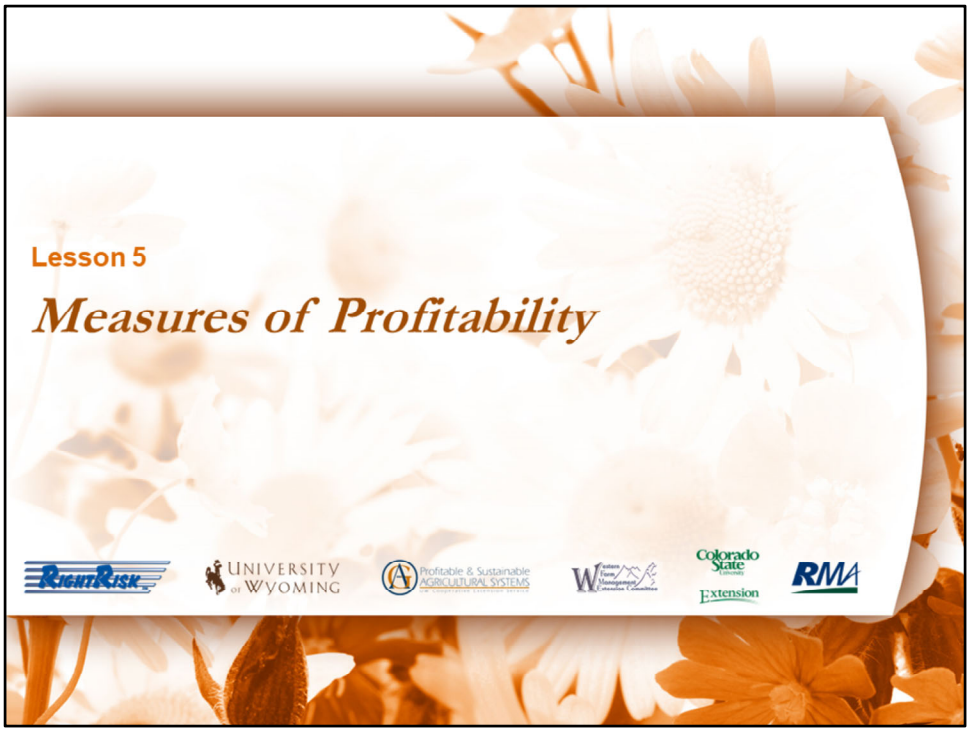
Audio:

Welcome to Getting on Track: Understanding Financial Performance. In this course you will learn how to analyze the health of your business using financial ratios.

Click the next arrow to start at the beginning of the course or click the Menu link to select a lesson from the Main Menu. We recommend that you view the lessons in order the first time through the course.


Lesson 5
Measures of Profitability
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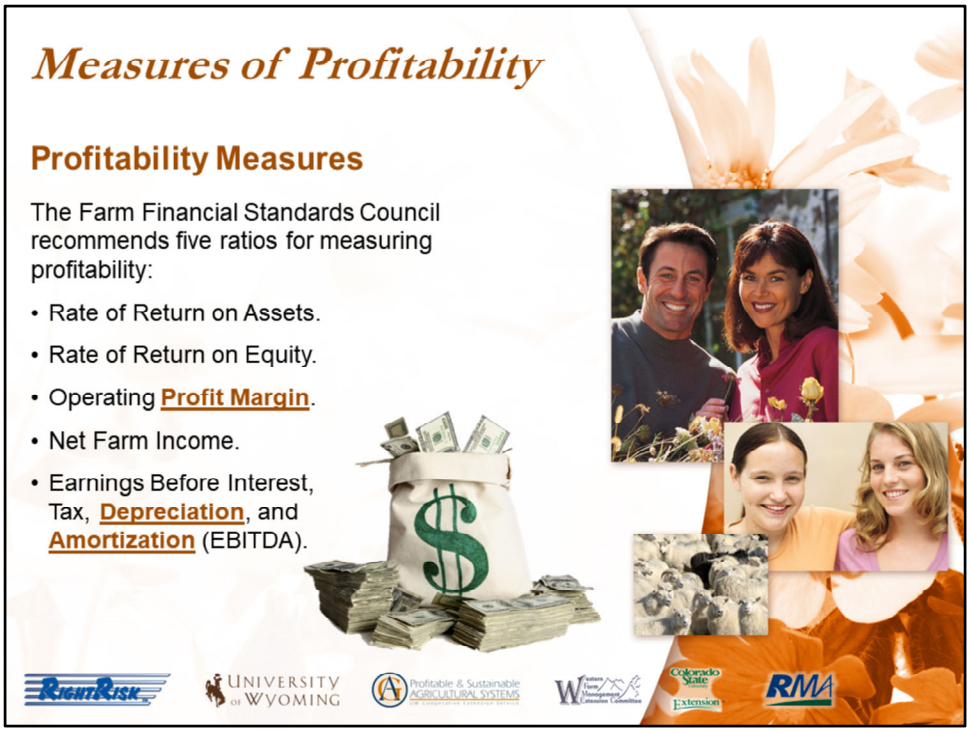


Audio:

Profitability refers to your ability to generate profits (income minus expenses) over a period of time.

The Farm Financial Standards Council recommends five ratios for measuring profitability; Rate of Return on Assets, Rate of Return on Equity, Operating Profit Margin, Net Farm Income, Earnings Before Interest, Tax, Depreciation, and Amortization (EBITDA).

