



Risk and Resilience in Agriculture

Preparing A Cash Flow Statement

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It is highly unlikely you would attempt to drive to Detroit, Michigan, without first consulting a road map. You would use the map to estimate the distance, the best route, and the total time required. This information would be used to plan other details such as lodging, meals, cash requirements, etc. A cash flow analysis is just as important to the farm manager as a map is to a traveler. Lenders are also very interested in cash flow statements to help analyze a proposed investment (e.g., irrigation) or a loan extension for an ongoing enterprise. The lender is interested in liquidity (the farmer's ability to generate sufficient cash to meet financial obligations without interrupting the ongoing farm operation) and the overall financial soundness of the operation.

The Cash Flow Statement: What Is It?

The cash flow statement summarizes the cash inflows (receipts) and outflows (expenditures) of a business over a specific time. The accounting period is usually one year divided into 12 monthly periods. The cash flow statement can be used in either of the following ways:

As a long-range projection or forecast of future operations (called pro forma or planning analysis).

As a historical (after the fact) record containing actual financial data.

Ideally, a manager will make use of both procedures and develop a yearly projection followed by an actual record of each month's financial transactions as they occur.

The cash flow statement is a projection of the amount and timing of cash expected to flow into and out of the farm business during the next accounting period. It allows the farm manager or lender to estimate the amount and when cash will be available. He can also determine the time and amount of any borrowed funds what might be needed, and it allows the lender and farmer to estimate the debt repayment capacity of the business. The cash flow helps determine not only the amount of debt the borrower can incur, but also the timing of repayment and the proper repayment schedule (i.e., the number of years to repay the loan).

Cash Flows in Commercial Agriculture

Each agricultural enterprise has its own special financial needs: livestock, row crops, dairy and fruit have different and unique cash flow problems. This, of course, is due to the timing and nature of costs that are incurred between starting an enterprise and the sale of the goods produced. A corn producer incurs costs in the spring and receives receipts when the crop is sold in late fall or early winter. A peach producer in Western Colorado will have to wait several years between planting and the first harvest before realizing any income. This is why cash flow analysis is so important. It requires a good planner who has mastered the technical aspects and seasonal peculiarities of their farm enterprise. A cash flow analysis forces managers to consider seasonal differences and allows him or her to develop alternative plans in search of the most feasible combination of enterprises. A cash flow analysis, however, does not indicate the profitability or wealth position of the business and should be used in conjunction with the income statement (to determine profitability) and the balance sheet (to show wealth).

Preparation of the Cash Flow Statements

An example of a cash flow statement recommended for most types of farm enterprises follows. The form can be modified to meet the needs of the preparer, and it may be used as an actual cash flow statement for monitoring or projection for planning. The Colorado State University Extension Record book has a cash flow statement which can be used.

One way to think of a cash flow statement is as a checkbook. Your checkbook accounts for all your cash inflows (deposits) and all your outflows (checks) At the end of each month a remaining cash balance is shown. A cash flow statement is very similar except it is more organized and systematic. The following cash flow statement is relatively simple, yet it is

useful. There are other cash flow statements which have greater detail and are more effective as a management and planning tool. The format of such cash flow statements are essentially the same, i.e., the upper section of the budget contains all the cash inflows (receipts and sales) and the lower section includes the cash outflows (expenses and debt payments).

The purpose of a cash flow statement will determine the difficulty and time necessary to prepare one. If you have never prepared a cash flow statement you are well advised to first prepare one that is based on historical information. For example, use your past bank statements (canceled checks and deposits) as the source of data -- both outflows and inflows. If you have separate business and personal bank accounts you will have to use both sets to prepare the cash flow statement.

The cash flow statement accounts for both the business and personal/family living expenses and income. Thus, it is quite important when preparing a projected cash flow statement for the farm or ranch business not to overlook family living expenses.

