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COMPUTER DECISION AIDS



USER'S GUIDE FOR **FINFLO**

A Computerized Monthly Cash Flow
and Financial Budgeting Procedure

By Kenneth H. Thomas, Charles H. Cuykendall
and Norlin A. Hein



UNIVERSITY OF MINNESOTA

AGRICULTURAL EXTENSION SERVICE

Institute of Agriculture
St. Paul, Minnesota 55101

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Dear Mr. Farm Manager,

One of the basic questions you must continually ask yourself as you attempt to compete in today's agriculture is, How can I best get to where I want to be from where I am? FINFLO, a computerized cash flow and financial summary budgeting procedure, is designed to help you take a first step toward answering this question. Once you have the budgeting results from the computer, you should then decide whether the projection for the coming year permits you to move toward your longer term objectives for your business. (If you are making a major shift in your operation, then you may wish to first use FINTRAN (CDA-203), a computerized three-year transition budgeting procedure.)

This User's Guide is designed to assist you in doing an accurate job of gathering the necessary information to be analyzed and in making a correct interpretation of the analysis results printed out from the computer. A brief index to major portions of the guide follows:

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There are two other major questions the manager must ask about his business: Where Am I? and Where Do I Want To Be? There are similar computerized analysis procedures available for answering these latter two questions:

- CDA-201-FINAN - A Computerized Annual Farm Financial Analysis Procedure
- CDA-202-FINLRB - A Computerized Long-Range Budgeting Procedure

We hope this kit of computerized tools proves useful to you as you attempt to improve your competitive position in today's agriculture.

With best regards,

The Authors

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

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Introduction^{1/}

FINFLO is a computerized budgeting procedure for use in projecting monthly cash flows and in developing an annual financial summary for the farm business for the coming business year.

This procedure permits you to project the monthly cash inflows and outflows for a given year's business. The resultant computer printout indicates how much additional money will need to be borrowed or how much principal and interest can be paid back to the major lender each month. It, in turn, indicates the accumulated borrowings and accrued interest due the major lender. The program also provides projected profit and loss and net worth statements, as well as various measures of profitability, debt servicing and financial solvency.

Since the computers are little more than high-speed calculating machines, you can make wrong decisions based on the information from the computer printouts if: (1) the computer is not given correct and accurate information to work with and (2) the meaning of the figures on the computer printout are not interpreted correctly.

Therefore, the purpose of this User's Guide is to help you complete the FINFLO computer input form accurately and to interpret the printout information from the computer correctly. Part I provides a detailed set of instructions for gathering and inputting the necessary information properly. Part II interprets the results of the computer printout in terms of "how was it computed?" and "what does it really mean?".

^{1/} The authors, Kenneth H. Thomas and Charles H. Cuykendall, are Extension Economists and Norlin A. Hein, research assistant, at the University of Minnesota. They wish to thank their fellow Extension Economists, Paul R. Hasbargen, Earl I. Fuller, and Richard O. Hawkins and Area Extension Agents in Farm Management, Lawrence M. Christenson, Mervin L. Freeman and William S. Penning, for their assistance in the development of the FINFLO computer program and this User's Guide.

Part I

Instructions for Completing FINFLO Input Form - Computer Decision Aid #204

A Brief Look at the Input Form

To use the FINFLO computer program you, the farm manager, must provide certain financial information about your business. Input form #204 is designed so that the required information can be gathered in an orderly fashion. The form is divided into three parts:

1. Cash inflow items (page 2)
2. Cash outflow items (page 3)
3. Capital assets, liabilities and other information (page 4)

A supplementary form (Form 204S) is available for use as an aid in gathering much of this information. It should prove helpful in thinking through the production process of the coming year and in obtaining the relevant financial information. It will be particularly useful when major changes are planned for the coming year's business.

Step #1 - Your Name, Address and Business Year (page 1)

On page 1, you should enter your name and mailing address. Also, indicate the time period for which the analysis is being made, including the beginning month and year. That is, if you want your analysis to run from January to December, then state, "For business year beginning January 19 __." Once you have chosen the time period then all of your cash flow, net worth, and other input information should coincide with this time period.

Step #2 - Estimating Cash Inflows and Allocating Them (page 2)

The second step in completing the FINFLO input form is to identify the sources of cash inflows for the coming year's business, project the yearly totals for each item and then indicate the proportion that will likely be received in each month.

Listing and coding cash inflow items; estimating yearly totals.

You should first make a list of cash flow sources for the coming year. In developing this list, a review of your past year's account records and the code list of items at the bottom of page 2 of the input form should be helpful.

Once the list has been developed, then each inflow item must be given an item code number, using the item code numbers shown on page 2 of the input form. In the example, we see that wheat, corn and market hogs are three potential sources of income for the coming year. The item codes for these are 11, 15 and 31, respectively. The names of each of these income items are stored in the computer under their respective code numbers. In the detailed cash flow statement (Section II of the output) the computer will print out the income item names in the same order as the numeric order of the codes.

CASH INFLOW ITEMS	ITEM Code	TOTAL coming year
<i>Corn</i>	11	5000 ,
<i>Wheat</i>	15	4000 ,
<i>Market Hogs</i>	31	16000 ,
		,
		,
		,
		,
		,
		,
		,
		,
Loans, others - operating exp.	66	,
Loans, others - capital purchases	67	,
Nonfarm income	78	,

Nonfarm income and loans, other sources for operating and capital purchases were inserted permanently on the input form to insure proper accounting. The nonfarm income item should reflect gross earnings before taxes. If you wish to be more specific, you can use other item code numbers to more accurately reflect the actual nonfarm income source (see item codes 71 to 79). You can input more than one nonfarm code if you wish to identify more than one source.

