

Twelve Steps to Cash Flow Budgeting

How much financing will your farm business require this year? When will money be needed and from where will it come? A little advance planning can help avoid short-term shortages of cash. One useful tool for planning the use of capital in the farm business is a **cash flow budget**.

A cash flow budget is an estimate of all cash receipts and all cash expenditures that are expected to occur during a certain time period. Estimates can be made monthly, bimonthly, or quarterly, and can include nonfarm income and expenditures as well as farm items. Cash flow budgeting looks only at money movement, though, not at net income or profitability.

A cash flow budget is a useful management tool because it:

- forces you to think through your farming plans for the year
- tests your farming plans, such as if you will produce enough income to meet all your cash needs
- projects how much operating credit you will need and when
- projects when loans can be repaid
- provides a guide against which you can compare your actual cash flows
- helps you communicate your farming plans and credit needs to your lender

Getting Started

Developing a cash flow budget for the first time will not be easy. Following a step-by-step approach can make the task less difficult, though. The pages at the end of this publication contain a format for completing your plan, although other forms can be used. There also are many personal computer programs available for developing cash flow budgets. Or, you may want to develop your own. In any case, the following steps can be applied.

1. Outline your tentative plans for livestock and crop production for the year, as shown in Example 1.

2. Take an inventory of livestock on hand and crops in storage now. If a recent financial statement is available, information found under the current assets section can be used.

3. Estimate feed requirements for the proposed livestock program, as shown in Example 2. Some typical feed requirements are contained in ISU Extension publication *FM 1815/AgDM B1-21, Livestock Enterprise Budgets for Iowa*. Your own past feed records are also a good guide.

Adjust feed requirements if livestock will complete only part of the feeding program during the budget year. It also is helpful to divide requirements for homegrown feedstuffs between the periods prior to harvest and following harvest.

4. Estimate feed available, as shown in Example 2. List beginning inventories prior to harvest, and expected new crop production after harvest. Remember to exclude grain transferred to the landlord under a cropshare lease. Finally, estimate the quantity of feed purchases needed, if any, and the quantity available to sell. Once your feed supply and feed requirements are estimated, you may want to adjust the livestock program to fit them.

5. Now you are ready to start with the actual cash flow budget.

First estimate livestock sales, based on production and marketing plans, as shown in the top line of Example 3.

- Start with livestock on hand, then add livestock to be produced during the year. Exclude animals to be carried over to next year or held back for breeding stock.
- Include sales of breeding stock that will be culled.
- Include livestock product sales, such as for milk or wool.
- Use your best estimate of selling prices based on outlook forecasts or marketing contracts.

Example 1. Production plans for the year.

Crop production plans:

500 acres of corn
400 acres of soybeans
50 acres of hay

Livestock production plans:

224 litters, farrow to finish swine

Example 2. Determining feed required (corn)

Enterprise	No. of units	Bushels needed per unit	Total bushels needed	Before harvest	After harvest
Farrow-to-finish	224 litters	105 per litter	23,520	17,640	5,880

Enterprise	No. of acres	Yield per acre	Bushels available	Before harvest	After harvest
Corn	beg. inventory		42,500	42,500	
Corn	500 acres	165 bu.	82,500		82,500
Needed to buy				0	0
Available to sell				24,860	76,620

- Reflect expected seasonal price patterns when appropriate, rather than using the same price all year.
- Stay on the conservative side. If your plan will work at conservative prices, it also will work at better prices.
- Some producers prepare budgets at two or three price levels for the major products they sell. This helps them identify the amount of price risk they face.

6. Plan sales of nonfeed crops and excess feed.

- Consider crops in inventory at the beginning of the year as well as crops to be harvested during the year. Plan to carry over grain for feed for next year plus other crops normally sold in the following year.
- Plan timing of sales according to your normal marketing strategy. In Example 3, the farmer plans to sell old-crop soybeans in March and hold new-crop soybeans until after January 1 of next year.
- Follow the same guidelines as in step 5 for estimating crop prices. Look at outlook forecasts, consider seasonal price patterns, and use conservative price estimates.
- Multiply quantities to sell by anticipated prices, and carry the totals to the budget form.
- After the initial cash flow budget is completed, you may want to revise your marketing plans to meet capital needs throughout the year.

7. Estimate income from other sources, including:

- USDA farm payments
- custom machine work income
- income from off-farm work, rental property, or other business activities
- interest, dividends, patronage refunds, etc.

Last year's additional cash income listed on your income tax return is a useful guide.