In this lesson, you will learn how to calculate and evaluate the Rate of Return on Assets and Rate of Return on Equity ratios.

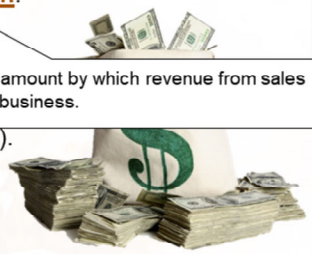
Measures of Profitability

Profitability Measures

The Farm Financial Standards Council recommends five ratios for measuring profitability:

- Rate of Return on Assets.
- Rate of Return on Equity.
- Operating **Profit Margin**.
- Net Farm Income
- Earning Tax, De **Amortization** (EBITDA).

Profit Margin is the amount by which revenue from sales exceeds costs in a business.



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Measures of Profitability

Profitability Measures

The Farm Financial Standards Council recommends five ratios for measuring profitability:

- Rate of Return on Assets.
- Rate of Return on Equity.
- Operating **Profit Margin**.
- Net Farm Income.
- Earnings before Interest, Tax, **Depreciation**, and **Amortizati**ITDA).

Depreciation is the process of spreading out the cost of an asset over its useful life due to use, age, and obsolescence. The purpose of this process is to provide information on the asset's current value to calculate business expenses. There are many different methods for calculating depreciation.

Measures of Profitability

Profitability Measures

The Farm Financial Standards Council recommends five ratios for measuring profitability:

- Rate of Return on Assets.
- Rate of Return on Equity.
- Operating **Profit Margin**.
- Net Farm Income.
- Earnings Before Interest, Tax, **Depreciation**, and **Amortization** (EBITDA).

Amortization is the reduction of the value of an asset by prorating its cost over a period of years.

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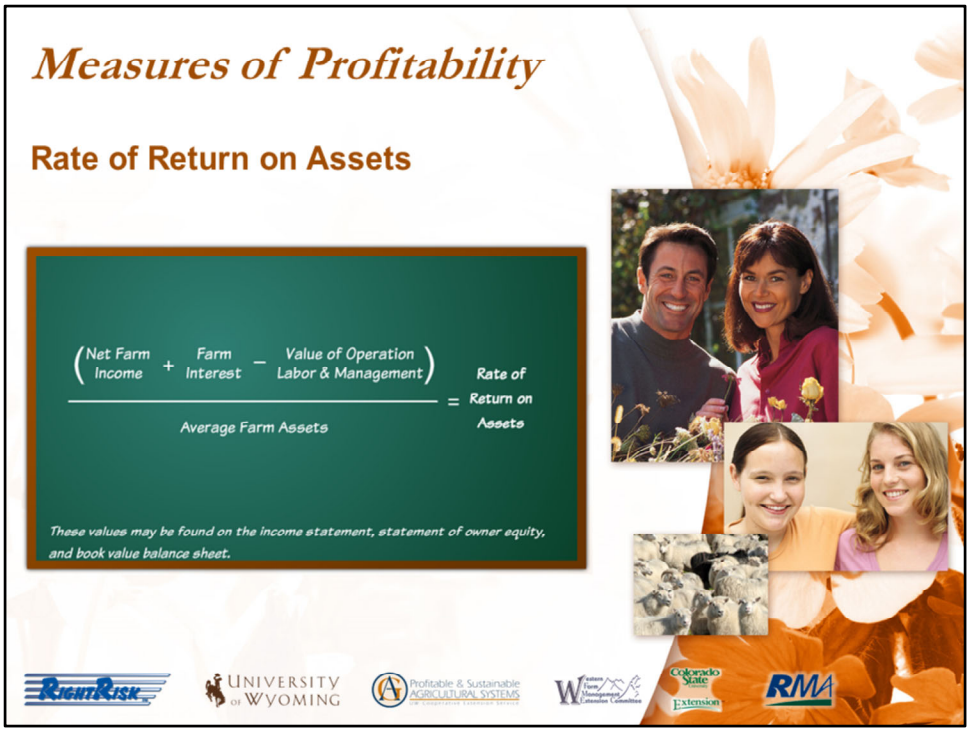
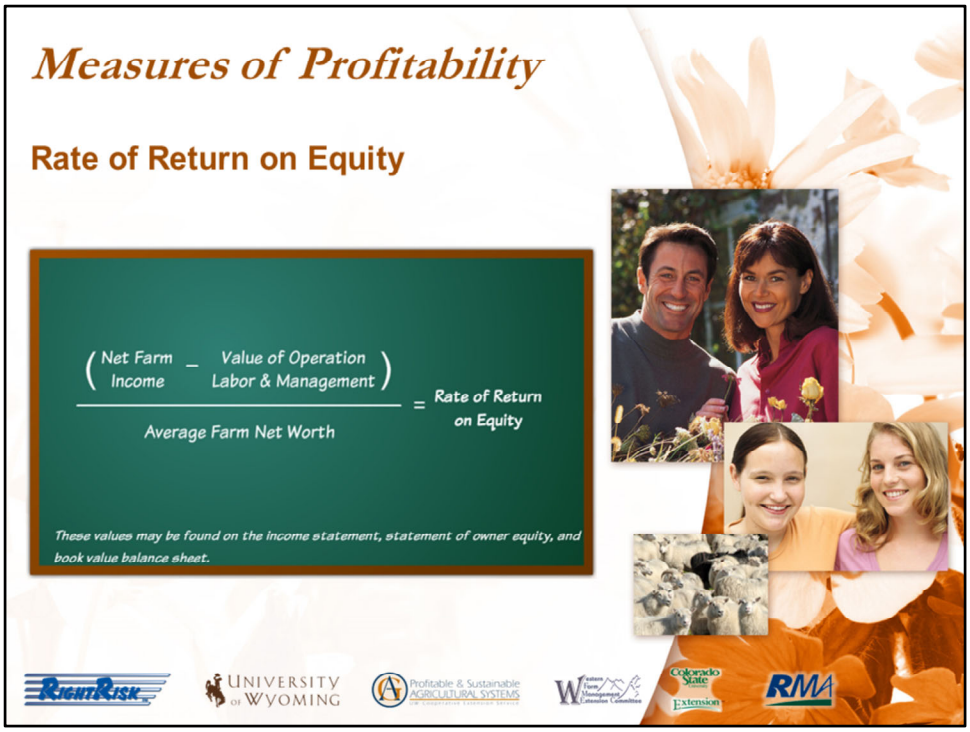


