COMPREHENSIVE GUIDE TO FARM FINANCIAL MANAGEMENT

Module 10: Combined Financial Statement Analysis

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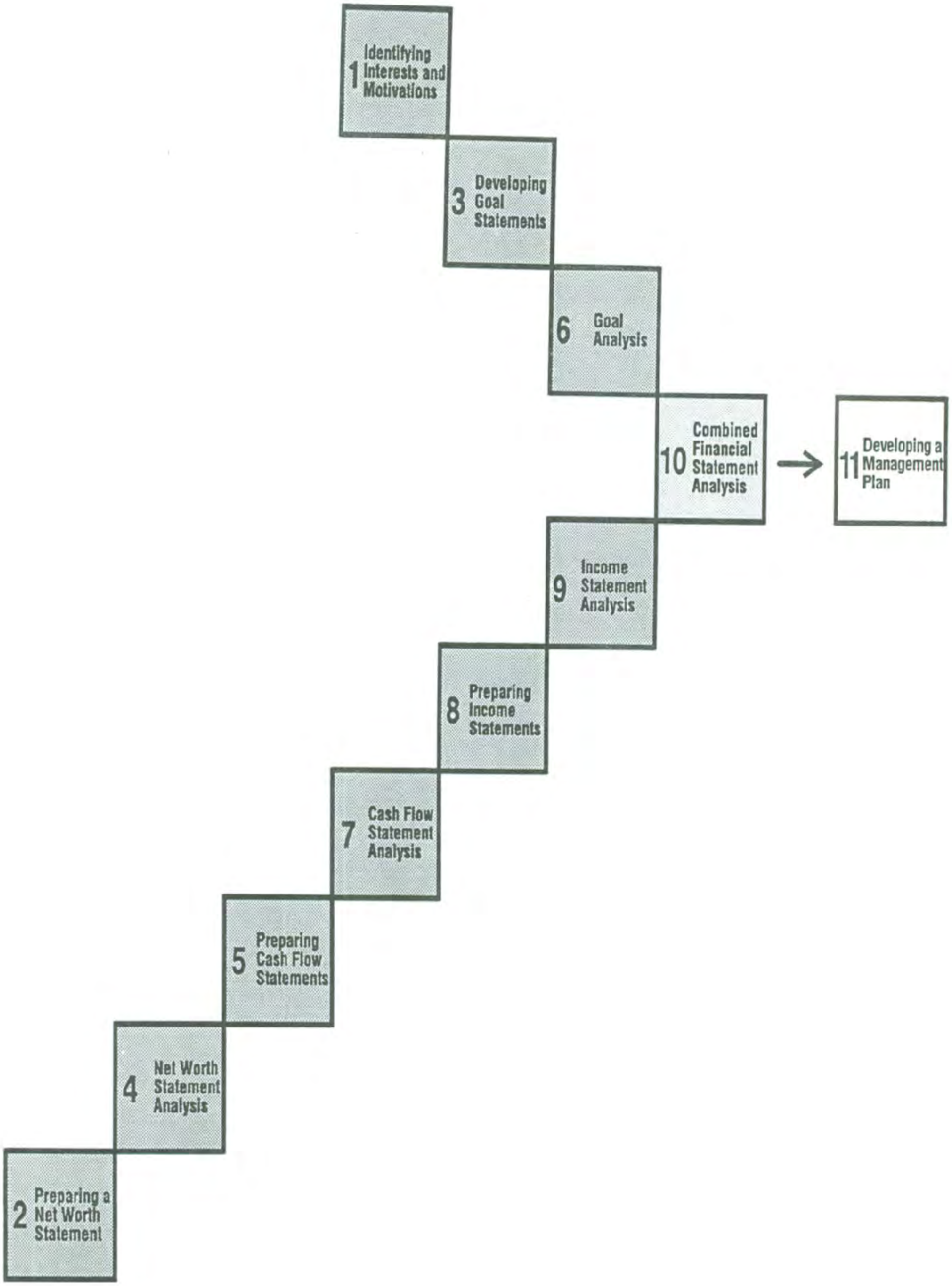
Government of Saskatchewan

Course Map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Combined Financial Statement Analysis

Introduction

Combined financial statement analysis allows the team to identify strengths, weaknesses and opportunities in the farm business. This information identifies financial resources available to pursue team goals. Goal choices can be finalized as the financial requirement of each team goal is compared with the financial resources available. Goals that ‘survive” analysis are the Prioritized Management Team Goals - the most suitable goals for the management team.