8. Project crop expenses and other farm operating expenditures.

- Last year's expenditures are a good guide. Adjust for changes in price levels.
- If cropping plans will be different this year, detailed field-by-field production plans or field maps can be used to estimate expenses.
- Expenses that are determined by contract, agreement, or law can be estimated directly from contract terms, unless rates are expected to change. These include property taxes, property and liability insurance premiums, and fixed cash rents.
- Expenses should be spaced through the year based on your best judgment. Some will fall mainly during certain seasons, such as machine hire, part-time labor, and crop expenses.

Remember to place these expenses during the period of payment, not the period of use. Some expenses will be spread through the year but will have definite seasonal peaks. Fuel, machinery and equipment repair, and utilities are examples. Other expenses may be spaced evenly through the year, such as vehicle operating expenses, livestock health and supplies, and purchased feed.

9. Consider capital purchases such as machinery, equipment, land, or additional breeding livestock. Major machinery expenses such as a tractor overhaul also can be included here, as well as construction or improvement of buildings. Example 3 shows that the farmer is considering trading for a new combine for a cost of \$50,000. This amount is entered under the "Purchases of Capital Assets" section. Show only the cash difference to be paid when a trade is involved.

You may want to complete the rest of the cash flow budget first to see if major capital expenditures will be feasible

this year. If a portion of the item will be financed by borrowing, then include the anticipated loan amount in the “Financing” section.

10. Summarize debt repayment. Much of this information can be taken from your most recent net worth statement. Include only those debts that you have already acquired at the beginning of the budgeting period. Calculate the interest that will be due at the time the payment will be made. Remember, the net worth statement may show only interest accrued up to the date of the statement.

11. Estimate nonfarm expenditures.

- Adjust last year’s living expenses for changes in family circumstances and inflation. Remember to allow for possible purchases of vehicles, furniture, appliances, or major repairs, and contributions to retirement accounts.
- A tax estimate made at the end of the year for tax management is helpful for projecting income tax and Social Security payments to be made for last year’s income. Your estimate can be revised when your actual tax returns have been completed.

12. Sum total cash inflows and total cash outflows.

- Add total projected cash inflows for the year and for each period, as shown in the sample budget in Example 3. Add the total inflows for each period to check that they equal the total projected inflows for the year.
- Add total projected cash outflows for the year and for each period. Add the total outflows for each period to check that they equal the total projected outflows for the year.
- Subtract total cash outflows from total cash inflows to determine the net cash flow for each period. Add the net cash flows for each period to check that they equal the total net cash flow for the year.

If the estimated net cash flows for the entire year and for each period are all positive, you have a feasible cash flow plan. If the net cash flows for some periods are negative, some adjustments may need to be made.

Analyzing Your Budget

In the example, the farm business will have a net cash flow of \$16,989 for the year as a whole. The projected cash outflows include:

- \$36,000 for family living expenses and \$23,000 for nonfarm investments.
- \$61,078 for repayment of borrowed funds plus interest.

- \$50,000 for trading combines.
- \$458,720 for operating expenses.

A cash flow budget only indicates whether or not the farm business will produce enough cash income to meet all demands for cash. It does not estimate net income or profit. Remember that net farm income also includes non-cash items such as depreciation and changes in crop and livestock inventories, and that net farm income can be positive even when net cash flow is negative, and vice versa.

Annual Adjustments

The first step in analyzing cash flow is to add cash on hand to net cash flow. If the total projected net cash flow for the year is still negative, some type of **annual adjustments** must be made. Alternatives include:

- Sell more current assets (crops and livestock). Be careful here, though—reducing inventories may solve the cash flow squeeze this year, but could result in even more severe problems next year.
- Carry over operating debt to the following year.
- Finance capital expenditures with credit, or postpone them until another year. Anticipated borrowing for capital assets can be included in the financing section under cash inflows.
- Reduce the size of intermediate and long-term debt payments by lengthening the repayment period or adding a balloon payment at the end.
- Convert short-term debt to intermediate or long-term debt by refinancing it as an amortized loan.
- Reduce nonfarm expenditures or increase nonfarm income.
- Sell intermediate or long-term assets to raise cash.

In the example, financing 50 percent of the \$50,000 combine trade with a lender (\$25,000) would leave a positive net cash flow for the year of \$41,989. The \$25,000 would be entered as new borrowing in the period when the purchase was projected (July through August).

Seasonal Adjustments

Even when the yearly net cash flow is positive, sizable deficits can occur in some months. This is due to the seasonal nature of expenses in farming and the tendency to sell large quantities of a product at one time. Some types of enterprises, such as dairy, produce a more constant cash flow than other types.

