



Ministry of Agriculture

120 Head Cow-Calf Enterprise Smithers Fall 1998 Agdex 422 - 810

#### Introduction

The planning process provides producers the opportunity to look at their operation as a group of distinct enterprises. Alternative enterprises should be evaluated on the basis of **Contribution Margin**, taking into consideration resource constraints, market opportunity, risk and uncertainty.

The Contribution Margin must provide funds for interest, overhead and other indirect expenses as well as a return for living expenses, loan repayment and investment. These items should be included in the overall farm plan which will include a Projected Income Statement and Projected Cash Flow Statement.

## **Key Factors Affecting Profit**

| Target               |                |
|----------------------|----------------|
| Weaning Weight       | 580 lbs/steer  |
|                      | 545 lbs/heifer |
| Calves Weaned as %   |                |
| of Cows Overwintered | 94.5%          |

For heavy fall calf weights high quality forage should be available to the calf, especially in the three month period prior to weaning.

To wean a 94.5% calf crop requires open cows to be culled in the fall, a good calf health program and good husbandry practices. Meeting the nutritional requirements of the cow particularly prior to and right after calving will increase the conception rate and thus reduce the number of open cows.

Shrink reduces profit through weight loss, therefore it is important to minimize animal stress levels through proper handling procedures during marketing.

Forage used by the cow-calf enterprise has been transferred from the crops enterprise at market value.

### Marketing Alternatives

Calves are usually marketed in the fall. They may be sold privately to a livestock buyer or a feeder. Often they are sold through a central market either through an auction sales yard or by computer. All methods involve shrink and weighing conditions which are key factors affecting the net market returns. When budgeting, it is imperative to use average prices, not just the price for an exceptional lot or the best market price received.

## Cash Flow Timing

|             | $\boldsymbol{J}$ | F | M  | $\boldsymbol{A}$ | M | $\boldsymbol{J}$ | $\boldsymbol{J}$ | $\boldsymbol{A}$ | S | 0 | N  | D  |
|-------------|------------------|---|----|------------------|---|------------------|------------------|------------------|---|---|----|----|
| %Inc        |                  |   |    | 5                |   |                  |                  |                  |   |   | 95 |    |
| %Inc<br>%Ex | 4                | 2 | 16 | 3                | 5 | 5                | 5                | 4                | 5 | 6 | 2  | 15 |

The above information indicates the timing of monthly flow of funds included in the Contribution Margin only. A complete Projected Cash Flow should include indirect expenses, capital sales and purchases, loans and personal expenses.

#### Rules of Thumb

| Total Assets per Cow (less than) | \$5,000  |
|----------------------------------|----------|
| Direct Expense % of Income 3     | 0% - 40% |
| Debt per Cow (less than)         | \$700    |

The above indicators are provided for comparison purposes. They are set out as **potential targets** for cow-calf production. These indicators have been realized by the top third of the ranchers who participated in the Cow-Calf Farm Business Analysis program 1989 - 1993.

Contact: DAVE RIENDEAU, P.Ag.

District Agriculturist Williams Lake ROGER KEAY, P.Ag.

Business Management Specialist

Kamloops

# COW - CALF RANCH Target - 520 lbs/cow wintered

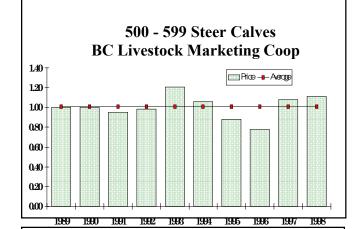
## Contribution Margin Per 100 Cows Smithers