Performance Objectives

Upon completing the material in this module you will be able to:

- combine the analysis of financial statements to measure the financial resources available to the team;
- make goal choices based on financial resources available to the team; and
- develop Prioritized Management Team Goals.

Financial Statement Analysis

Financial statement analysis is a learned skill. Think of it in the same manner as learning to operate a new farm implement or growing a special crop for the first time. These skills can be acquired and once mastered and applied they pay big dividends. Financial statement ratios used in analysis are no different than production ratios commonly used in farming every day such as yield per acre, pounds gained per day, percentage calf crop, piglets weaned per litter, etc.

Good financial statement analysis accomplishes three things:

- identifies trends (positive or negative) for the business

- provides the opportunity to study projected plans so decisions can be made "on paper" before dollars are committed

- monitors goal pursuit throughout the year

Financial analysis ratios generated for the farm can be compared with benchmarks or industry standards. However, it is more valuable to compare your farm business against itself over a period of years. This identifies trends while recognizing the uniqueness of your farm, its enterprises and the management skills of team members.

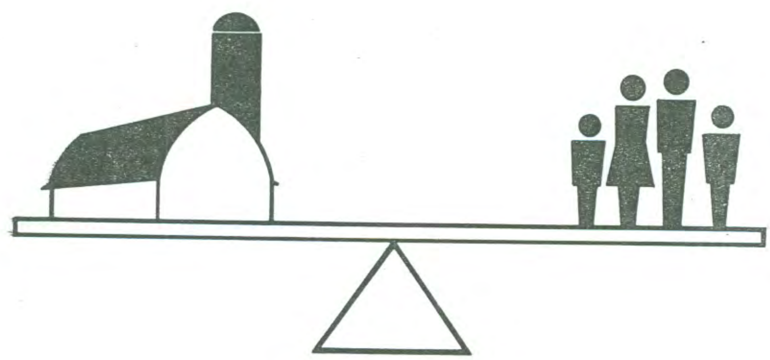
When undertaking analysis, remember that decisions are no better than the information they are based upon. Incomplete or inaccurate information can lead to poor decision making that can have long lasting effects.

There is no substitute for good judgment or common sense. Learning from past experiences provides managers with information on how certain situations will function on their particular farm. Combining good judgment and common sense with financial statement analysis increases decision making ability.

Putting It All Together

It is extremely important to make decisions based on analysis of all financial statements presented in this course. Each statement has limitations when used as a sole source of decision making information. When information from analysis of all statements is combined in a systematic process, the ability to make informed decisions is greatly improved. Think of it as conducting a checkup on the financial health of the farm using all available tools.

When analyzing your financial statements, recognize the distinct and special relationship between the farm and the family. Claims on farm income for family living expenses can be substantial and may or may not be offset by non-farm income earned by family members. The values and interests of team members affect how resources are allocated to achieve farm versus family goals. They play the biggest role in how farm profits are allocated.



Let's use Diane and John as an example to illustrate the process of combined financial statement analysis. You may want to review previous financial statement analysis modules before continuing with this section.

Solvency

The first financial health indicator to consider is solvency. It is found in the Net Worth Statement. In order for the business to continue, it must be solvent - assets must be greater than liabilities. The degree of solvency (amount of net worth) varies for any particular farm, depending on the enterprises associated with it and the stage of farm development (a new versus established farm).

When analyzing solvency over a period of years, determine which way the solvency trend is headed and find out why. Make allowance for significant changes in solvency caused by large changes in the value of non-depreciable fixed assets (like land). Often land values are affected by factors other than productivity. This can cause major changes in net worth. Recognizing the contribution of changing fixed asset values to net worth can prevent a distorted view of a solvency trend - either positive or negative. A Balance Sheet provides a better method to evaluate solvency trends (see page 4-30).

Solvency should increase over time. The increase should be due to business profitability. Family living expenditures make substantial claims on farm income and can reduce solvency over a period of time. Reducing solvency is not a desirable situation; however, it is common in agriculture during periods of low profitability (you've often heard of the term "living off depreciation").

If the long term trend (five years plus) does not indicate an increase in solvency arising from business profitability (as defined by owner's equity on the Balance Sheet), corrective action needs to be taken. The farm cannot continue to erode equity with the hope that things will "turn around", or there will be a major increase in land values so you can "cash in".

