWICKI	317-84-0377	RR 15 BOX 250	5.5	3.5	7.5	8.5		7			32	3.7	118.4	110.4672
ROB LITZ	306-72-1080	216 W RIDGE ST	5.5	3.5	7.5	8.5					25	3.7	92.5	86.3025
JOE MACCARONE	222-50-3178	RR 1 BOX 75-B CARBON				8.5	7	7	8.5	8	39	3.7	144.3	134.6319
MIKE MACCARONE	311-92-7308	RR 1 BOX 75-B CARBON				8.5	7	7	8.5	8	39	3.7	144.3	134.6319
JIM MCMAHON	541-80-0510	RR 13 BOX 344A				8.5			5	8	21.5	3.7	79.55	74.22015
STEVE MCHARGUE	451-33-1530	RR 1 BOX 177 CARBON	6.5	3.5	7.5	8.5	7	7	8.5	8	56.5	4	226	210.858
CHAD MEEKS	315-86-2150	RR 13 BOX 342				8.5	7	5	5	8	33.5	4	134	125.022
JANICE MOSTELLER	311-54-3390	RR 13 BOX 180	3								3	3.7	11.1	10.3563
RICK MUSTARD	304-68-1284	1312 WILLOW DR		3.5		8		7	8.5	8	35	3.7	129.5	120.8235
WAYNE PELL				3.5		8.5	7				19	3.7	70.3	65.5899
CHERYL PICKETT	306-64-7655	1312 WILLOW DR		3.5		8		7	8	8	34.5	3.7	127.65	119.09745
MITCH QUICK	316-66-5915	601 W CENT APT F4						7	8.5	8	23.5	3.7	86.95	81.12435
PETER RAINWATER			3	3.5		8.5	7	7	8.5	8	45.5	4	182	169.806
MIKE REEVES	310-76-3048	RR 13 BOX 206	6.5	3.5	7.5	8.5	7	7	8.5	8	56.5	4	226	210.858
JAYNE REINOEHL	303-82-0040	RR 13 BOX 333	5.5	3.5	7.5	8.5	7	7	8	8	55	4	220	205.26
JOEL REINOEHL	306-60-6017	RR 13 BOX 164	6.5	2.5	7.5	8.5	4.5	7	8.5	8	53	4	212	197.796
CINDY SIMMONS	310-90-8056	RR 13 BOX 316						5	8.5	8	21.5	3.7	79.55	74.22015
JAN STEVENSON	304-74-0947	RR 13 BOX 479	5.5	3.5		8.5		7	8.5	2	35	3.7	129.5	120.8235
DANNY SWIM		RR 13 BOX 223	5.5	3.5	7.5	8.5				0	25	3.7	92.5	86.3025
SHANNON THOMAS		RR 11 BOX 116			7.5	8.5	7	7	8	8	46	3.7	170.2	158.7966
MARK TRUSTY	315-84-4799	RR 13 BOX 315							3.5	8	11.5	3.7	42.55	39.69915
LENNY WHEELER	316-74-7452	RR 1 CARBON		3.5		8.5	7	7	5.75	8	39.75	3.7	147.075	137.22098
LYN WHEELER	303-76-0749	RR11 BOX 227				8		7	8		23	3.7	85.1	79.3983
CLAUDE WRIGHT	316-30-6215	T	4.4								4.4	3.7	16.28	
										GRAND	1434		5474.605	
												ACRES	65	
												COST/ACRE	84.224692	

1984 SUMMARY

	LABOR	REPAIRS	UTILITY	FUEL	RENT	SEED	FERT	HERB	TAXES	INS	INTEREST	PRINC
JANUARY	1003.08	453.45	145.55	121.6	18000				157.34	254.5	18582.59	1499.41
FEBRUARY	175	782.97	1223.77	2323.02	0		500				11296.76	4309.02
MARCH	1774	542.8	536.99	11.13	5605		630			1770.1	26438.78	6331.59
APRIL	2743	5534.96	551.7	3672.25	5225	877.66	10220.4	22873.5		418.41		8151.54
MAY	3138	3277.45	576.82		4040	148	17760.6		5477.51			2167.51
JUNE	3233	790.53	141.49			23421	8963.42		5851.7		0	2322.55
JULY	2988	2345.14	227			6833.87	10751.85		19			1393.87
AUGUST	2607.5	5484.22	325.97	2500	207		6598.68	2300		117.2		16751.78
SEPTEMBER	2083	6575.18	123.24					1266.5		461.04		11297.6
OCTOBER	4538.5	1692.42	131.97		1600							425.77
NOVEMBER	4982.5	521.33	1217.34	5765.59	15975							39838.27
	29265.58	28000.45	5201.84	14393.59	50652	31280.53	55424.95	26440	11505.55	3021.25	56318.13	94488.91