Audio:

Rate of return on assets is calculated with the formula shown on screen.

These values can be found on the income statement and balance sheet.

The results of this calculation will help you compare your earnings to the value of the assets used in the production process



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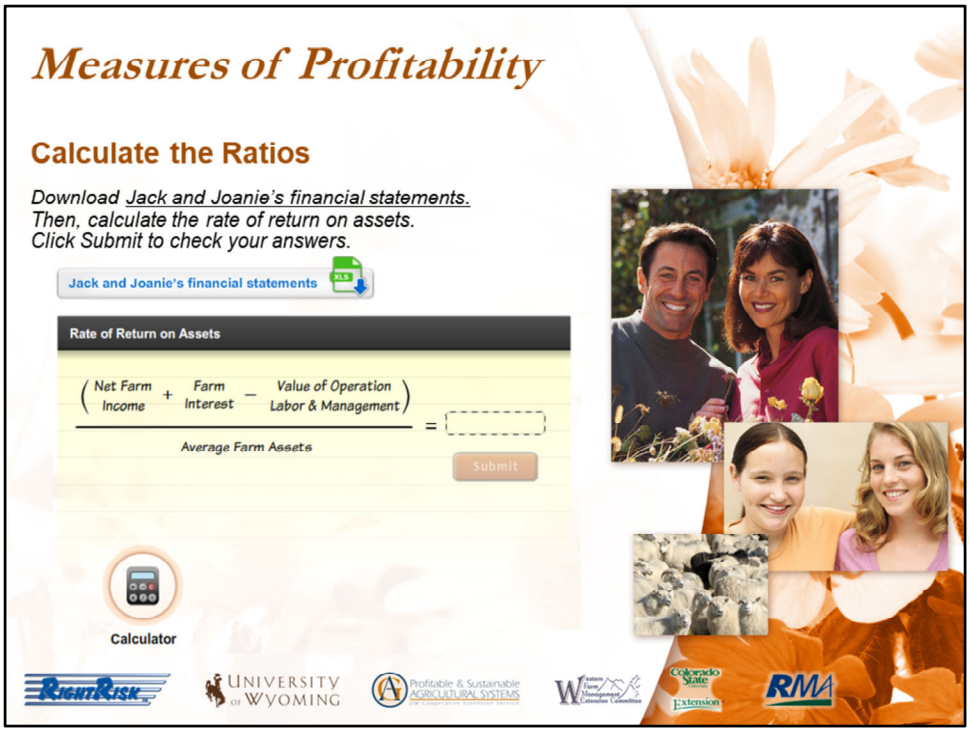
Rate of return on equity is calculated with the formula shown on screen.

These values can be found on the income statement and balance sheet.

Rate of return on equity compares the earnings of the business to the business owner's investment in the production process.



Audio:

Now, try calculating the ratios. Click on the link to download Jack and Joanie's financial statements. Then, calculate Jack and Joanie's rate of return on assets. Click the calculator icon to access a calculator tool.

Click Submit to check your answer.

Measures of Profitability

Calculate the Ratios

Download Jack and Joanie's financial statements.
Then, calculate the rate of return on assets.
Click Submit to check your answers.

Jack and Joanie's financial statements

Rate of Return on Assets

$$\frac{\left(\text{Net Farm Income} + \text{Farm Interest} - \text{Value of Operation Labor \& Management}\right)}{\text{Average Farm Assets}} = .12$$

Submit

That's correct! You have correctly calculated Jack and Joanie's rate of return on assets.

Calculator

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Measures of Profitability

Calculate the Ratios, Cont.

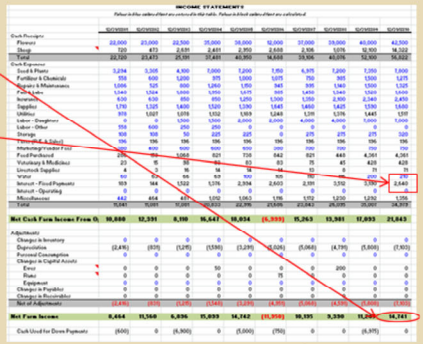
Calculating the Rate of Return on Assets X

Step 1:
Locate the net farm income on Jack and Joanie's income statement.

