

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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