Let's look to the Blakes. Their beginning and ending Net Worth Statement (page 8-28) indicates their operation is solvent. Net worth increased over the year by $21,277. However, not all the Blakes income comes from the farm. Diane's part time job at the school generates $16,000 of net income. If it was not available, their net worth increase over the period would be reduced by that amount.

While their solvency trend is positive, Diane's off-farm income is a major contributor. This presents several concerns for the Blakes. One of their goals is to have Diane terminate off-farm employment after the baby is born. Another is to purchase land from George and Hazel. Also, extra income is required to undertake continued expansion of their farm.

The Blakes do not have a large amount of capital assets but they plan to buy more as their farm grows. This further exposes them to risks inherent in agriculture. Their solvency position is reasonably strong but it cannot be determined yet if they have the financial resources necessary to pursue their goals.

Liquidity

Liquidity is required so current debt obligations can be met with saleable farm production. If the farm is not liquid, some method of current debt consolidation is required to alleviate the problem (see pages 4-16 to 4-18).

Liquidity has a strong tie to the Accrued Income Statement and is often used as a quick indicator of business performance. Liquidity measurements do not recognize claims on available cash and near cash items for family living expense, nor do they recognize the potential injection of non-farm income. Once again, the balance between farm and family becomes an important factor.

Upon examining the Blakes beginning and ending Net Worth Statement (page 8-28), you find they have a desirable liquidity position (a Current Ratio greater than 1) at both the beginning and end of the year. Working Capital increased over the period by approximately $10,000.

Excess liquidity only indicates the ability to meet current debt commitments. It does not give a good base on which to make goal choices. Further analysis of the Blake's financial situation is required.

Profitability

You want the farm to make a profit but how much is required? In the analysis of income statements you learned that family living expenses, income tax and debt repayment place claims on profit in a hierarchical order. Remaining funds are available for growth, re-investment in the farm, or savings.

In order to determine a level of profitability suitable for your farm and family, prepare a projected Accrued Income Statement and an accompanying projected Debt Service Capacity Worksheet. Base your calculations on:

- your production plans for the coming year
- your estimate of non-farm income (if any)
- your estimate of family living costs, farm income tax and projected debt repayment

The projected Margin for Growth identifies funds available to be used in achieving farm and family goals you have set. If the margin is insufficient, corrective action needs to be taken immediately. This could take the form of:

- a reduction in the number or level of goals set
- a change in production plans to produce more net income
- a reduction in family living expenditures
- an increase in non-farm income

A negative Margin for Growth dictates even more urgency for corrective action. If farm profitability cannot be increased sufficiently, non-farm income increased, or family living costs significantly reduced, a major restructuring of present debt repayment must be undertaken. This involves spreading out debt repayment over a longer period of time to reduce yearly payments (see pages 4-16 to 4-18).

A new projected Accrued Income Statement and Debt Service Capacity Worksheet (incorporating new term debt repayment) needs to be prepared if goals you have set require borrowed funding. They provide information to determine if the business can generate sufficient profit to undertake the new venture(s). If not, goals need to be reduced in number and/or level.

Let’s examine the Blake’s situation. Their Accrued Income Statement (page 8-34) indicates an Accrued Net Farm Income of approximately $41,000. This may seem like a very acceptable amount. However, both the farm (through debt repayment requirements) and the family (through family living expenses) make claims on this income.

Examine the Blake’s Debt Service Capacity Worksheet (page 9-37). They have a Margin for Growth of $9,666. Diane’s off-farm net income contributed a major portion of income available to service debt. Without her contribution, the Blakes would have a serious shortage of Debt Service Capacity.

Depreciation is also an important factor to consider. The depreciation charge of $4,400 is non-cash cost and is therefore income available to service debt. The Margin for Growth must provide funds necessary for replacing depreciable assets. If it is insufficient to allow for replacement over time, business assets will wear out and no longer be productive.

As they reflect on the information found in their Debt Service Capacity Worksheet, Diane and John realize they have to reevaluate some of their goals.

Cash Flow

So, you’ve determined that your farm business has an increasing solvency trend, a Current Ratio greater than 1 and a positive projected Accrued Net Farm Income. Margin for Growth is positive even after taking into account loans required for a new tractor and an addition to the house. Time to go for it, right? Not quite.