Shorter term adjustments can be made when projected net cash flow is positive for the whole year but negative for certain months. These include:

- Shift the timing of some sales.
- Shift the timing of some expenditures.
- Increase short-term borrowing in periods with negative cash flow, and project repayment in periods with positive cash flow. Remember to add interest charges to payments.
- Delay the due date of fixed debt payments to match periods with positive net cash flows.

Operating Loan Transactions

In Example 3, cash on hand at the beginning of the year is \$6,146. Enter this in the January-February column, as well. Then work through the remaining periods to determine the amount of additional new borrowing needed in each period.

The farmer in the example wishes to plan for a cash balance of at least \$1,000 at the end of each period. The cash flow can be balanced by planning to borrow \$20,000 in operating capital in January, \$5,000 in April, \$11,000 in June and \$22,000 in October. The operating loan balance (\$60,000) can be repaid in December, however, plus interest.

Some farmers operate with a **line of credit** from their lender, with a maximum borrowing limit, instead of borrowing funds in fixed amounts. The cash flow budget also can be used to test if the need for operating capital will exceed this limit, as shown in the lower part of Example 3.

- Add the outstanding balance on the line of credit at the beginning of each period to the amount of new borrowing in that period. If operating debt will be repaid instead, subtract the amount to be repaid to arrive at the ending credit balance for that period. Do not include new borrowing to be repaid over several years (such as for the combine) if the borrowing limit applies only to short-term capital.
- In this case we are concerned only with the amount of principal borrowed and repaid, not interest.
- In the example, the farmer started the year with an annual operating loan balance of \$203,200. The loan balance was projected to drop to \$201,200 by the end of the year.

- If the projected ending credit balance for any period exceeds the credit limit, adjustments to cash flow can be made as discussed above.

Monitoring Cash Flows

Review your cash flow budget from time to time during the year. Prices and costs may differ from your estimates, or production plans may change. Monthly bank statements and canceled checks are a good source of cash flow information against which your budget can be compared. This will help you anticipate changes in your needs for cash and credit later in the year. You may even need to prepare a revised budget for the remainder of the year.

Developing a cash flow budget for the first time will not be easy. Close communication with your lender is important. By planning where you are going financially, you can increase your chances of arriving there safely. Cash flow budgeting is an essential part of sound financial management.

Budgeting Major Investments

A cash flow budget also can be very helpful in evaluating major capital investments or changes in the farm business. Examples are purchasing land, building new hog facilities, or expanding a beef cow herd. Often it will be necessary to develop two budgets: one for a business year after the investment or change in the business is complete, and one for the intermediate or transition year (or years).

As an example, a beef cow-calf producer decides to expand the herd by buying heifer calves. The producer should develop a total cash flow budget for the operation as it will be after the expansion is complete. However, the greatest cash flow problem may be in the transition year. The expenses will increase because there will be more cattle in the herd but income will not increase until calves from the new heifers are sold.

Expansion of a livestock enterprise through construction of new facilities can often create cash flow problems in the construction year, even if the facilities are financed with an intermediate or long-term loan. This is especially true if it will take some time to expand the enterprise up to the capacity of the facility. In the meantime, the producer will have to meet the loan payments on the facility, as well as pay for additional labor and feed. A set of cash flow budgets could help select the best alternative in terms of financial feasibility.