The cash flow procedure contained in this program focuses upon accumulated borrowings from the major lender. Therefore, sources of funds from other lenders are the only borrowed funds that need to be identified and accounted for at this juncture. The amount of money borrowed from others for operating and capital purposes must be reported separately. Include real estate capital loans from major lender in line 67.

Next, you will need to estimate the expected total inflows for the coming year for each of the items. If major changes in the business or in prices are projected for this coming year, then some careful projecting needs to be done. Supplementary form 204S should prove particularly helpful in those situations.

Monthly Allocation of Yearly Totals

Having identified the cash inflow items and projected the expected yearly total for the coming business year, the final task is the monthly allocation of this income. That is, when is the income expected? To do this you must first check the monthly headings to be sure that the month in the first column corresponds to the first month of the business year noted on page 1. The form is set up assuming that the business year for most farm businesses begins with January. If you are projecting on a different business year basis and so

indicated this in Step #1, then you must cross out the printed monthly headings and pencil in the correct monthly sequence, beginning with the first month in your business year in the January column. This is necessary since the computer will print out your cash flow in a monthly sequence starting with the month indicated in Step #1. Therefore, your income and expenses must be allocated in that same sequence.

MONTHLY ALLOCATION OF INFLOWS

CASH IN FLOW ITEMS	(Use numbers that allocate cash inflows in desired proportion)											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
<i>Corn</i>					2					1	1	
<i>Wheat</i>								1				1
<i>Market Hogs</i>		45		35			55		25			
Loans, others - operating exp.												
Loans, others - capital purchases												
Nonfarm income												

Next, you must indicate for each inflow item the months in which you expect the inflows to occur and the proportion of the total inflow you expect will be received in those months. Any series of numbers that allocates the income in the desired proportions can be used. For example, note above that wheat is to be sold in August and December. The (1) in each of these two months indicates that equal amounts are to be sold in each period. With corn, the farmer expected to sell 1/4 of the crop in October and November and 1/2 in May. Therefore, a weighting of 1, 1, 2, respectively, was used. Hog income was allocated using actual dollar amounts, expressed in \$100 units. Numbers need to be placed only in those months in which inflows are expected to occur.

Step #3 - Estimating and Allocating Cash Outflow Items (page 3)

Next, you will need to consider the expected outflow of cash from the business during the coming year. Again, you must list and code the outflow items, project the expected total yearly outflow, and use a series of numbers to allocate the outflows in desired proportions on a monthly basis.

To develop a list of expense items, you should review your past year's accounts and the item code list on page 2 of the input form. A series of expense lines have already been labeled in the input form on page 3 to facilitate the accounting process. More specific line codes can be used for such items as capital nonreal estate purchases (see code list).

MONTHLY ALLOCA'

CASH OUTFLOW ITEMS	ITEM Code	TOTAL coming year	(Use numbers that allocate cas					
			Jan	Feb	Mar	Apr	May	June
<i>Seed</i>	101	1500	,	,	,	,	,	,
<i>Fertilizer</i>	102	3000	,	,	,	,	,	,
<i>Feed</i>	119	3500	,	,	,	,	,	,
		,	,	,	,	,	,	,
		,	,	,	,	,	,	,
		,	,	,	,	,	,	,
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		,	,	,	,	,	,	,
		,	,	,	,	,	,	,
		,	,	,	,	,	,	,
Interest paid - other lenders	160	,	,	,	,	,	,	,
Capital real estate purchases	180	,	,	,	,	,	,	,
Capital nonreal estate purchases	181	,	,	,	,	,	,	,
Principal payments to others	184	,	,	,	,	,	,	,
Family living	190	,	,	,	,	,	,	,
Income tax & social security	191	,	,	,	,	,	,	,
Other nonfarm expenses	192	,	,	,	,	,	,	,

The expected yearly total outflows for the coming year should then be estimated for each outflow item. The monthly allocation process should proceed in the same fashion as in Step #2. Remember, if you are operating on a business year other than one beginning January 1, you will need to change the month headings so that the beginning month of your business year appears in the January column.

Step #4 - Deciding on the Desired Analysis Option; Completing Page 4

The final step in completing the FINFLO input form is the completion of page 4. To do this, the manager must first decide how detailed a financial analysis he wants of this coming year's business.

There are two basic analysis options open to you. The first option provides only a monthly cash flow statement. The second option provides a monthly cash flow statement as well as projected profit and loss and net worth statements and selected financial measures. The choice of options, obviously, will affect the size of the inputting task. The more complex the analysis, the more detailed the input task.

Once you have decided upon the desired analysis options then you need to fill in only that portion of the input form on page 4.

Input for Analysis Option #1 - Monthly Cash Flow Statement Only

In order for the computer to provide you with just a monthly cash flow statement, seven pieces of information are required in addition to the projected inflows and outflows just discussed (see below).

<u>For Analysis Option #1: For monthly cash flow only</u>	
200 Beginning cash and checking balance	_____ ,
Desired monthly cash and checking balance . .	_____ ,
Beginning liabilities, other lenders.	_____ ,
<u>Major Lender:</u>	
Beginning liabilities, current.	_____ ,
Beginning liabilities, intermediate	_____ ,
Accumulated interest due, beginning	_____ ,
Average interest rate old and new debt.	=====

The beginning cash and checking account balance for this coming year can be derived from the ending financial or net worth statement or estimated from previous experience or records. The desired monthly cash and checking balance is a projected amount that you and/or your creditors would like you to have as a minimum cash plus checking balance. Also, indicate the amount of liabilities owed other lenders.