Remember, all these financial indicators are based on accrued calculations. Farmers continually face uncertainty of market availability and price expectation. While Accrued Net Farm Income and the Margin for Growth may be satisfactory, the conversion of saleable production into cash may involve a significant time lag. Here is where it is necessary to consider information from analysis of a Projected Cash Flow Statement.

A Projected Cash Flow Statement recognizes the time lag between production of goods for sale and their actual sale (conversion into cash). Farms can have good profitability, debt service capacity and liquidity but still face cash flow shortages because of the time lag between production and marketing. Since the Projected Cash Flow Statement records all cash flowing into and out of the farm, it can be used to identify a period of cash surplus or cash deficit. If a cash shortage exists:

- Are savings available to make up the shortfall or is an operating loan required?
- Should efforts be continued towards achieving goals at the expense of a reduction in savings or an increase in operating loan requirements?
- Can marketing be improved in order to improve cash flow?

The Cash Flow Statement recognizes the tie between farm and family, since family living expense and net non-farm income are recorded in the Statement.

Lack of cash flow can be the biggest stumbling block to achievement of farm and family goals, even if the operation is making a healthy profit. Cash flow shortages may prevent you from taking advantage of opportunities when they are presented. This can hinder chances for farm expansion or family opportunities. Careful study of past actual cash flows will allow you to determine traditional periods of cash surplus or cash deficit. Once these periods have been identified, evaluate strategies which can "smooth out" cash flow. This allows for a smaller drain on savings (or a reduction in operating loan requirements) in cash deficit periods. You will also be better prepared to take advantage of unforeseen opportunities that may arise.

Examine the summary section of the Blake's Cash Flow Statement (page 5-35). They require a reasonable amount of operating funds for the year 20X1, with a peak of approximately $15,500 in the third quarter. Their requirements taper off significantly in the fourth quarter. This fits well for their situation because they have a good amount of working capital at the end of the year (see their ending Net Worth Statement on page 8-28).

Making Goal Choices

Combined financial statement analysis is used to determine if financial resources are available to achieve team goals. In Module 6 (Goal Analysis), the financial requirement of each goal was determined. Comparing this information, the finances required by goals with the actual financial resources available provides the team with the knowledge to make informed goal choices.

Let's look at how the Blakes used combined financial statement analysis to make goal choices.

When Diane and John reviewed their financial statements, they found a positive solvency trend, desirable liquidity, strong Accrued Net Farm Income, a positive Margin for Growth and reasonable cash flow.

Diane and John determined that two highly desirable goals for their team are:

- (H) to purchase the land from George and Hazel in the next ten years (a Long Term Farm Goal)

- (H) to have Diane terminate part-time employment by December (a Short Term Family Goal)

These goals conflict with one another - purchasing the land requires funding, while having Diane terminate her part-time employment eliminates a source of income. Goal choices or changes need to be made. Some of the options Diane and John identified are:

- increase farm income

- reduce farm expense

- reduce family expense

- Diane could continue working

They decided to use all the options.

Diane will continue to work for two more years. The income generated by her employment is required in the short term. They will increase farm income and reduce farm and family expense so that she can terminate her off farm employment by June of 20X3.

To increase farm income, Diane and John made these decisions:

1. They have considerable livestock skills and enjoy working with cattle. They already have the long term goal:

    - (M) to expand the cowherd by 25 head over the next five years

    Diane and John changed the rank to high. They also decided to keep more of their own heifers for replacements to lower costs.

2. Diane and John have the long term goal:

    - (M) to own 20 ewes in three years

    They decided to change the rank to high because it is an income earning goal. They did consider increasing the size of the flock. However, since Diane is the person most enthusiastic about this goal, she decided to keep the goal modest. Her work, family responsibilities and lack of experience raising sheep combined to make her realize that the goal must be kept manageable. She will consider increasing the flock size at the end of three years when she reviews the project.

3. During the winter they will discuss income increasing options with their Regional Livestock Specialist. They will prepare some enterprise analysis budgets to determine costs and returns of potential livestock enterprise scenarios.

4. Diane and John are enthusiastic about the long term goal:

   - (H) to diversify the crop base in three years

   They decided to meet with their Regional Crops Specialist to further investigate cropping options that will increase farm income.

To reduce farm and family expense, Diane and John made these decisions:

1. Diane and John are going to meet with their Regional Farm Business Management Specialist to discuss ideas to decrease farm expense and increase farm income.