WHOLEFARM CASHFLOW STATEMENT

NAME	DATE:												PAGE:
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<<OPERATING RECEIPT>>			0										
1. Livestock Sales	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Sale of Livestock Products	0	0	0	0	0	0	0	0	0	0	0	0	0
3.	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Crop Sales	0	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Government Payments	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Other Farm Income	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	0	0	0	0	0	0	0	0	0	0	0	0	0
9. TOTAL CASH RECEIPTS	0	0	0	0	0	0	0	0	0	0	0	0	0
<<CAPITAL SALES>>													
10. Breeding Livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Machinery, Equipment, Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Buildings, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
<<OTHER OUTFLOWS>>													
13. Wages and Salaries	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	0	0	0	0	0	0	0	0	0	0	0	0	0
16. TOTAL CASH INFLOW	0	0	0	0	0	0	0	0	0	0	0	0	0
<<OPERATING EXPENSES>>													
17. Hired Labor	0	0	0	0	0	0	0	0	0	0	0	0	0
18. Repairs: Mach. & Equip.	0	0	0	0	0	0	0	0	0	0	0	0	0
19. Repairs: Bldgs. & Fences	0	0	0	0	0	0	0	0	0	0	0	0	0
20. Feed Purchased	0	0	0	0	0	0	0	0	0	0	0	0	0
21. Seed, Plants	0	0	0	0	0	0	0	0	0	0	0	0	0
22. Fertilizer	0	0	0	0	0	0	0	0	0	0	0	0	0
23. Machine Hire	0	0	0	0	0	0	0	0	0	0	0	0	0
24. Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Vet, Meds & Breeding Fees	0	0	0	0	0	0	0	0	0	0	0	0	0
26. Fuel, Oil, Lubricants	0	0	0	0	0	0	0	0	0	0	0	0	0
27. Storage, Warehousing	0	0	0	0	0	0	0	0	0	0	0	0	0
28. Taxes-R.E. & Personal Prop.	0	0	0	0	0	0	0	0	0	0	0	0	0
29. Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0
31. Cash Rents & Leases	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Freight & Trucking	0	0	0	0	0	0	0	0	0	0	0	0	0
33. Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0
34. Trustee Payments	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Previous Operation Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
36. TOTAL CASH EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0
<<CAPITAL EXPENSES>>													
37. Breeding Livestock	0	0	0	0	0	0	0	0	0	0	0	0	0
38. Mach., Equip, Veh.	0	0	0	0	0	0	0	0	0	0	0	0	0
39. Bldgs, Land	0	0	0	0	0	0	0	0	0	0	0	0	0
<<OTHER OUTFLOWS>>													
40. Family Living	0	0	0	0	0	0	0	0	0	0	0	0	0
41. Income Tax	0	0	0	0	0	0	0	0	0	0	0	0	0
42. Investments	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Dept Payments	0	0	0	0	0	0	0	0	0	0	0	0	0
44. Short Term – Interest	0	0	0	0	0	0	0	0	0	0	0	0	0
45. Short Term – Principal	0	0	0	0	0	0	0	0	0	0	0	0	0
46. Intermediate – Interest	0	0	0	0	0	0	0	0	0	0	0	0	0
47. Intermediate – Principal	0	0	0	0	0	0	0	0	0	0	0	0	0
48. Long Term – Interest	0	0	0	0	0	0	0	0	0	0	0	0	0
49. Long Term – Principal	0	0	0	0	0	0	0	0	0	0	0	0	0