Step 2:
Locate the interest expense on Jack and Joanie's income statement.

Step 3:
Add these two values together.

14,741 + 2,640 = 17,381



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Measures of Profitability

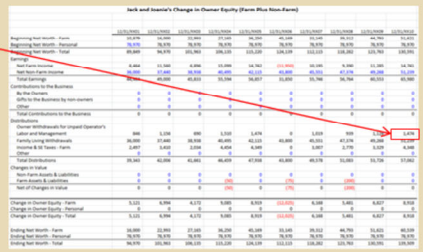
Calculate the Ratios, Cont.

Calculating the Rate of Return on Assets X

Step 4:
Locate the value of operation labor & management on Jack and Joanie's statement of owner equity. This represents the amount of money they paid themselves for working on and running the farm.

Step 5:
Subtract this value from your previous total.

17,381 - 1,474 = 15,907



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Measures of Profitability

Calculate the Ratios, Cont.

Calculating the Rate of Return on Assets

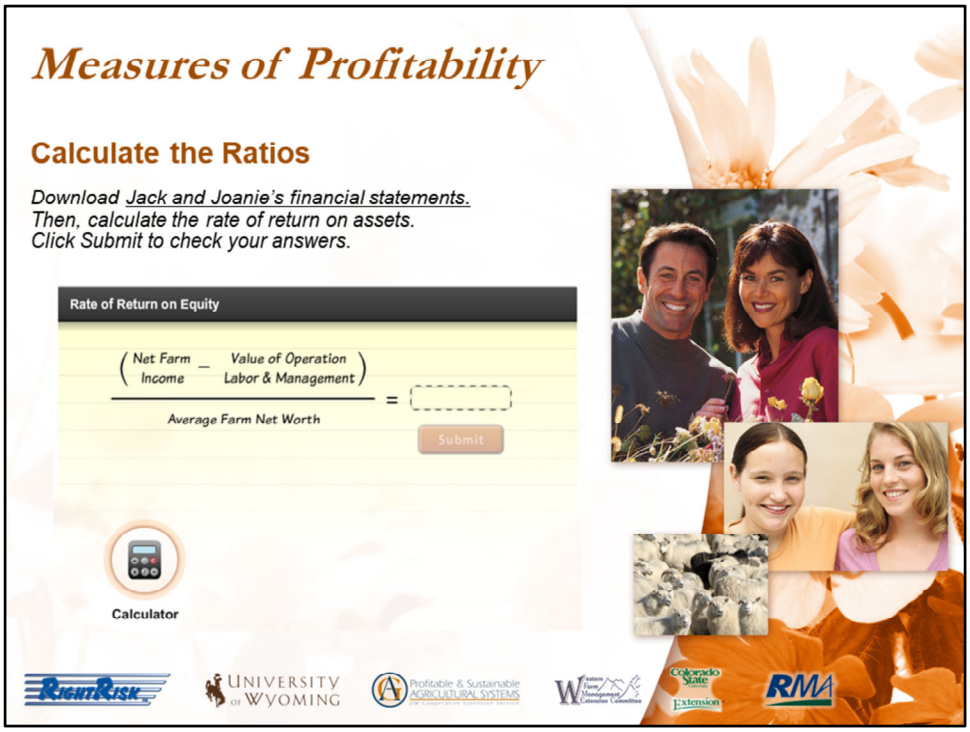
X

Step 6:
Determine the average farm assets on Jack and Joanie's balance sheet by adding the total assets from the past two reporting periods and dividing it by 2.

$$\frac{139{,}544 + 136{,}466}{2} = 138{,}005$$

Step 7:
Divide the result of Step 5 by this value.

$$\frac{15{,}907}{138{,}005} = 0.12$$



Audio:

Now, try calculating Jack and Joanie's rate of return on equity. Click the calculator icon to access a calculator tool.

Click Submit to check your answer.

Measures of Profitability

Calculate the Ratios

Download Jack and Joanie's financial statements.
Then, calculate the rate of return on assets.
Click Submit to check your answers.

Rate of Return on Equity

$$\frac{\left(\text{Net Farm Income} - \text{Value of Operation Labor \& Management}\right)}{\text{Average Farm Net Worth}} = .24$$

Submit

That's correct!. You have correctly calculated Jack and Joanie's rate of return on equity.