Four additional items, each concerning the major lender, are needed to complete option #1. The beginning liabilities, current, can be taken from your financial statement and should represent the portion of major lender debt that is due during the coming year such as feeder loans, the portion of intermediate debt due in 12 months, etc. The beginning liabilities, intermediate, should include liabilities to the major lender that are not due and payable during the coming year. The accumulated interest due the major lender at the beginning of the year as well as the average interest rate on existing and new major lender debt that would be incurred during the year must be inputed.

Input for Analysis Option #2 - Detailed Cash Flow, Financial Statements and Summary

For the computer to provide various projected financial statements and measures as well as a detailed monthly cash flow statement requires several more pieces of information. A discussion of how to input these items follows.

Gathering Information Regarding Capital Assets and Related Items.

The first group of additional input items needed for analysis option #2 involves inventories, purchases, depreciation and sales of various farm capital items, as listed below.

First, a note on the categorization of new and existing buildings and improvements. If new buildings and improvements have been or are being built (or made) and financed with intermediate term financing, then they should be put in the new category so that the assets and liabilities are in the same financing category. If long-term financing is used, their separation is unnecessary -- include them with existing buildings.

<u>Capital Items: Inventories, Purchases, Sales</u>					
	<u>Breed Stock</u>	<u>Mach & Equip</u>	<u>New Bldg & Impr.</u>	<u>Exist Bldg & Impr.</u>	<u>Land</u>
201 Beginning inventory.	_____	_____	_____	_____	_____
202 Purchases.	_____	_____	_____	_____	_____
203 Depreciation	_____	_____	_____	_____	_____
204 Sales	_____	_____	_____	_____	_____
Ending Inventory.	_____				

- Line 201: Beginning inventories for the various items can be taken from the ending financial statement for the past year, unless some re-evaluation is deemed desirable. Also, be sure the date of the beginning inventory corresponds with the business year stated in Step #1.
- Line 202: Capital purchases were reported earlier in Step #3. However, they did not have to be identified in the fashion required for the financial statement that is printed in the output. Therefore, capital purchases made should be inputted on line 202 according to the type of asset categories listed.
- Line 203: Depreciation on existing capital assets as well as purchases made during the year should be indicated for each of the categories. The depreciation on purchased breeding livestock will be used only for income tax purposes.
- Line 204: Sales should check with the total capital asset sales reported in Step #2. However, this step is necessary to allocate sales among asset groups to complete the financial statement. The ending inventory (value at the end of the coming year being projected) for breeding stock should also be estimated.

Gathering Other Asset Information

The next information needed in the detailed analysis involves a listing of beginning and ending inventories of all other assets owned by the parties involved in the business. The beginning amount should coincide with this past year's ending financial statement; the ending figure should be a projected ending inventory for the coming business year. The following asset categories include both farm and nonfarm items:

<u>Other Asset Information</u>		
	<u>Begin</u>	<u>End</u>
205 Market livestock.	_____	_____
Crops for sale, feed.	_____	_____
Notes and accounts receivable	_____	_____
206 Cash value life insurance	_____	_____
Savings and securities.	_____	_____
Other current assets	_____	_____
207 Nonfarm equipment, other	_____	_____
Nonfarm real estate.	_____	_____

Gathering Information Regarding Liabilities and Debt Repayment Schedules

To complete the net worth statement and debt repayment analysis of the financial summary requires information on liabilities and a schedule of debt payments. Since this computer program balances monthly cash inflows and outflows with funds paid to or borrowed from the major lender, details on how debts owed other lenders as well as the major lender are to be serviced need to be specified. The form below indicates the items of information that will be necessary.

But first, two comments on the major lender:

1. The major lender should normally be thought of as the lender who supplies the major portion of the operating and intermediate asset-type credit for your business.

2. If by chance this major lender is also financing some of your long-term debt, then payments and balances on that long-term portion of the debt should be included in the other lender section. (The analysis focuses on servicing major lender operating and intermediate type debt.)

		<u>Liabilities Information</u>		
<u>Other Lenders:</u>		<u>Current</u>	<u>Intermediate</u>	<u>Long-Term</u>
208	Beginning liabilities	_____	_____	_____
	New loans	_____	_____	_____
209	Principal payments, coming year	_____		
	Principal payments, following year	_____	_____	_____
	Accounts payable	Begin _____	End _____	
<u>Major Lender:</u>				
210	Beginning liabilities	_____	_____	
	Scheduled principal payment, coming year	_____		
	Accumulated interest due, beginning of year	_____		
	Average interest rate on old and new debt.	_____		
	Desired % repay of end of year inter. debt	_____		

Other Lender Debts and Schedule of Payments

Information required regarding other lenders include a listing of beginning liabilities, new loans incurred during the year, a schedule of principal payments to be made during the coming and following year and beginning and ending accounts payable.

Line 208: Beginning liabilities should reflect the amount of debts owed other lenders at the end of the past year's business. The portion of intermediate and long-term debt that is due during the coming year should be reported as a current debt, and the other debt categories reduced accordingly. New loans from other lenders should equal the amount reported in Step #2. Here, again, it

is a matter of allocating the total of new loans into current, intermediate and long-term categories. Special Note: If a portion of a new intermediate or long-term loan is payable during the coming year, then it should be included in the current portion, the other loan categories being reduced accordingly.

Line 209: Principal payments, coming year, should include the amount of beginning liabilities plus the portion of new loans that are due during the year. (See special note on new loans under Line 208, above.) Principal payments, following year, should include that portion of current debt remaining to be paid at the end of the coming year (current portion of beginning liabilities plus new current loans less principal payments coming year) as well as that portion of intermediate and long-term debts that are scheduled for payment during the following year. Accounts payable at the beginning of the coming year should be taken from the past year's financial statement. Payables at the end of the coming year will require a projection as to how open accounts will be handled, financed, or repaid during the coming year.