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
50. Total Cash Outflows	0	0	0	0	0	0	0	0	0	0	0	0	0
<< NEW BORROWING>>													
51. Short Term	0	0	0	0	0	0	0	0	0	0	0	0	0
52. Intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0
53. Long Term	0	0	0	0	0	0	0	0	0	0	0	0	0
<<CASH FLOW SUM>>													
Interest Rate = << >>													
>>Min. Cash Bal, >>													
54. Beg. Cash Balance =	0	0	0	0	0	0	0	0	0	0	0	0	0
55. Inflows-Outflow (16-50)	0	0	0	0	0	0	0	0	0	0	0	0	0
56. Cash Position (51+52+53+54+55)	0	0	0	0	0	0	0	0	0	0	0	0	0
57. New Borrowing: Operating	0	0	0	0	0	0	0	0	0	0	0	0	0
58. New Borrowing: Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<<Accrued Int. Due on Oper. Loan>>	0	0	0	0	0	0	0	0	0	0	0	0	0
59. Int. pay'ts. On Oper. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0
60. Principal pay'ts on Oper. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0
61. Ending Cash Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
62. Outstanding Operating Dept	0	0	0	0	0	0	0	0	0	0	0	0	0
63. Outstanding Short Term Debt	0	0	0	0	0	0	0	0	0	0	0	0	0
64. Outstanding Int Term Debt	0	0	0	0	0	0	0	0	0	0	0	0	0
65. Outstanding Long Term Debt	0	0	0	0	0	0	0	0	0	0	0	0	0
66. Total Outstanding Debt	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:

A projected cash flow statement or a statement of future operations can be prepared in two ways:

1. Project future income and expenses for the whole farm based on last year's receipts and expenditures.
2. Project income and expenses for the enterprises of the farm with a detailed analysis of inputs, outputs, prices, etc.

The first method requires the least effort while the second method is extremely detailed, requiring much planning and hard work.

The first method involves taking last year's cash flow statement and projecting expected price changes. For example, if livestock receipts and livestock prices are projected to increase 10 percent this year, one would increase livestock income from the previous year by 10 percent. Of course, this also assumes production levels this year will be the

same as last year's. If price and output stability could be anticipated this method would be quite adequate. However, price, cost, and output variance in the agriculture sector may make this method too imprecise for planning and budgeting needs.

The second method is very detailed. What is done is to break the business down into the various enterprises and develop a budget for each enterprise. This entails developing a cropping plan -- including the acres, expected yields, and total production (if the producer has sufficient data on yields, use them or use a county or area average). In addition to yields and output prices, the preparer must estimate the seed, fertilizer, chemical, labor, and other input requirements and associated costs. A livestock plan is prepared much in the same manner as the crop plan. The expected production associated raised or purchased livestock must be estimated. The costs of operating the livestock enterprises must be determined and the marketing activities, with quantities and prices, must be estimated. The livestock plan requires careful consideration. As the crop program decided upon, determining sales prices for products may be the most frustrating requirement.

Other items which must be addressed are: crop usage and feed requirements; capital expenditures and repairs; projecting intermediate and long-term low payments; and lastly, the family living budget.

Planning crop usage and feed requirements involves estimation of supply (inventory plus production) and calculation of seed and feed use. Knowing the feed requirements for livestock will assist in determining surplus quantities of grain and hay which can be marketed. It will also assist in identifying feed or grain shortages which require purchase of supplies to meet feeding requirements.

It is important that producers have a capital replacement and repair plan. Rather than wait until machinery, equipment, or buildings become unusable, so that the producer is faced with large replacement costs, a schedule for replacement should be developed. There may be production years when replacement is not feasible due to low income but it is important to plan replacement of capital assets over the long term. Planning for capital replacement and regular, annual contributions to a reserve for replacement will help one avoid big dollar outlays in the year of replacement. The anticipated capital purchases and repairs for the upcoming production year should be accounted for in the cash flow budget.

Repayment of debt is also an important element to account for in the budgeting process. This element may be difficult to estimate for loans with a variable interest rate structure. If one anticipates buying capital assets in the upcoming year and financing the purchases, then the loan repayments (principal and interest) should be included in the cash flow budget. Lenders will be able to provide assistance when the preparer is projecting his debt repayment schedules.

Lastly, agricultural families should plan their living costs, just as other people should. Farm families have educational, food, clothing, housing, utilities, and other expenses just as non-farm families do. It is very important not to overlook this aspect of the cash flow preparation process. As much attention should be directed at this aspect as one would spend in determining a budget for the other components.

