CASH FLOW BUDGETING

A cash flow budget is an important tool for financial management. It is a projection of the sources and uses of cash in the farm business for the coming year. It helps in predicting cash short falls, planning when products should be sold, and estimating credit needs.

The objective of this lab is to learn the steps in developing a cash flow budget, by projecting your cash inflows and outflows for year 9 of Farmsim. You will need your Years 1-8 printouts and your Farmsim Explanation handout. In particular, use your Year 8 Cash Flow Summary as a guide.

A spreadsheet program to help you make out your budget is available on the Economics 330 home page under LABS. Load the spreadsheet by clicking on: Econ 330 at http://www.econ.iastate.edu/faculty/kliebenstein. You will need to have Excel on your computer. Lotus 123 might work, too. You can also use it in the microcomputer lab in 68 Heady. See back page for instruction for 68 Heady. You may want to take a diskette along to save your worksheet, in case you want to revise it later, or work on it elsewhere. You cannot save your budget on the computer in the lab, though.

The following instructions will be helpful. Read them carefully before you start. Then follow them step by step.

ENTERPRISE BUDGETS

First go to the sheet named Enterprise Budgets. Enter the number of acres of each crop you intend to grow, and your expected yields based on the first 8 years. The average corn yield was 132 bushels per acre while soybean yield was 43 bushels per acre. Enter numbers in the yellow shaded cells, only.

Also enter how many acres of each crop you will rent under a crop share lease, if any (the spreadsheet will adjust for the owner’s share of production and input costs).

Now enter the sow units of farrow-to-finish hogs you will have, if any), and the number of cattle that you bought at the end of year 8, if any, under the type and ration you chose.

Now go to the Cash Flow Budget sheet.

CASH INFLOWS

Operating

For sales of previous years crops, enter your carryover inventory of corn (minus bushels needed for feed) and soybeans from year8. Don’t worry about corn silage, since it can’t be sold. Estimate the bushels of corn that will be needed for feed for cattle and hogs. Include 75 percent of the bushels needed for your hogs in year 9 (the other 25 percent can come from new crop corn harvested in October), and 100 percent of the bushels needed for the cattle that you have. Use your past records and information in the Farmism Explanation as a guide. Estimate selling prices based on the information below.

<table>
<thead>
<tr>
<th>Average Prices for Years 1 - 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring corn-bu.</td>
</tr>
<tr>
<td>Fall corn-bu.</td>
</tr>
<tr>
<td>Spring soybeans-bu.</td>
</tr>
<tr>
<td>Fall soybeans-bu.</td>
</tr>
<tr>
<td>Steer calves-lb.</td>
</tr>
<tr>
<td>Yearling steers-lb.</td>
</tr>
<tr>
<td>Finished cattle-lb.</td>
</tr>
<tr>
<td>Hogs-lb.</td>
</tr>
</tbody>
</table>
For **this year’s crop sales**, use your projected bushels from the Enterprise Budgets sheet as a maximum to sell. You may want to leave this blank until you see what your estimated net cash flows look like at the end of the year.

Under **cattle sales**, enter the number of cattle you bought at the end of year 8, minus one percent for possible death loss, and the final selling weight (1150 lbs. for calves, 1250 lbs. for yearlings). Yearlings will be sold in *June* and calves in *September*.

For **hog sales**, use the number of pigs from your year 8 closing inventory for Jan.-June sales (check your year 8 Hog Summary). For July-Dec. sales, use your estimated pigs per litter multiplied by your number of sows, then subtract pigs that will be retained as replacement gilts.

\[
\text{_____ pigs per litter} \times \text{ _____ litters} - \text{ replacement gilts} = \text{to sell}
\]

Under **Sows and Boars**, assume you will sell the same number as in Year 8, in *July*.

You must now allocate the sales among the six periods. You can change the timing of your grain sales later, if you want, after you see your estimated net cash flows. As a check, the values in the Check column should all be zeroes.

Under **Capital Asset Sales**, if you plan to trade machinery sets or a combine, enter the value of the present machines (from your Year 8 Net Worth Statement) under Machinery Sale or Combine Sale. Trades take place in January.

Under **New Loans**, if you plan to borrow money to buy machinery or a combine, enter these amounts, in the total column and in January. If you expect to borrow money to buy cattle, enter this amount in the total column and in December. Check the Cattle Purchases line below first, though. You can’t borrow more than the total purchase cost of your cattle.

**CASH OUTFLOWS**
**Crop and livestock operating costs** are calculated automatically, from information you entered in the Enterprise Budgets sheet. Allocate these among the six periods until the Check column values are all zero. Use your best judgment about when expenses are most likely to occur.

Enter the number, weight, and expected price of any **feeder cattle** that you want to buy in December.

You can estimate and enter the **other costs**, starting with fuel and oil, using your Cash Flow Summary and other information from year 8. Enter values in the Whole Year column first, then allocate them among the six periods.

If you don’t own a combine, **custom combining** costs $25 per acre, payable in November.

Enter **cash rent** at $100 per acre, or use your actual bid. Cash rent is due half in March, half in December.

**Property taxes** and **insurance on buildings** are paid in March and September.

Estimate your **hired labor** expense at $10 per hour, for the hours you need to hire.