| Smithers                      |       |          |                 |          |  |  |
|-------------------------------|-------|----------|-----------------|----------|--|--|
| Income                        |       | Avg      | Price           |          |  |  |
| Theome                        | Head  | Weight   | /lb             | Income   |  |  |
| Steers                        | 47    | 570      |                 | \$29,654 |  |  |
| Heifers                       | 24    | 500      | 1.005           | 12,059   |  |  |
| Cull Yearling Heif            |       | 800      | 0.922           | 2,951    |  |  |
| Cull Cows                     | 18    | 1,110    | 0.498           | 9,952    |  |  |
| Cull Bulls                    | 1     | 1,850    |                 | 1,126    |  |  |
| Less Bull Purchase            | _     | 1,000    | 2,000           | (2,000)  |  |  |
| Total Income                  |       |          | _,              | \$53,742 |  |  |
|                               |       |          |                 | 400,1    |  |  |
| Direct Expense                |       | <b>.</b> | ъ.              | m . 1    |  |  |
|                               | Head  | Input    | Price           | Total    |  |  |
| **                            |       | -        | / Unit          | Expense  |  |  |
| Hay:                          | 100   | Tons     | Φ <b>7</b> 5.00 | Φ21 (00  |  |  |
| Cows                          | 100   | 2.88     |                 | \$21,600 |  |  |
| Bulls                         | 4     | 3.42     | 75.00           | 1,026    |  |  |
| Repl Hfr Calvs                | 24    | 1.53     | 75.00           | 2,754    |  |  |
| Pasture:                      | AU    | Mons     | AUM             |          |  |  |
| Spring                        | 124   | 0.75     |                 | 930      |  |  |
| Fall                          | 0     | 0.00     | 10.00           | 0        |  |  |
| Barley:                       | 0.0   | Lbs      |                 |          |  |  |
| Cows                          | 80    | 0.00     | 0.091           | 0        |  |  |
| Bred Heifers                  | 20    | 125      | 0.091           | 228      |  |  |
| Bulls                         | 4     | 180      | 0.091           | 66       |  |  |
| Repl Hfr Calvs                | 24    | 360      | 0.091           | 786      |  |  |
| Grazing Permit                | 123   | 4.25     | 2.03            | 1,061    |  |  |
| Feed Supplements              |       | Days     |                 |          |  |  |
| Min. & Salt                   | 128   | 365      | 0.022           | 1,045    |  |  |
| Supplies & Service            |       |          | Cow             |          |  |  |
| Bedding                       | 100   |          | 3.00            | 300      |  |  |
| Livestock Spls                | 100   |          | 2.00            | 200      |  |  |
| Vet & Medicine                | 100   |          | 20.44           | 2,044    |  |  |
| Machinery Operat              |       |          |                 |          |  |  |
| Fuel and Oil                  | 100   |          | 12.40           | 1,240    |  |  |
| R & M                         | 100   |          | 12.40           | 1,240    |  |  |
| Marketing                     | Head  |          | Head            |          |  |  |
| Trucking                      | 94    |          | 10.00           | 940      |  |  |
| Mktg Charges                  | 94    |          | 15.00           | 1,410    |  |  |
| BIDB, Brand Ins               | p. 94 |          | 2.75            | 259      |  |  |
| Total Direct Expense \$37,128 |       |          |                 |          |  |  |
| Contribution                  | 5     | \$16,613 |                 |          |  |  |

# Buildings, Machinery and Livestock Investment Farm Size - 200 Cultivated Acres

(Does not include haying equipment)

| Buildings | \$30,000  |
|-----------|-----------|
| Machinery | 25,000    |
| Cow Herd  | 130,000   |
| Vehicles  | 4,000     |
| Total     | \$189,000 |



# Contribution Margin -Sensitivity Analysis

The table below lists the changes to Contribution Margin as the weaning weights, weaning percentage and steer price varies.

| Steer<br>Price | Weaning Weight Steers (Heifers 35 lbs less) |        |        |        |  |
|----------------|---|--------|--------|--------|--|
|                | 53 <b>0</b>                                 |        | 570    |        |  |
| \$0.90         | 3,507                                       | 4,736  | 5,965  | 7,194  |  |
| 1.00           | 8,370                                       | 9,741_ |        | 12,483 |  |
| 1.11           | 13,568                                      | 15,090 |        | 18,136 |  |
| 1.20           | 18,094                                      | 19,749 | 21,405 | 23,060 |  |

| Percent | (Heifer 35 lbs less) |        |        |        |  |  |  |
|---------|----------------------|--------|--------|--------|--|--|--|
|         | 530                  | 550    | 570    | 590    |  |  |  |
| 90.0%   | 12,050               | 12,980 | 13,877 | 14,750 |  |  |  |
| 92.0%   | 13,105               | 14,067 | 14,994 | 15,897 |  |  |  |
| 94.5%   | 14,632               | 15,641 | 16,613 | 17,560 |  |  |  |
| 96.0%   |                      | 16,228 |        | 18,179 |  |  |  |

Weaning Weight Steers

This information is provided as a guideline only. **Target yield indicates above average production.** An individual plan should be developed by each producer. Planning forms may be obtained from your local office of the BC Ministry of Agriculture and Food.