Calculator

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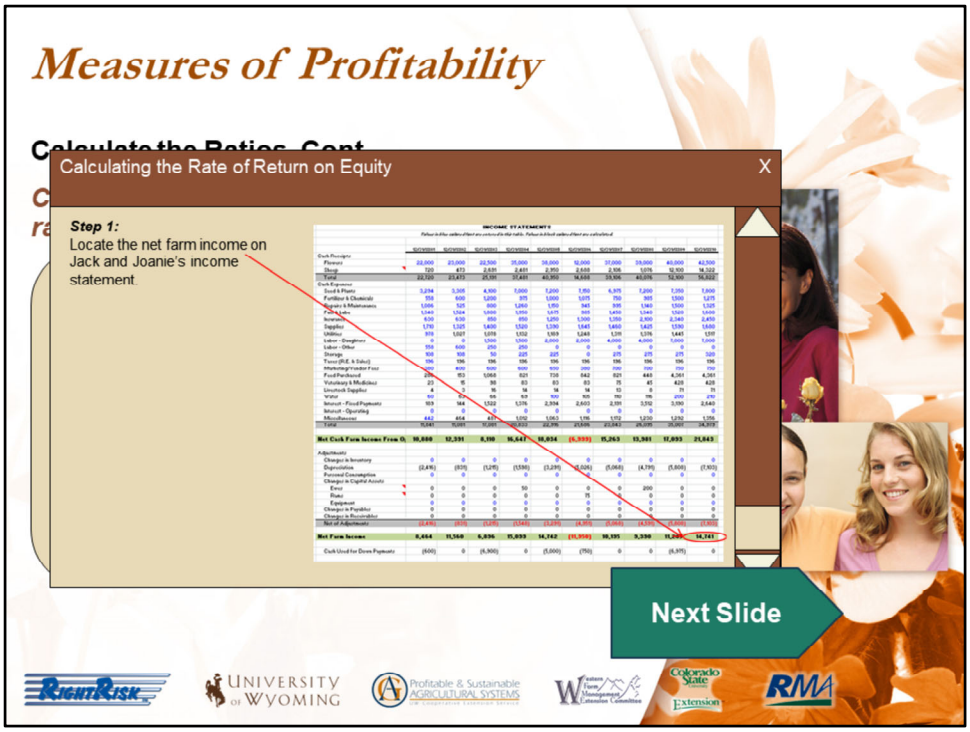
Measures of Profitability
Calculating the Rate of Return on Equity
X
Step 1:
Locate the net farm income on Jack and Joanie's income statement.
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Measures of Profitability

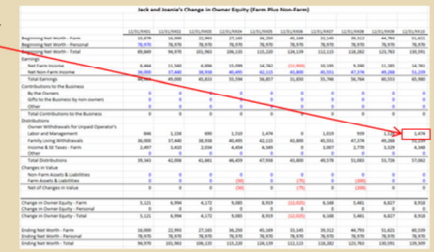
Calculate the Ratios, Cont.

Calculating the Rate of Return on Equity X

Step 2:
Locate the value of operation labor & management on Jack and Joanie's statement of owner equity.

Step 3:
Subtract this value from the net farm income.

14,741 - 1,474 = 13,267



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Measures of Profitability

Calculate the Ratios, Cont.

Calculating the Rate of Return on Equity

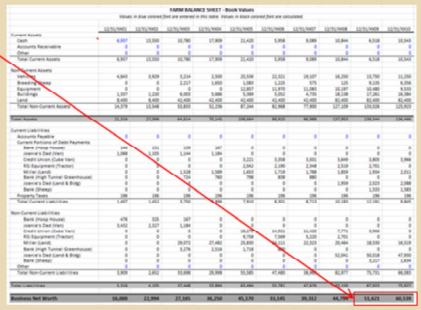
X

Step 4:
Determine the average farm net worth on Jack and Joanie's balance sheet by adding the total net worth from the past two reporting periods and dividing it by 2.

$$\frac{51{,}621 + 60{,}539}{2} = 56{,}080$$

Step 5:
Divide the result of Step 3 by this value.

$$\frac{13{,}267}{56{,}080} = 0.24$$



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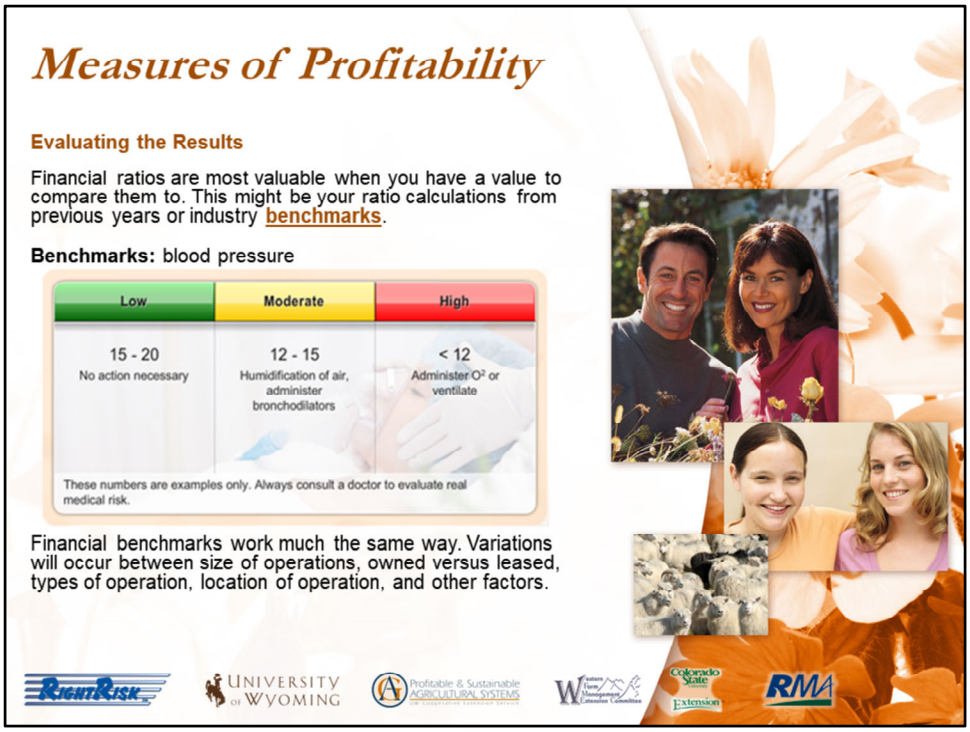