Major Lender Debts and Schedule of Repayments

Information required regarding the handling of major lender debt includes a listing of beginning liabilities, scheduled payments due during the coming year, accumulated interest due at the beginning of the year, the average interest rate on old and new borrowings and the desired percentage rate of repayment of end of year intermediate debt. The details for gathering this information follows:

Line 210: Beginning liabilities must be divided between current and intermediate portions. That portion of the intermediate debt due during the coming year should be included as a current liability. Remember, if the major lender is also financing long-term debt, then payments and balances on that portion of the debt should be handled in the Other Lender section.

The scheduled principal payment, coming year, should reflect the amount of current debt that is scheduled for payment during the coming year -- normally the full amount of beginning current liabilities, plus payments due on any new capital purchases made during the year. The accumulated interest due, beginning of coming year, represents the amount of interest that was payable at the end of this past year's business to the major lender. The interest rate on new and old debt should represent the estimated average interest rate (in percent) on short- and intermediate-term debt outstanding to the major lender during the coming year. The desired percent repayment of end of year intermediate debt is an estimate of the portion of accumulated or carryover intermediate-term debt at the end of the coming year that you or your credit agency would want repaid during the following year. For example, if the balance is due in 5 years, then 20% would be the portion due the following year.

Gathering Other Business and Family Information

To complete the financial summary analysis and to calculate the projected income taxes on the coming year's business requires several additional items of information as outlined on lines 211 and 212 below.

<u>Other Business and Family Information</u>	
211	Value operator labor and management _____,
	Beginning cash and checking balance _____,
	Desired monthly cash, checking balance _____,
	Net nonfarm income _____
212	Cost of feeder stock sold _____,
	Net taxable gains, schedule D _____,
	Tax exemption and deductions _____,
	Number of families involved _____,
	Investment credit _____,
	Taxable nonfarm income _____

Line 211: The value of operator's labor and management should reflect what the operator(s) would expect to receive in wages for doing a similar managerial job in a nonfarm business. The beginning cash and checking balance is the amount listed in the financial statement at the end of the past business year. The desired monthly cash and checking balance is the checking and cash balance that the manager desires to have on hand at the beginning of each month. Net nonfarm income is the income you expect to receive from nonfarm jobs or businesses after paying all related expenses except income tax and social security.

Line 212: Cost of feeder stock sold should represent the original purchase price of any feeder stock to be sold during the coming year. This amount is needed for tax purposes and does not represent double counting in those instances where you have a feeder livestock purchase entered under outflows on page 3 of the input form. The net taxable gains should represent the actual amount of capital sales that is taxable. That is, items such as breeding stock which are taxable at a 50% rate should be inserted at 50% of the total sales value.

The dollar amount of tax exemptions and deductions should reflect the number and size of families included as part of the business in question. (Do not consider landlords.) The number of families or taxable units involved in the business should be noted. The total net amount of investment credit allowable on capital purchases and carry overs should be specified. Taxable nonfarm income, should be the total of wages and other income received less allowable business expense for tax purposes. This total should be greater than the net nonfarm income amount entered in 211 by the amount of any expenses that cannot be deducted when calculating taxes.

Total monthly farm income is determined by the computer first proportioning the annual total for each farm income item (code numbers 11 through 64) among each of the 12 months. The monthly total of all of these income items is then calculated and printed out. Nonfarm income is calculated in the same way and includes code items 71 to 79.

Monthly amounts of money borrowed from sources other than the major lender (loans, others - code items 66 and 67) and money from savings and life insurance (code 69) are handled in a similar fashion.

To arrive at the total cash available, the manager must also know how much money had to be borrowed each month from the major lender. This amount, Loans, Major, is determined by the computer in a fairly complex manner. This procedure will be easier to follow once the cash outflow items have been discussed.

The cash farm expenses include expense code items 101 through 158; similarly, non-farm expenses are from code item 192. Each of these items have monthly totals determined in the same fashion as farm and nonfarm income (see above). In calculating total cash used, the program also adds the monthly allocation of interest paid to other lenders (code item 160), farm capital purchases (code items 173 to 181), nonfarm capital purchases (codes 194 to 196), principal payments to other lenders (code items 184 to 187), family living and income tax and social security (code items 190 and 191), and the desired ending cash balance which was inputted at line 200 for analysis option #1 and at line 211 for analysis option #2.

To determine the total cash used also requires information on interest and principal payments made to the major lender.

To arrive at these interest and principal payment totals as well as the new loans needed from the major lender (see above discussion of inflow items) the computer makes the following series of calculations:

- #1. It totals all of the cash inflow items for the month, except new loans from the major lender.
- #2. It then totals all of the outflow items, except the principal and interest payments to the major lender.
- #3. It then calculates the balance between these two totals (totals #1 - #2).

This resultant balance (at #3) can take three forms: (1) the balance can be negative; (2) the balance can be positive but not larger than accrued interest charges; (3) the balance can be positive by an amount greater than accrued interest charges. The way the computer handles each of these balance situations and its resultant impact upon loan balances and principal and interest payments to the major lender is detailed below.

Situation #1 - The balance is negative (outflows exceed inflows)

This balance situation means that no principal or interest payments can be made to the major lender. In fact, new loans from the major lender will have to be made to the extent of the negative balance. This new loan amount would show on the Loans, Major, line of

the cash flow summary (see above). The principal (PRINC MAJOR) and interest (INTRST MAJOR) payment lines, in turn, will show zeros -- no payments can be made. (This situation occurred in May through August of our case example.)

This new loan amount is then added to the previous month's ending current or intermediate debt to give the new accumulated major lender debt outstanding.