2. To reduce farm expense they have decided to discard these long term goals:

   - (M) to purchase an air seeder in three years

   - (H) to purchase a new grain truck by 20X6

   Their present line of machinery is adequate for their needs.

3. Diane and John have the short term goal:

    - (H) to keep track of family living expense for the next year

    This is a good first step toward decreasing family expenses. They want to know where their money is going before they establish a budget. They decided to add the goal:

    - (H) to follow a monthly budget for family living expense starting in January

4. To reduce family expenses they decided to discard these long term goals:

    - (L) to purchase a cabin in ten years

    - (L) to purchase a boat when the youngest child is seven

    Upon examining their “relaxation” goals, Diane and John decided they would rather put their money toward a major family trip and their 25th wedding anniversary celebration. They decided to rent a cabin or use George and Hazel’s camper for summer trips.

5. When Diane and John were discussing upcoming expenses with George and Hazel, they were able to discard these two short term goals:

    - (M) to purchase bedroom furniture for Susie in the next year

    - (L) to purchase a larger kitchen set in the coming year

    When they exchange houses with George and Hazel, they will exchange kitchen sets. As well, George and Hazel want to leave a bedroom suite for Susie as they won’t have room for it in their new home.

Activity

The management team will use their knowledge of available financial resources to make goal choices.

Instructions

To make goal choices using the team's knowledge of available financial resources you require:

- Long Term Goal Planning Worksheets
- Short Term Goal Planning Worksheets
- Farm Business Planner

1. Work as a team.

2. Assess financial requirements of each Management Team Long Term Goal. Using the Long Term Goal Planning Worksheets, review each ranked supporting goal (Column B). Use the information from these Columns:

   Column C - Timing (chronologically in years)

   Column D - Purchases required for goal achievement

   Column E - Total funding required

3. Assess financial requirements of each Management Team Short Term Goal. Using the Short Term Goal Planning Worksheets, review each activity required for goal attainment (Column I). Use the information from these Columns:

   Column J - Timing (months of the year)

   Column M - Purchases required for goal attainment

   Column N - Funding required

4. Use information from the Farm Business Planner to determine if financial resources are available to achieve goals listed on the Long Term and Short Term Goal Planning Worksheets.

instructions continued on next page

Instructions continued…

5. Make any goal choices or changes on the Long Term or Short Term Goal Planning Worksheets.

6. Some new goals may be identified by your team. Complete Module 6 (Goal Analysis) and Module 10 (Combined Financial Statement Analysis) **for each new goal.**

Prioritized Management Team Goals

Modules 6 (Goal Analysis) and 10 (Combined Financial Statement Analysis) provided information to make knowledgeable goal choices. Goal changes have been made on the Long Term and Short Term Goal Planning Worksheets. Goals that “survive” analysis are your Prioritized Management Team Goals.

Prioritized Management Team Goals are goals to which the team is willing and able to commit team members and the use of available resources. They are the most suitable goals for your team and will guide the management of the farm and family.

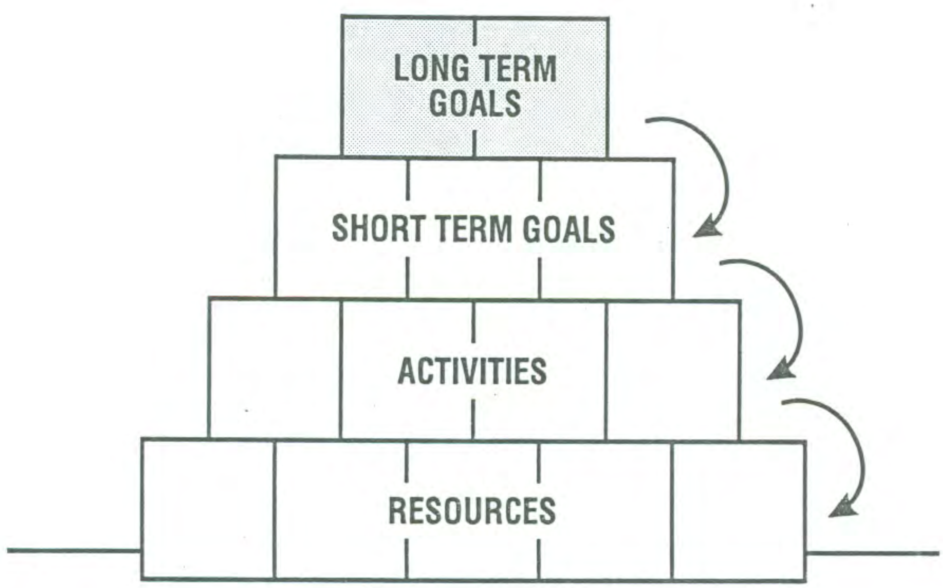
The H-M-L ranking is used for Prioritized Goals. High ranked goals are the most important and/or urgent goals for the farm or family. They are goals to which the team is most willing to commit resources. That does not mean medium and low ranked goals will be ignored. However, if resources are limited, and not all goals can be pursued, high ranked goals receive priority over lower ranked goals.