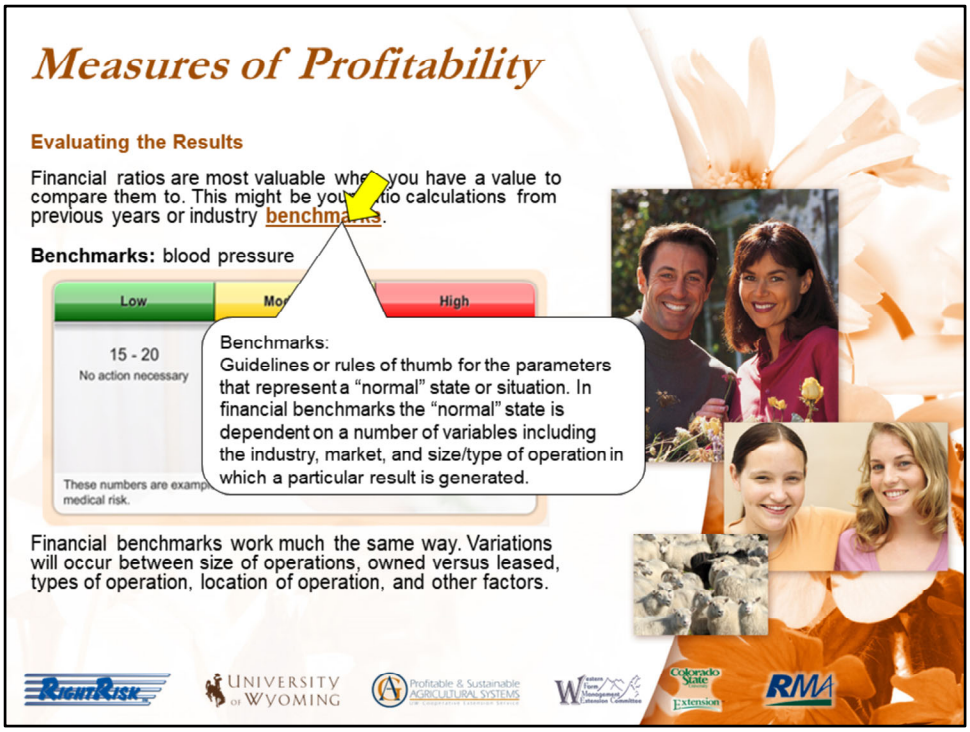
Audio:

Financial ratios are most valuable when you have something to compare them to. This might be ratio calculations from previous years or industry benchmarks.

Benchmarks are guidelines or general rules of thumb related to a specific industry. For instance, normal respiration is between 15 and 20 breaths per minute. However, body respiration can vary with age, emotional state, activity level, and other variables.

Thus, there is no single respiration rate that can be considered normal. The benchmark range simply allows a doctor to interpret the measurement and to decide if further action is required.

Financial benchmarks work much the same way.



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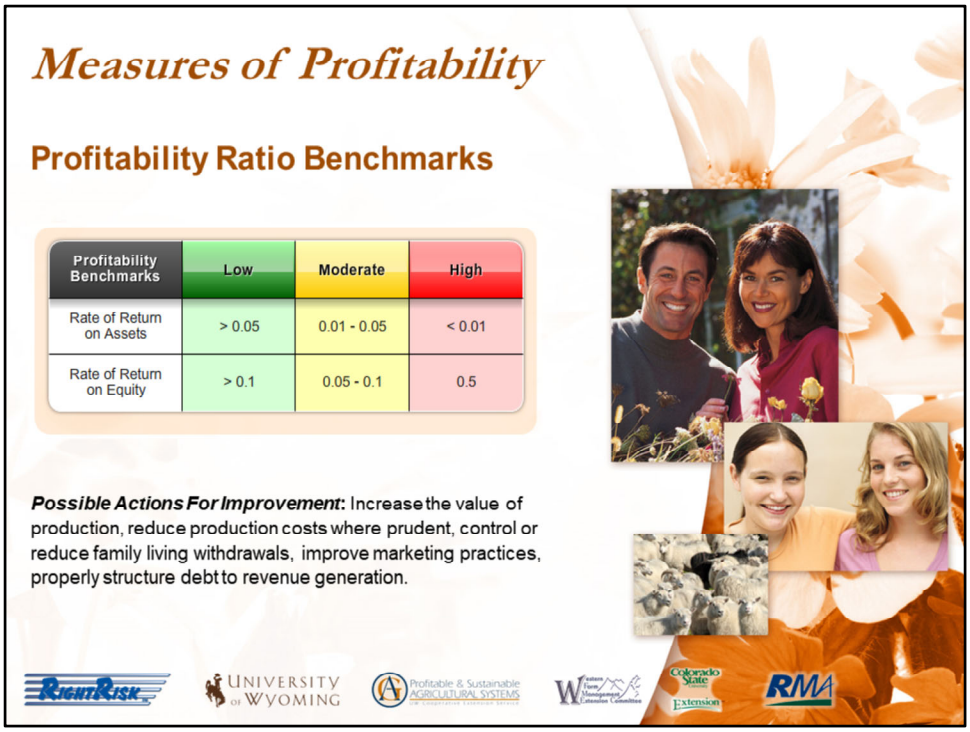