The distribution of this new loan amount between current and intermediate major lender debt is done in the following manner. First, the amount of new loans from other lenders for capital purchase purposes is subtracted from total capital purchases for that month. If a positive balance results (capital purchases being greater than loans from other sources for this purpose), then this positive balance is added to the accumulated Major Lender intermediate debt (MAJ DEBT - INT). This positive balance is also then subtracted from the total new loan amount from the major lender. If a positive new loan balance still remains, this balance is then added to the major lender's current balance (MAJ DEBT - CUR); a negative balance is subtracted. (In our case example, in May no capital items were purchased nor were funds borrowed from other lenders. Thus, a negative balance of \$619 (Loans, Major) was termed a current debt. It was added to a zero balance for April, thus, the \$619 ending balance in May.)

If capital purchase loans from other sources are equal to capital purchases for that month, then the total of new loans from the major lender is added to the accumulated current major lender debt. That is, loans from other sources covered the total cost of capital purchases. Therefore, new loans from the major lender were needed to cover operating expense-- thus, the current major lender debt categorization.

The total accumulated current and intermediate major lender debt at the end of the month is then added to the previous month's total ending debt and divided by 2 to give the average major lender debt of the month. This amount is then multiplied by the inputted interest rate (line 100 or 110, input form) and the resultant interest amount added to the accrued interest for the previous month to determine the month's ending accumulated interest (ACC INT-MAJ) for the major lender.

Situation #2 - Balance between lines 1 and 2 is positive, but is equal to or less than the accumulated interest charges due.

In this situation, the computer is instructed to cover as much of the accumulated interest due as possible and to indicate the level of interest payments made on the INTRST MAJOR line. The unmet interest balance is then added to the monthly interest charge on the average monthly debt for the current month as described above, the total appearing on the ACC INT MAJ line.

The LOANS, MAJOR and PRINC MAJOR lines would thus show zeros -- no loans made or principal repaid. Likewise, the ending accumulated current and intermediate major lender debt totals would remain the same as for the previous month.

Situation #3 - Balance between lines 1 and 2 above are positive by an amount greater than the amount of accrued interest charges due.

In this instance, no new loans would be needed. The amount of interest paid would equal the accumulated interest due at the end of the previous month, and principal payments would equal the excess balance over that necessary for interest payments. In turn, accumulated current and intermediate borrowings from the major lender at the end of the month are reduced by this principal payment amount in the following manner. The balance for principal repayment is used first to reduce current debt commitments. If additional repayment capacity remains after paying all current debt, this balance is used to reduce major lender intermediate debt obligations. (This situation occurred in March and April for the example farm. Cash balances permitted principal payments of \$873 to the major lender. This amount was subtracted from a beginning current debt of \$2,000. Thus, the current debt balance of \$1,217. In April current debt was completely paid off and intermediate debt reduced.)

Monthly interest charges are then calculated on the average monthly major lender debt. The resultant interest amount would represent the total accumulated interest due at the end of the current month, as all accumulated interest charges due at the beginning of the month would have been paid in full.

Special Note: It is recognized that the procedure used above for calculating interest may slightly over- or under-state the amount due in any given month. For planning purposes, however, this approach should give a reasonable estimate of expected interest charges.

The DEBT OTHERS line indicates the debt outstanding to other lenders as of the end of each month. To make this calculation, Loans, Other, are added to the beginning liabilities of other lenders while principal payments (PRINC OTHERS) are subtracted.

The remainder of Section I of the printout displays a summary of projected financial measures. The first four items are annual cash totals. The total money handled item indicates the amount of cash that flowed into the business during the year (including the beginning cash and checking balance). Since in a cash flow statement cash inflows must equal outflows, this amount also indicates the total outflows, including ending cash and checking balances. Cash farm income includes crop and livestock sales, other farm income and sales of breeding stock (code items 11 through 58). Cash farm expenses include crop and livestock expenses, related operating expense and farm interest expense (code items 101 through 160 plus interest paid the major lender (see below).

The family living expense line indicates the amount that you budgeted for this purpose in the cash flow projection (see step #3 of inputting discussion).

PROJECTED FINANCIAL MEASURES SUMMARY

ANNUAL CASH TOTALS:					
TOTAL MONEY HANDLED			86564.		
CASH FARM INCOME			57885.		
CASH FARM EXPENSE			28092.		
FAMILY LIVING EXPENSE			16000.		
PROJECTED INCOME & SS TAX			4234.		
MAJ LENDER INTEREST:BEGIN:	111.	PAID:	988.	END:	124.
MAJ LENDER DEBT: BEGIN:	10000.	PEAK:	23339.	END:	17952.
OTHER LENDER DEBT: BEGIN:	37550.	PEAK:	35550.	END:	34050.
EXCESS CASH AFTER PAYING SCHLD MAJ DEBT				7611.	
CURRENT LIABILITIES/ASSET PCT (END).....				36.	
TOTAL LIABILITIES/ASSET PCT (END).....				35.	
PROFIT OR LOSS (-)				22140.	
LABOR AND MGT EARNINGS				16495.	
RETURN PER \$100 FARM INVESTMENT				8.26	
RETURN PER \$100 NET WORTH				6.53	
CHANGE IN NET WORTH				5558.	

- TYPE 1 FOR DETAILED MONTHLY CASH FLOW STATEMENT
- 2 FOR FINANCIAL SUMMARY
- 3 FOR NET WORTH STATEMENT
- 4 FOR ALL THREE STATEMENTS
- 5 TO STOP

OPTION DESIRED ? 4

The projected income and social security taxes item is a calculation of the amount of Federal and Minnesota State income plus social security taxes that will be due the following year on the projected coming year's business. If projected taxes appear to be particularly high or low, you may wish to do some income or expense adjustments between years. If the projection has been made on a business year other than that corresponding to your normal tax year, then you should either ignore this information or make appropriate adjustment to a tax year basis and recalculate taxes by hand.