STATEMENT OF FINANCIAL CONDITION FOR DIRT UNLIMITED
AS OF 4-3-85

ASSETS

DESCRIPTION	AMOUNT BEFORE LOAN CLOSES	ADJUST. AFTER LOAN CLOSES
CASH	12000	1000
$ VALUE INSURANCE		
MKTBLE SECURITIES		
ACCTS RECEIVABLE	58000	8000
FEED&SEED PRODUCT		
PRODUCT FOR SALE	260000	
CASH IN CROPS	0	32780
LIVESTOCK	0	2940
TOTAL CURRENT	330000	44720
BREEDING LIVESTCK		
STOCKS IN COOPS	9725	9725
	24000	19200
AUTO&TRUCKS	32000	32000
MACH&EQUIP	115000	139000
OPEN END RESERVE		
TOT. INTERMEDIATE	180725	199925
MARKET VALUE FARM		
TO BE MORTGAGED	0	0
160 $1400	224000	238000
160 $1300	168000	184000
110 $1200	134000	147000
120 $1100	111000	127000
51 $1100	48100	55500
SALES CONTRACTS		
TOTAL FIXED	685100	751500
TOTAL ASSETS	1195825	996145
INTANGIBLE ASSETS		

IT IS A FEDERAL OFFENSE TO KNOWLINGLY MAKE A FALSE STATEMENT FOR THE PURPOSE OF INDUCING IN ANY WAY THE ACTION OF A FINANCIAL INSTITUTION.

SIGNATURE----------

LIABILITIES

TO WHOM PAYABLE, SECURITY GIVEN DATE INCURRED	INT. RATE OR TERMS	AMOUNT BEFORE LOAN CLOSES	ADJUST.AFTER LOAN CLOSED	ANNUAL PAYMENT
NOTES &CONTRACTS DUE WITHIN 1 YR				
PCA 84 OPERATING	0.1325	290000	101000	
			0	
			0	
			0	
			0	
OPEN ACCOUNTS				
1984 OPER BORROW	260000	33000		23000
MECH./MATL LIENS		0		
DELINQUENT TAXES				
TOTAL CURRENT		323000	101000	
UNMATURED DEBTS DUE IN 1 TO 7 YEARS FROM ABOVE DATE				
FIRST BANK	0.15	0	13000	7500
PCA	0.1375	0	81000	30000
FAST FREDDY	0.06	18000	23062	5200
OTHER	0.11	0	7000	1826
JOHN DEERE	0.04	34000	38120	5934
TOTAL INTERMEDIATE		52000	162182	
UNMATURED DEBT DUE OVER 7 YEARS				
FLB	0.12	167000	0	0
FLB	0.06	21161	21161	1896
SHARKIES	0.12	154854	154854	20081
MUTUAL FEDERAL	0.15	35864	35864	5999
SCAM BANK	0.1	54440	54440	8414
NEW LOAN	0.135	0	0	17459
TOTAL LONG-TERM & DEBT SERVICE		433319	266319	127309
TOTAL LIABILITIES		808319	529501	
NET WORTH		387506	466644	79138
CONTINGENT LIABILITIES				NET WORTH CHANGE