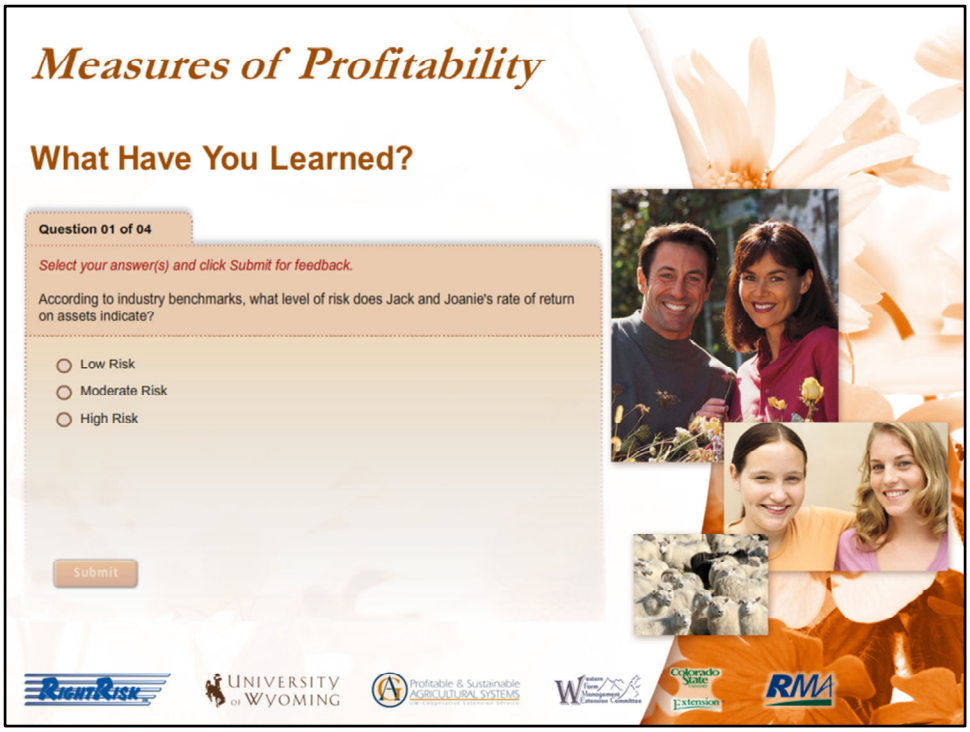
Audio:

Some benchmarks for profitability ratio values are shown on screen.

The benchmarks are meant to be only a guideline for comparison purposes.

The correlated benchmarks are presented in terms of green, yellow, and red lights. A green light represents a financial strength with low risk. A yellow light corresponds to moderate risk, and a red light means weakness and high risk. A green light doesn't guarantee success, nor does a red light imply failure. A weakness in one area may be overcome by strengths in other areas.

Each farm operator should establish specific benchmarks for their specific farm situation.



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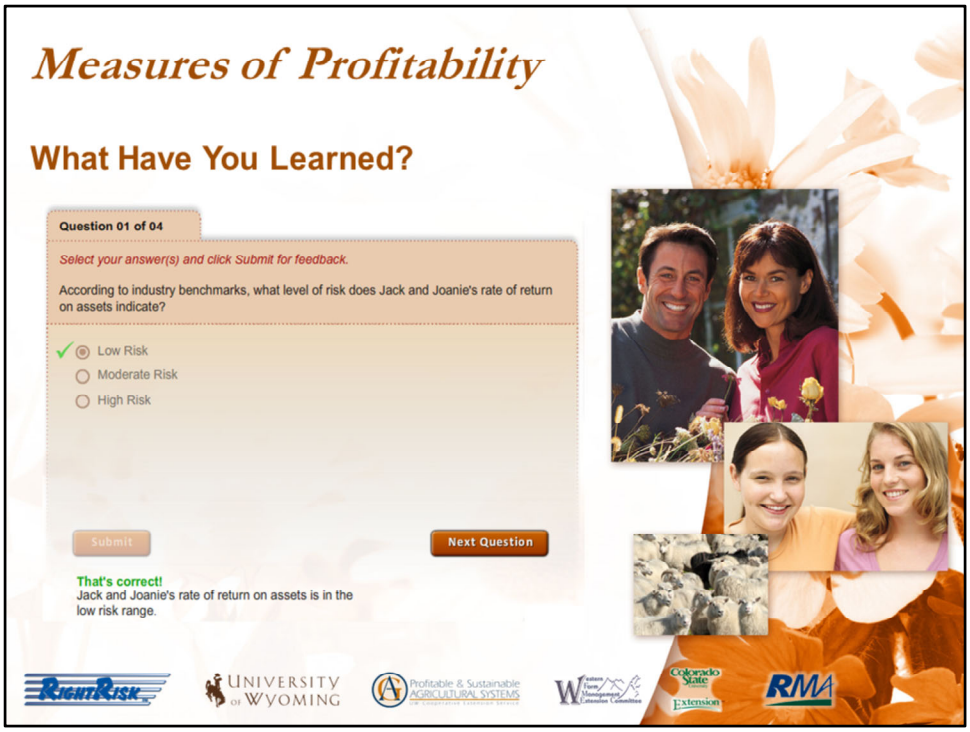
Check what you have learned about measures of profitability by answering the questions on screen. Click Submit to check your answers.