The two methods of preparing a cash flow budget suggested earlier are effective. However, the second method provides more detail and is more effective as a management tool. A starting point for those who have not prepared a cash flow budget before would be

to use the first method. For some producers with only one or two enterprises (e.g., dryland wheat and sorghum) the first method is sufficient. However, producers with multiple enterprises may find the second method more useful and meaningful to their management needs.

Use and Analysis

The cash flow statement has a number of uses. The most important use is for planning. It provides an estimate of how the farm or ranch business will be operated for the next production period/year. It also establishes definite expectations that can be utilized as the framework for measuring or monitoring performance over the time period for which the cash flow statement was prepared.

Monitoring is particularly important if the cash flow statement/budget is to be followed closely. Monitoring periodically (e.g., monthly) allows the farmer or rancher to identify potential cash flow problems. For example, if a rancher observes that his veterinary expenses are exceeding what was anticipated, he can adjust cash outflow in other areas to keep within his budget. A primary use of the statement is to identify cash flow difficulties when they are occurring. Once a cash flow problem has been identified, corrective measures can be instituted. Many times such problems go unnoticed until severe cash shortages occur. The cash flow statement can greatly assist the farmer or rancher in maintaining sufficient liquidity in the business. This, of course, assumes the preparer closely monitors and adheres to the cash flow budget in a timely manner.

Another important use of the cash flow statement is the projection of revenue and expenses for a projected (pro forma) income

statement.¹ Since a cash flow statement does not reflect profitability or loss, it is important to associate pro forma cash flow with a pro forma income statement. The uncertainty of prices, yields, cost, etc., makes this technique rather difficult. It is important that a set of assumptions or estimates is made concerning these unknowns. It would be extremely useful to use several different sets of assumptions based on an optimistic outlook, the status quo, and a pessimistic outlook. Also, care must be taken to identify all costs which must be charged to the operation. Data on inventory changes and depreciation are also necessary to complete the income statement. The cash flow statement (both actual and projected) is integral to preparing a profit or loss (income) statement.

The cash flow statement is particularly important for the evaluation of borrowed capital and the estimation of ability to repay. The cash flow statement (projected) identifies the level of capital necessary to operate the business, the requirement for borrowed capital, and the best method or time to repay the loan. The cash flow statement will identify the periods of time (e.g., months) where cash surpluses or shortages are expected to occur. Having such knowledge will greatly assist the lender in evaluating credit needs and repayment capacity. For agricultural producers using line-of-credit financing, cash flow statements are extremely useful.

If producers are considering new enterprises in the business, a cash flow statement will determine the impact on the cash flow. Adding, adjusting or eliminating an enterprise(s) will change the current flow of receipts and expenses. Projection of cash

¹ An income statement reflects the profit or loss for the business for a given time period. For agricultural producers this is normally a calendar year.

flows with changes in the farm business greatly facilitates management of operations.

Lastly, management of cash surpluses is important to agricultural producers. If cash surpluses occur one may be concerned with investing these temporary funds in money market instruments (bonds, commercial paper, etc.). Producers must take advantage of the available financial options when cash surpluses exist. Interest earnings on such funds will add to the overall financial position of the business.

Management Uses

A cash flow projection has several features that make it especially useful as a management tool:

- The projected cash flow analysis formalizes the planning process for next year and provides a basis for developing other projected financial management tools such as the income statement and balance sheet.
- It provides an estimate of borrowing requirements and repayment capacity and scheduling, and
- It allows you to monitor actual cash flow and identify potential problems.

Once farmers/ranchers become familiar with a cash flow analysis, they will find it is a necessary reference and planning tool. Some microcomputer accounting systems have the ability to prepare a cash flow analysis or the use of an electronic spreadsheet can accomplish the same objective. Such software programs provide valuable management information.