If you plan to invest in a new machinery set or a combine, enter their expected purchase costs under **Purchases of Capital Assets**. Cost information is contained in the Farmsim Explanation.
Use the table below to estimate your **Loan Payments** and interest expense for next year. Your next principal payments are found on your year 8 Net Worth Statement, in the Current Liabilities section. Calculate interest on the **total** owed, both current and intermediate or long-term, including any new machinery loans you plan on taking out in Year 9.

Calculate the interest for a full year, except for cattle. Cattle loans are due in the same month that the cattle are sold, so interest accumulates only from December until June or September. All other loan payments are due in December.

Do not include your carryover operating loan balance here, if you have one. Your operating loan will be entered later.

<table>
<thead>
<tr>
<th>Loan</th>
<th>Next Principal Payment</th>
<th>Total Principal Owed</th>
<th>Interest Rate</th>
<th>Interest to Pay</th>
<th>Month Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeder cattle</td>
<td>_____</td>
<td>_____ x</td>
<td>9% =</td>
<td>_____</td>
<td>June or Sept</td>
</tr>
<tr>
<td>Machinery</td>
<td>_____</td>
<td>_____ x</td>
<td>9% =</td>
<td>_____</td>
<td>Dec</td>
</tr>
<tr>
<td>Combine</td>
<td>_____</td>
<td>_____ x</td>
<td>9% =</td>
<td>_____</td>
<td>Dec</td>
</tr>
<tr>
<td>Swine facilities</td>
<td>_____</td>
<td>_____ x</td>
<td>9% =</td>
<td>_____</td>
<td>Dec</td>
</tr>
<tr>
<td>Land</td>
<td>_____</td>
<td>_____ x</td>
<td>10% =</td>
<td>_____</td>
<td>Dec</td>
</tr>
</tbody>
</table>

Enter Total Interest to Pay under Operating Expenses:  $__________

Under **Nonfarm Expenditures**, enter your estimated family living costs. Income taxes (check your Income Tax Report for year 8) must be paid in March.

**ANNUAL SUMMARY**

Under **Summary**, enter your cash balance (cash on hand) from the end of year 8, under **Beginning Cash Balance**. If you have some carryover operating loan from the end of year 8, enter the balance under Operating Loan Balance, **Beginning Balance**.

Now it's time to analyze your budget. Is the projected **Ending Cash Balance** in the **Whole Year** column positive or negative? (Don't worry about the monthly balances yet.) If it is positive, go on. If it is negative, you have several options:

a) Sell more grain. Revise the values at the top of the spreadsheet, under sales of new crop grain.

b) Sell market hogs early. Use the “Sell hogs early,” line at the top. Check your last hog summary to see how many you might have at the end of the year.

c) Carry over some operating debt. To show this, enter the necessary dollar value under **New Operating Loan Received**, in December.

d) Borrow funds by refinancing against your land. To show this, enter the necessary amount under **New Loans, Loan Against Farmland**, to be received in December.

e) If you were planning a purchase of machinery or a combine, you may have to postpone it until year 5, or increase the amount you plan to borrow to make these investments if you are not already planning to borrow the maximum.

f) Borrow more of the cost of feeder cattle, if you are not already at 100 percent.

Try one or more of these options until you project a positive Ending Cash Balance for the **Whole Year** column.

Now you need to project a positive ending cash balance at the end of each one of the two-month periods. Budget for an ending cash balance of at least $1,000 in each period, to allow some margin for error.
BIMONTHLY SUMMARY
Is the Ending Cash Balance at least $1,000 in each period? If so, congratulations---you are done! If not, you need to:
   a) Shift the timing of grain sales, or
   b) Borrow some New Operating Loan Received funds in the cash deficit periods, and show repayment (Repay Operating Loan) in the cash surplus periods. Note that the interest on the new operating loans is calculated automatically.

Continue to adjust your budget until you can project at least a $1,000 ending cash balance for each period as well as for the entire year.

Print your Enterprise Budget sheet and your Cash Flow Budget sheet (2 pages) and attach them to this lab. Answer the questions below.

a. Which period has the most negative projected Net Cash Flow? ______________

   Which period has the most positive projected Net Cash Flow? ______________

b. What actions did you take to achieve a positive projected cash balance for the total year?

c. What actions did you take to achieve a positive projected cash balance for each period?

d. How large will your spring operating loan request need to be for year 9? Look at the New Operating Loan Received line for January through August.

   $ ___________________

e. Is your projected Ending Balance for your operating loan larger or smaller than your operating loan Beginning Balance?

   __________________________

   By how much?

   $ ___________________

f. If you were arranging a line of credit with a lender, what is the maximum operating loan ending balance you would need during any one period? When would the maximum outstanding balance occur?

   $ _______________ in ____________ (months)
Instructions for Economics 330, Lab #12
In Heady 68

1. To load the file:
   a) Double click on the classes icon.
   b) Double click on the Econ 330 icon.
   c) Double click on the Kliebenstein icon.
   d) Click on cashflow2001.xls.

2. To print the worksheet, click on the printer icon, then click on **OK**. Your copy will print on the laser printer.

3. If you want to save the worksheet, put your own 3.5" disk in the external disk drive. If you need help ask the lab monitor.

   YOU CANNOT save your own budget on the lab computer -- there isn't room.

4. To exit the program, double click on: \( \backslash \) in upper right hand corner.