The middle portion of this section of the printout summarizes the debt servicing and solvency characteristics of the farm plan under study. It first indicates the interest that could be paid to the major lender as well as the amount of accumulated interest due at the beginning and end of the year. It next reports the beginning, peak and end of year debt balances of the business relative to the major and other lenders. It also indicates how well your business will likely be able to service scheduled major lender debt (excess cash) and what the current and total liabilities/assets ratios of the business would likely be by the end of the projected business year.

The remaining five items in the summary are selected measures of business probability. The profit or loss represents the projected return to labor, management and equity capital. Labor and management earnings are residual earnings after paying cash costs for borrowed funds and 6% on the farmer's equity. The next two are measures of residual returns to total farm investment and net worth. The computer also prints the projected net worth change between the beginning and ending financial statements. This change in net worth indicates the amount by which you will likely be able to increase your equity in the business during the projected year.

Once you have reviewed this summary, you must then decide whether you want the analysis to continue, and if so, what additional information you wish to have printed out. The list of options open are printed at the end of the first portion of the printout (see above).

Section II - Detailed Monthly Cash Flow Statement (Output Option #1)

The first output option provides a printout of a detailed monthly cash flow statement. The first portion lists the names of the sources of income (corresponding to the codes used in step #2 of inputting) and the amount received in each month.

INFLØWS	MAR	APR	MAY	JUN	JUL	AUG
CØRN	0	0	0	0	0	0
FEEDER PIG	0	3400	0	0	0	0
ØTHR DAIRY	225	225	0	0	0	0
MILK	4171	3529	3208	2887	2567	2246
CAP SALES	600	0	1800	0	0	0
LØAN MAJØR	0	0	619	455	2707	9488
BEG CASH	737	700	700	700	700	700
CASH AVAIL	5733	7854	6327	4043	5973	12434

The expected cash flow expenses and payments follow a similar format, with the item names appearing on the left and the amounts flowing out for each month. Only a partial list of expenses appears in the example.

ØUTFLØWS	MAR	APR	MAY	JUN	JUL	AUG
SEED	0	0	0	0	0	0
FERT	0	0	0	0	755	755
CRØP SUPLY	0	0	306	0	0	0
INT-MAJØR	0	0	0	0	0	0
INT-ØTHER	0	0	1253	0	0	0
N REAL EST	0	0	0	0	0	8800
PRIN MAJØR	0	0	0	0	0	0
PRIN DEAL	2000	0	0	0	0	0
FAMILY LIV	783	4452	0	0	0	0
INC TAX&SS	111	60	0	0	0	0
END CASH	700	700	700	700	700	700
CASH USED	5733	7854	6327	4043	5973	12434

You, the manager, should scan this detailed cash flow statement to make sure the correct amounts were inputed and that they were allocated properly. If the amounts look reasonable, the printout can be used in planning credit needs with your lender and in controlling income and expenses during the year. As the business year progresses, you can determine how closely actual cash flows followed your projected cash flows. Major discrepancies between the projected and actual cash flows should suggest the need for a change in the original plan or for business adjustments to bring actual happenings more closely in line with the projection.

Section III - Financial Summary (Output Option #2)

Output option #2 provides you with a profit and loss statement as well as various other profitability, debt servicing and financial solvency measures regarding the projected year's business. The following is a brief description of how these measures have been calculated and how they should be interpreted.

Profit and Loss Statement

The printout first provides an abbreviated projected profit and loss statement for the business (see below). A description of how the calculations were made follows.

FINANCIAL SUMMARY

**** PROFIT AND LOSS ****

1 CASH FARM REC, INCL BREED SALES	57885
2 CASH FARM EXPENSES	28091
3 NET CASH FARM INCOME	29793
4 FEED + GRAIN INVENTORY CHANGE	-2297
5 MARKET LIVESTOCK INVENTORY CHANGE	0
6 OTHER INCOME/EXPENSE ADJUSTMENTS	-200
7 NET OPERATING PROFIT	27296
8 BREEDING LVSK INV CHANGE-PURCH	1744
9 DEPRECIATION -MACH, BLDG, IMPROVE	6900
10 PROFIT OR LOSS	22140

Line 3: Net cash farm income is determined by subtracting cash farm expenses from cash farm receipts. Cash farm receipts are calculated by adding together the income associated with code items 11 through 50 and code 204 (sales of breeding livestock). Cash farm expenses include expense codes 101 to 158, the total of interest charges for other lenders (code item 160) and the amount of interest paid to the major lender as calculated in Section I.

Line 7: Net operating profit is determined by adjusting net cash farm income (line 3) for changes in crop and market livestock inventories and for other income and expense adjustments. Changes in feed, grain and market livestock inventories are calculated by subtracting the beginning inventory value from the ending for each of these items. These items were inputed at line 205, input form. In calculating the other income/expense adjustments line, the beginning inventory of accounts receivable is subtracted from the ending inventory. For accounts payable, the ending inventory was subtracted from the beginning inventory. These two items were inputed at lines 205 and 209, respectively.

Line 10: Profit (or Loss) is determined by adjusting net operating profits (line 7) for changes in breeding livestock inventories and subtracting a depreciation charge for machinery, buildings and improvements. The breeding livestock inventory change minus purchases line (line 8) is calculated by subtracting the beginning breeding livestock inventory (line 201, input) and breeding livestock purchases (line 202, input) from the ending livestock inventory (line 204). Depreciation on machinery, buildings (new and existing) and improvements was inputed at line 203

The profit and loss figure indicates the expected return for your labor and management and use of your equity capital. You can compare the projected level of profits for the coming year with those of past years. If projected profits appear to be particularly high or low, you should check your projection. If these figures appear to be all right, then you may have to change the plan if you are still not satisfied.