Prioritized Management Team Goals are grouped by rank.

Prioritized Management Team Long Term Goals

Prioritized Management Team Long Term Goals are goals that **will** guide the management of your farm and family in the future.

They are written statements of the hopes, dreams and aspirations of team members. Prioritized goals have been analyzed and to the best knowledge of the team they are achievable. **These goals are the long range, motivating, driving force behind your management activities and use of available resources.**



Through analysis, Diane and John have made goal choices to develop these Prioritized Management Team Long Term Goals:

Prioritized Management Team Long Term Goals

Management Team: John and Diane Blake **Year:** 20X1

Worksheet # 1 **of 1**

RANK	Prioritized Management Team Long Term Goals
H	to purchase the land from George and Hazel in the next ten years
H	to live out at the farm in five years
H	to improve the shelterbelt so it is well established in ten years
H	to provide a fund for the children's post-secondary education
H	to diversify the crop base in three years
H	to spend Sundays in a relaxing manner as a family unit
H	to encourage active involvement in the farm by all family members
H	to expand the cow herd by 25 head over the next five years
H	to provide a spiritual background for each of the children
H	to own 20 ewes in three years
H	to go on a summer holiday each year
H	to build better calving facility by November 20X5
H	to encourage family members to get physically fit
M	to ensure the transfer of the farm to any child that wants to farm
M	to go on a major family trip before the children leave home
M	to be debt free by the time we are 55
M	to keep an up to date line of machinery to pass on to the children
M	to replace the family vehicle every 150,000 km
M	to purchase a piano in five years
M	to encourage family members to take part in community activities
M	to travel to Hawaii for our 25th wedding anniversary
M	To purchase two 2,000 bushel flat bottom bins by 20X6
M	To build a new shop in ten years

Activity

The team will list the Prioritized Management Team Long Term Goals. Use the worksheets found at the end of this module.

Instructions

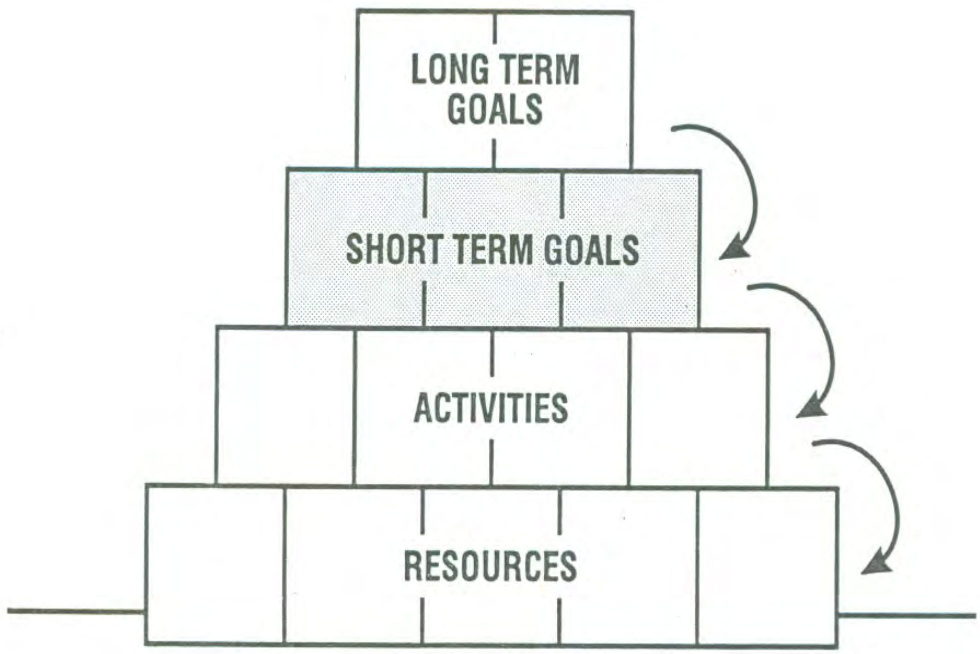
To list Prioritized Management Team Long Term Goals you require:

- Long Term Goal Planning Worksheets

1. Work as a team.
2. Using the Long Term Goal Planning Worksheets list in order of rank the long term goals that remain after goal choices have been made.