Example 3. Cash Flow Budget

Name: Mayer Farm	Year: 2008						
Cash Inflows	Total for	January	March	May	July	September	November
Operating	Year	February	April	June	August	October	December
Livestock income	233,587	38,931	38,931	38,931	38,931	38,931	38,931
Sales of crops	380,800	31,909	152,891	34,364	0	0	161,636
Other crop income	0	0	0	0	0	0	0
USDA payments	18,000	9,000	0	0	0	9,000	0
Custom hire income	0	0	0	0	0	0	0
Farm rents, interest	0	0	0	0	0	0	0
Other	6,000	1,000	1,000	1,000	1,000	1,000	1,000
Sales of Capital Assets	0	0	0	0	0	0	0
Financing							
New short-term loans to receive	0	0	0	0	0	0	0
New long-term loans to receive	0	0	0	0	0	0	0
Non-farm Income	7,400	400	400	2,900	400	400	2,900
a. Total Cash Inflows	645,787	81,240	193,222	77,195	40,331	49,331	204,468
Cash Outflows	Total for	January	March	May	July	September	November
Operating	Year	February	April	June	August	October	December
Seed	49,050	16,350	16,350	0	0	0	16,350
Fertilizer and lime	84,500	21,125	42,250	0	0	0	21,125
Pesticides	20,200	0	20,200	0	0	0	0
Crop insurance	10,700	0	0	0	0	10,700	0
Drying fuel	16,600	0	0	0	0	16,600	0
Custom hire or machine rental	1,750	0	0	438	875	437	0
Purchased crops	0	0	0	0	0	0	0
Purchased livestock	11,200	1,867	1,867	1,867	1,867	1,867	1,867
Purchased feed	78,400	13,067	13,067	13,067	13,067	13,067	13,067
Health and veterinary	5,600	933	933	933	933	933	933
Marketing	6,720	1,120	1,120	1,120	1,120	1,120	1,120
Real estate taxes	11,000	0	5,500	0	0	5,500	0
Cash rent	80,000	0	40,000	0	0	0	40,000
Hired labor	30,000	5,000	5,000	5,000	5,000	5,000	5,000
Repairs and upkeep	13,000	2,889	1,444	1,444	1,444	2,889	2,889
Fuel and lubrication	25,000	2,500	5,000	5,000	2,500	5,000	5,000
Other fixed expenses	6,000	1,000	1,000	1,000	1,000	1,000	1,000
Equipment lease payments	0	0	0	0	0	0	0
Miscellaneous operating costs	9,000	1,500	1,500	1,500	1,500	1,500	1,500
Purchases of Capital Assets	50,000	0	0	50,000	0	0	0
Financing							
Accounts payable	23,523	23,523	0	0	0	0	0
Short term notes due	0	0	0	0	0	0	0
Long term loan payments	37,555	7,511	22,533	0	0	0	7,511
Installment contract payments	0	0	0	0	0	0	0
Nonfarm Expenditures							
Family living expenses, taxes	36,000	6,000	6,000	6,000	6,000	6,000	6,000
Nonfarm investments	23,000	2,000	13,000	2,000	2,000	2,000	2,000
b. Total Cash Outflows	628,798	106,385	196,764	89,369	37,306	73,613	125,362

Example 3. Cash Flow Budget (continued)

Summary	Total for Year	January February	March April	May June	July August	September October	November December
c. Net Cash Flow (a - b)	16,989	(25,144)	(3,542)	(12,174)	3,025	(24,282)	79,106
d. Beginning cash balance	6,146	6,146	1,002	2,460	1,286	4,311	2,029
e. New operating loan received	58,000	20,000	5,000	11,000		22,000	
f. Repayment of operating loan	60,000						60,000
g. Interest paid on oper. loan balance	18,589	0	0	0	0	0	18,589
Ending cash balance (c + d + e - f - g)	2,546	1,002	2,460	1,286	4,311	2,029	2,546
Operating Loan Balance							
h. Beginning loan balance	203,200	203,200	223,200	228,200	239,200	239,200	261,200
Ending balance (h + e - f)	201,200	223,200	228,200	239,200	239,200	261,200	201,200

Cash Flow Budget

Name:	Year:						
Cash Inflows	Total for	January	March	May	July	September	November
Operating	Year	February	April	June	August	October	December
Livestock income							
Sales of crops							
Other crop income							
USDA payments							
Custom hire income							
Farm rents, interest							
Other							
Sales of Capital Assets							
Financing							
New short-term loans to receive							
New long-term loans to receive							
Non-farm Income							
a. Total Cash Inflows							
Cash Outflows	Total for	January	March	May	July	September	November
Operating	Year	February	April	June	August	October	December
Seed							
Fertilizer and lime							
Pesticides							
Crop insurance							
Drying fuel							
Custom hire or machine rental							
Purchased crops							
Purchased livestock							
Purchased feed							
Health and veterinary							
Marketing							
Real estate taxes							
Cash rent							
Hired labor							
Repairs and upkeep							
Fuel and lubrication							
Other fixed expenses							
Equipment lease payments							
Miscellaneous operating costs							
Purchases of Capital Assets							
Financing							
Accounts payable							
Short term notes due							
Long term loan payments							
Installment contract payments							
Nonfarm Expenditures							
Family living expenses, taxes							
Nonfarm investments							
b. Total Cash Outflows							

Cash Flow Budget (continued)

Summary	Total for Year	January February	March April	May June	July August	September October	November December
c. Net Cash Flow (a - b)							
d. Beginning cash balance							
e. New operating loan received							
f. Repayment of operating loan							
g. Interest paid on oper. loan balance							
Ending cash balance (c + d + e - f - g)							
Operating Loan Balance							
h. Beginning loan balance							
Ending balance (h + e - f)							

... and justice for all

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