Other Profitability Measures

The other profitability measures portion of the financial summary section reports the expected labor and management earnings (line 12), returns per \$100 of farm investment (line 17) and of net worth (line 21) and the projected change in net worth.

**** OTHER PROFITABILITY MEASURES ****

11 INTEREST ON NET WORTH	5645
12 LABOR AND MANAGEMENT EARNINGS	16495
13 FARM INTEREST PAID	4746
14 VALUE OF OPERATOR'S LABOR AND MANAGEMENT	16000
15 RETURNS TO FARM INVESTMENT	10386
16 AVERAGE FARM INVESTMENT	131864
17 RETURN PER \$100 FARM INVESTMENT	8.26
18 NET NONFARM INCOME	0
19 RETURNS TO TOTAL NET WORTH	6140
20 AVERAGE TOTAL NET WORTH	94088
21 RETURN PER \$100 NET WORTH	6.53
22 CHANGE IN NET WORTH	5558

Line 12: Labor and Management Earnings is calculated by subtracting a 6 percent interest charge on average total net worth (line 11) from the business's profit or loss (line 10). (Note: If you have a substantial nonfarm net worth, then your labor and management earnings will be understated. This can be corrected by multiplying your nonfarm net worth by 6% and adding the result to the reported labor earnings.)

- Line 17: Return per \$100 of farm investment is calculated by dividing the return to farm investment by the average farm investment. Return to farm investment is calculated by adding the farm interest paid (line 13) to profit or loss (line 10, above). From this amount is subtracted an allowance for the operator's labor and management (line 211, input). The average farm investment is calculated by adding beginning and ending farm assets together (input lines 201 and 205) and dividing the result by 2.
- Line 21: Return per \$100 net worth is calculated by dividing return to total net worth by the average total net worth. Return to total net worth is calculated by adding the net nonfarm income (input line 211) to the return to farm investment (line 17), and subtracting farm interest paid. Average total net worth is determined by subtracting total beginning and ending liabilities (input lines 208 and 210) from beginning and ending assets (input lines 201, 205, 206 and 207) and dividing by 2.
- Line 22: Change in net worth is determined by subtracting beginning total net worth from the ending amount. The input lines for these items were detailed at line 21 (see above).

Over the years, labor and management earnings have been a useful measure of the residual earnings of the operator after paying going rates for the use of capital. For the labor-oriented manager, the man who looks upon farming as a means of self-employment, it remains a useful measure.

However, in this rapidly changing agriculture the labor-oriented manager, like his capital-oriented counterpart (the man who views himself as a manager of capital and men), should also be interested in the rate of return he is receiving from his investment in the business. Such calculations allow him to estimate how well he will be able to compete for funds with other farms or businesses over time (return per \$100 farm investment) and whether or not he is receiving a return to his own investment (Net Worth) equal to or greater than other investments of similar risk that could have been made.

Over the years the return per \$100 farm investment for your business should be at least equal to and preferably greater than the going rate of interest on borrowed funds. In any given year, returns could be low due to factors such as unusual production conditions (weather, disease, price breaks, etc.). However, if your projected investment returns tend to run below the interest rate on borrowed funds, your ability to compete effectively for funds is in serious doubt.

Return per \$100 of total net worth is the calculation that includes nonfarm income and nonfarm assets and liabilities. If it is higher than your return to farm net worth, it would indicate that nonfarm business activities are enhancing your total financial well-being.

Debt Servicing, Major Lender

The debt servicing section of the financial summary focuses upon your ability to service major lender debt. It also indicates the extent to which you will have sufficient current assets at the end of the year to cover liabilities due in 12 months.

**** DEBT SERVICING, MAJOR LENDER ****

23	TOTAL NET CASH INCOME	29793	
24	FAMILY LIVING+INC TAX AND SOC SEC	16682	
25	SCHED PRIN PAYMENT TO OTHERS	3500	
26	OTHER CASH COMMITMENTS	20182	
27	CASH AVAIL FOR MAJOR LENDER DEBT	9611	
28	SCHEDULED MAJOR LENDER DEBT	2000	
29	EXCESS CASH AFTER PAY SCHED MAJ DEBT	7611	
30	CHANGE IN CROP & LVST INVENTORY	-2297	
31	BREEDING LVSK INV CHANGE-PUR	1744	
			BEG END
32	CURRENT ASSETS	17820	15386
33	CURRENT LIABILITIES	6300	5543
34	CURRENT LIABILITIES/ASSET PCT	35	36

Line 27: The cash available for major lender debt service is determined by subtracting other cash commitments (line 26) from the total net cash income available (line 23). Total net cash income is determined by adding together net cash farm income (line 3) and net nonfarm income (line 18). Other cash commitments include family living (code item 190, page 3), income tax and social security payments due (code item 191, page 3) and scheduled principal payments to others (input line 209).

Line 29: Excess cash after paying scheduled major debt is calculated by subtracting the scheduled major lender debt payments (input line 210) from line 27 (above), the cash available for major lender debt servicing. Changes in crop and livestock inventories (line 30) are shown at this point to indicate whether an inventory build-up or sell-off was responsible for the resultant balance at line 29. The production costs of building up breeding livestock inventories can also cause repayment problems -- thus, the reported change in this item on line 31. (Both lines were reported earlier at lines 4, 5 and 8 of the Profit and Loss.)

Lines 32 - 34 show how effectively ending current assets would cover current liabilities, should a cash or credit crunch occur.