Prioritized Management Team Short Term Goals

Prioritized Management Team Short Term Goals are goals that will guide the management of the farm and family in the next one to two years. They are exciting goals because goal achievement is observed in a relatively short period of time. They provide purpose to everyday activities. Many short term goals are building blocks for longer range goals. Successful completion of each short term goal is rewarding and motivates team members to continue pursuing long term goals or undertake new projects.



Through analysis, Diane and John have made their goal choices and changes to develop these Prioritized Management Team Short Term Goals:

Prioritized Management Team Short Term Goals

Management Team: John and Diane Blake **Year:** 20X1

Worksheet # 1 **of 2**

RANK	Prioritized Management Team Short Term Goals
H	to develop a plan for the land transfer by November
H	to purchase some land from George and Hazel by December
H	to move out to the farm in the next one to two years
H	to plan the improvement of the existing shelterbelt by June 20X2
H	to order trees for shelterbelt by July 20X3
H	to prepare site for shelterbelt in 20X2 and 20X3
H	to go to church as a family every week
H	to plan diversification of crop base by April 20X2
H	to grow two 40 acre fields of specialty crops next year (20X2)
H	to commit 100 acres to specialty crops in 20X3
H	to update our wills by March
H	to have Diane terminate part-time employment in June 20X3
H	to consider farm income earning options this winter
H	to repair corral fencing by October
H	to go for a walk or bike ride at least three times a week
H	to take a farm management course this winter
H	to build a cradle before the baby is born
H	to purchase five ewes this fall
H	to keep track of family living expenses for the next year
H	to follow a monthly budget for family living expenses, starting in January
H	to look at different calving facilities in the coming year
H	to plan an education fund for the children by February 20X2
H	to save family allowance for an education fund starting immediately

Prioritized Management Team Short Term Goals

Management Team: John and Diane Blake **Year:** 20X1

Worksheet # 2 **of** **2**

RANK	Prioritized Management Team Short Term Goals
H	to review the education fund in January 20X3
H	to spend Sundays as a family
H	to enroll in a family fitness class this winter
H	to go on a family holiday for three days at the end of July
M	to purchase a 2,000 bushel flat bottom bin next year
M	to clean up the weeds around the bins this summer
M	to register Tommy in a group activity in the community this fall
M	to save $1,000 per year for a major family trip
M	to initiate estate planning by December
M	to plan major family trip this winter
M	to have Diane work with the machinery 1/2 day per week this year
M	to clean up the junk metal pile this summer

Activity

The team will list the Prioritized Management Team Short Term Goals. Use the worksheets found at the end of this module.

Instructions

To list the Prioritized Management Team Short Term Goals you require:

- Short Term Goal Planning Worksheets

1. Work as a team.
2. Using the Short Term Goal Planning Worksheets list in order of rank the short term goals that remain after goal choices have been made. High ranked goals are first, followed by medium and low ranked goals.

Summary

The most accurate financial planning decisions are made after evaluating and then combining the information gained from analysis of all financial statements. These financial health indicators need to work in harmony to produce results desired by your management team. Knowledgeable application of the indicators is a skill that you will want to acquire. It will pay big dividends by allowing you to make informed goal choices.

Combined financial statement analysis provides some of the information required to determine the most suitable goals for your team - the Prioritized Management Team Goals. These are the goals that your team has agreed upon, is committed to, and are willing and able to commit the use of available team resources. They are the goals that will direct the management of your farm and family in the future.

Prioritized Management Team Short Term Goals

Management Team: ____________________ **Year: _________**

Worksheet # ___ of ___

RANK	Prioritized Management Team Short Term Goals

Prioritized Management Team Short Term Goals

Management Team: ______________________ **Year: _________**

Worksheet # ___ of ___

RANK	Prioritized Management Team Long Term Goals