Measures of Profitability
What Have You Learned?
Question 01 of 04
Select your answer(s) and click Submit for feedback.
According to industry benchmarks, what level of risk does Jack and Joanie's rate of return on assets indicate?
Low Risk
Moderate Risk
High Risk
Submit
Next Question
That's correct!
Jack and Joanie's rate of return on assets is in the low risk range.
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Measures of Profitability

What Have You Learned?

Question 02 of 04

Select your answer(s) and click Submit for feedback.

According to industry benchmarks, what level of risk does Jack and Joanie's rate of return on equity indicate?

- ○ Low Risk
- ○ Moderate Risk
- ○ High Risk

Submit

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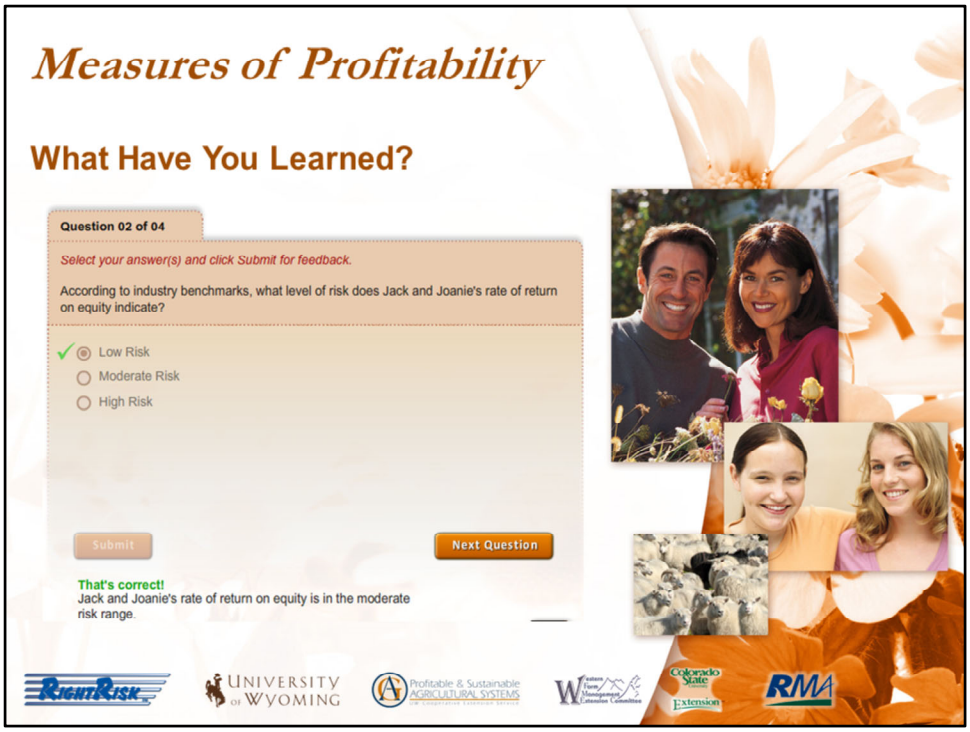
Measures of Profitability
What Have You Learned?
Question 02 of 04
Select your answer(s) and click Submit for feedback.
According to industry benchmarks, what level of risk does Jack and Joanie's rate of return on equity indicate?
Low Risk
Moderate Risk
High Risk
Submit
Next Question
That's correct!
Jack and Joanie's rate of return on equity is in the moderate risk range.
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Measures of Profitability

What Have You Learned?

Question 03 of 04

Select your answer(s) and click Submit for feedback.

What can Jack and Joanie do to improve their rate of return on assets?

- ☐ Increase net farm income
- ☐ Increase withdrawals for operator labor and management
- ☐ Invest in profitable assets
- ☐ Sell unproductive (unnecessary) assets

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Measures of Profitability

What Have You Learned?

Question 03 of 04

Select your answer(s) and click Submit for feedback.

What can Jack and Joanie do to improve their rate of return on assets?

- ✓ ☑ Increase net farm income
- ☐ Increase withdrawals for operator labor and management
- ✓ ☑ Invest in profitable assets
- ✓ ☑ Sell unproductive (unnecessary) assets

Submit | Next Question

That's correct!
Increasing net farm income, investing in profitable assets and selling unproductive ones will improve rate of return on assets.

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Measures of Profitability

What Have You Learned?

Question 04 of 04

Select your answer(s) and click Submit for feedback.

What can you do to increase net farm income?

- ☐ Better manage to reduce expenses
- ☐ Select enterprises with a higher net return
- ☐ Sell products at a lower market price
- ☐ Increase expenses while reducing revenues

Submit

Measures of Profitability

What Have You Learned?

Question 04 of 04

Select your answer(s) and click Submit for feedback.

What can you do to increase net farm income?

- [x] Better manage to reduce expenses
- [x] Select enterprises with a higher net return
- [ ] Sell products at a lower market price
- [ ] Increase expenses while reducing revenues

Submit

That's correct!
Reducing expenses and pursuing enterprises with higher net returns will increase farm income.