Financial Solvency Measures

The financial solvency section provides a capsule view of the farmer's projected net worth statement for the coming year. Key percentages or ratios are also calculated.

*** FINANCIAL SOLVENCY ***

34	CURRENT AND INTERM ASSETS	66929	79439
36	CURRENT AND INTERM LIABILITIES	16350	22801
37	TOTAL ASSETS	139659	149669
38	TOTAL LIABILITIES	48350	52801
39	NET WORTH	91309	96867
40	CHANGE IN NET WORTH		5558
41	CURRENT AND INTERM LIAB/ASSET PCT	24	28
42	LONG TERM LIAB/ASSET PCT	43	42
43	TOTAL LIAB/ASSET PCT	34	35
44	PCT ASSETS IN CURR AND INTERM	47	53
45	PCT LIABILITIES IN CURR AND INTERM	33	43

Lines 35-38: The items comprising the current and intermediate and total assets and liabilities can be seen in the detailed net worth statement discussed in the next section. Most of these items were taken directly from the input form.

Line 40: The projected change in net worth is calculated by subtracting the beginning net worth from the end-of-year amount. It indicates the extent to which the business can cover business and personal expenses as well as have excess earnings to cause a growth in the manager's equity in the business.

Lines 41-43: These financial ratios are determined by dividing the respective liabilities categories in the net worth statement by the comparable asset items. Expressed in percent, they indicate the extent to which the farm manager is loaned up.

Total liabilities/asset pct (line 43) is the most common solvency measure, indicating how well the manager could cover all debts if creditors "blew the whistle" at the beginning or end of this coming year. However, line 41 (current and intermediate liabilities/asset pct) is undoubtedly the most critical ratio under today's farming conditions. A relatively unprofitable business or poor matching of asset acquisition and of financing methods can cause serious problems in this area. Eventually, the point is reached where the business cannot get financed for its operating expenses and working tools and thus is forced out of business.

Lines 44 & 45: These lines help shed light on one of the possible causes of the problems noted above, that is, poor balancing of asset acquisition and financing. The calculation is made by dividing current and intermediate assets and liabilities (lines 35 and 36, above) by their counterpart total assets or liabilities for the business (lines 37 and 38, above). If the percentage for the current and intermediate liabilities (line 45) is considerably higher than for assets (line 44), then a poor job of financing has been done, and repayment problems will likely emerge.

Section IV - The Net Worth Statement (Output Option #3)

The FINFLO program also provides a detailed projected net worth statement, sorting assets and liabilities into current, intermediate and long-term categories. This information (with the exception of ending major lender liabilities) was inputted at lines 201 to 212. The ending liabilities for the major lender was calculated internally (see discussion of Section I).

Two aspects of the statement will receive particular attention in this discussion. First, is the intermediate asset item of new buildings and improvements. As was indicated in the discussion of page 4 of the input form, this category is for those new buildings and improvements which were or are to be financed with nonreal estate credit. This categorization, in turn, makes the ensuing financial ratios more reasonable. Otherwise, if all buildings were placed under long-term assets but a portion were financed with intermediate credit then the ratios could show a marked imbalance.

NET WORTH STATEMENT

ASSETS	BEG	END
CURRENT		
CASH, CHECKING	737	700
SAVINGS, SECURITIES	0	0
LIVESTOCK HELD FOR SALE	630	630
CROPS HELD FOR SALE AND FEED	15103	12806
NOTES AND ACCOUNTS RECEIVABLE	200	0
OTHER CURRENT ASSETS	1150	1250
TOTAL CURRENT ASSETS	17820	15386
INTERMEDIATE		
BREEDING LIVESTOCK	24756	26500
MACHINERY, EQUIPMENT, AND VEHICLES	24353	22353
BUILDING AND IMPROV (INTERM CRED)	0	15200
NONFARM EQUIPMENT, OTHER	0	0
TOTAL INTERMEDIATE ASSETS	49109	64053
TOTAL CUR. AND INTERM. ASSETS	66929	79439
LONGTERM		
FARMLAND	35000	35000
BUILDINGS AND IMPROVE (L. TERM CRED)	26230	23730
NONFARM REAL ESTATE	11500	11500
LONG TERM ASSETS	72730	70230
TOTAL ASSETS	139659	149669

The second key item in this net worth statement relates to your current and intermediate debt position at the end of the coming year with respect to the major lender. The current portion of this ending debt is calculated by first multiplying the intermediate term debt owed the major lender at the end of the year (see Section I, final month's MAJOR DEBT-INTER) by the desired % repayment of end of year debt as inputed at line 210 of the input form. This amount is then added to the MAJOR DEBT-CURRENT (MAJ DEBT-CUR) for the final month to give the total current debt owed at the end of the year. The remaining intermediate debt balance (total MAJOR DEBT-INTER less the current portion due) owed the major lender is then reported in the intermediate-major lender category (see below). All other liability items reported in the net worth statement were taken or calculated directly from the input form.

LIABILITIES		
CURRENT		
MAJOR LENDER-SCHEDULED REPAYMENT	2000	2243
OTHER LENDERS	3500	2500
ACCOUNTS PAYABLE	800	800
TOTAL CURRENT LIABILITIES	6300	5543
INTERMEDIATE		
MAJOR LENDER	8000	15707
OTHER LENDERS	2050	1550
TOTAL INTERMEDIATE LIABILITIES	10050	17257
TOTAL CUR. AND INTERM. LIABILITIES	16350	22801
LONGTERM		
OTHER LENDERS	32000	30000
TOTAL LONG TERM LIABILITIES	32000	30000
TOTAL LIABILITIES	48350	52801
NET WORTH	91309	96867