0.68	0.53
DEBT/ASSET BEFORE	DEBT/ASSET AFTER

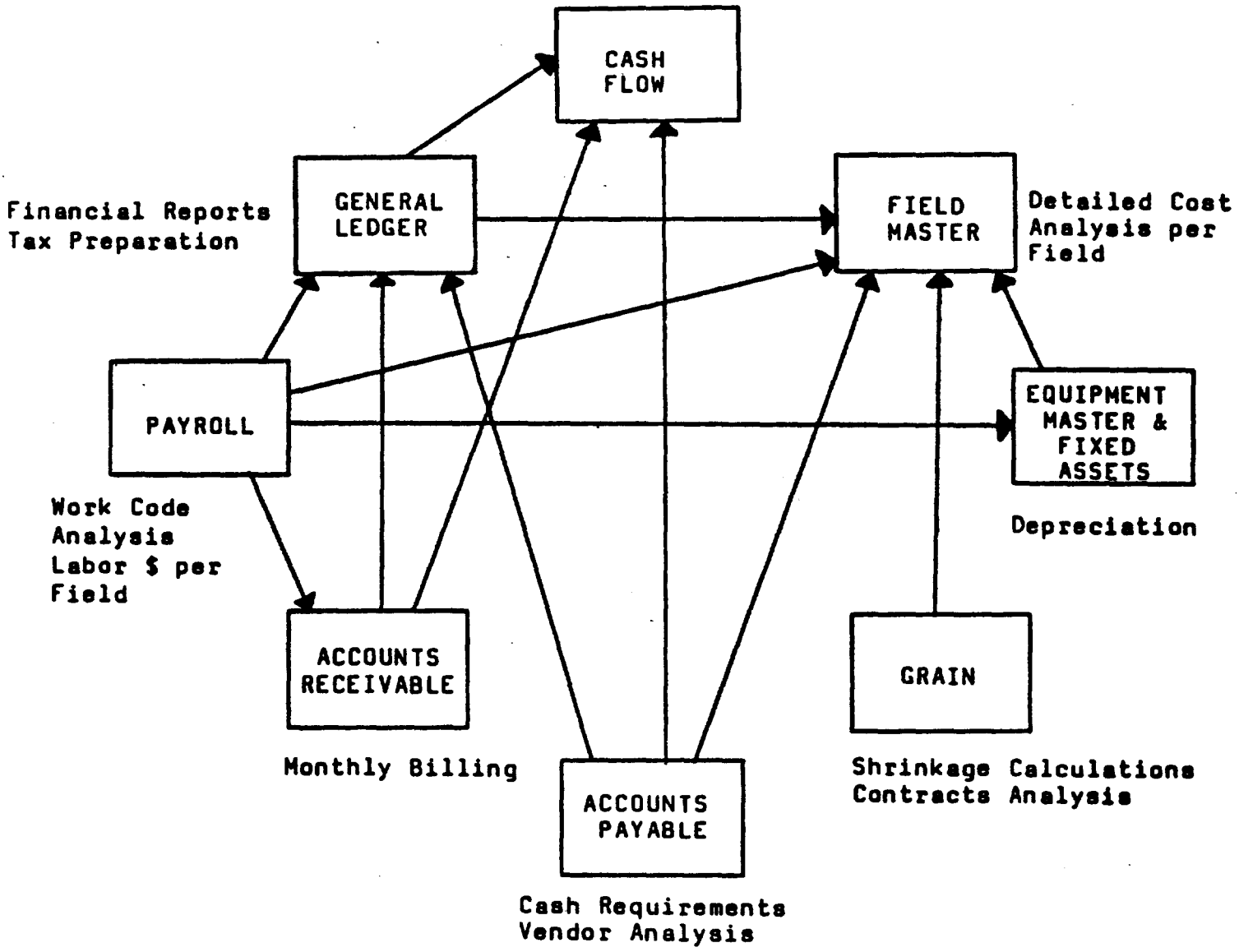
CASH FLOW

	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	
LABOR	2200	2200	3000	3500	3500	3500	10000	3500	3500	3500	2000	2000	42400
UTILITIES	350	300	300	250	200	200	200	200	250	1500	1500	250	5500
FUEL	6500	1500	1500	2000	1500	1100	500	1500	1500	2500	10500	1000	31600
REPAIRS	1500	550	5000	3000	800	2300	5000	5000	1500	1000	500	500	26650
FERTILIZER	10000	0	5000	10000	10000	7000	5000						47000
SEED					24840								24840
HERBICIDES	21700												21700
INSECTICIDES	3000												3000
CASH RENT	400	400	14000		1200			1200			14700	17750	49650
PAYMENTS	8400	11230	230	1030	27666	2230	230	230	230	230	1030	28500	81236
TAXES	4500			3000	0	4020				1500			13020
LICENSE&INS	500	2000	700	500			120	450					4270
MISC.&SEED P	25500			1000					1000		16515		44015
TOTAL	84550	18180	29730	24280	69706	20350	21050	12080	7980	10230	46745	50000	394881
INCOME	18000	22247		11500	61000				2000	71360	132760	128896	
CREDIT LINE	141550	137483	167213	179993	188699	209049	230099	242179	248159	187029	101014	22118	
INTEREST	1710.4	1661.3	2020.5	2174.9	2280.1	2526	2780.4	2926.3	2998.6	2259.9	1220.6	267.26	24826.2

APPENDIX B
David and Mary Howell Sample Reports

Honey Creek Information Systems, Inc.
R. R. 2 • BOX 174 • MIDDLETOWN, INDIANA 47356 • (317) 759-7432

INTEGRATED DATA FLOW DIAGRAM



```
1*********1*********2*********3*********4*********5*********6*********7*********8
DAVID & MARY HOWELL FARMS                    MENU ITEM? XXXXXX 1
*                                                                              *
*   ENTER HOWELL'S PASSWORD.                                                   *
*                                                                              *
5                                                                              5
*                                                                              *
*                    1. PAYROLL                                                *
*                                                                              *
*                    2. GENERAL LEDGER                                         *
10                                                                             10
*                    3. FIELD                                                  *
*                                                                              *
*                    4. GRAIN                                                  *
*                                                                              *
15                   5. EQUIPMENT                                              15
*                                                                              *
*                    6. ACCOUNTS RECEIVABLE                                    *
*                                                                              *
*                    7. ACCOUNTS PAYABLE                                       *
20                                                                             20
1*********1*********2*********3*********4*********5*********6*********7*********8
```

POWELL FARMS MASTER MENU