

WELCOME TO EVALUATING PROFITABLE AGRICULTURAL ENTERPRISES

A PROFESSIONAL DEVELOPMENT WORKSHOP



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WORKSHOP SCHEDULE

Time	Session Title	Speaker(s)
9 to 9:15 am	Introductions	All
9:15 to 10 am	Basics of Economic Feasibility Assessment	Kynda Curtis
10 to 11 am	Market Feasibility Assessment	Kynda Curtis
11 to 11:15 am	Break	
11:15 am to 12:00 pm	Financial Feasibility Assessment – Budget and Profit Basics	Ruby Ward
12:00 to 12:45 pm	Lunch Break	
12:45 to 1:45 pm	Financial Feasibility Assessment – Budgets and Financial Statements	Ryan Larsen
1:45 to 2:00 pm	Break	
2:00 to 3:00 pm	Financial Feasibility Assessment – Financial Analysis	Ryan Larsen and Ruby Ward
3:00 to 3:30 pm	Enterprise Financing: Federal Grant and Loan Programs	Kynda Curtis
3:30 to 4:15 pm	Basic Program Needs Assessment and Evaluation	Lendel Narine
4:15 pm	Wrap-up and Workshop Evaluation	All



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WORKSHOP PURPOSE

- For Extension, tribal, or government personnel who work with agricultural producers, small growers, and food makers
- Those with *clients seeking assistance* with management decisions or assessing the feasibility of new enterprises or products
- Opportunity to learn basic *economic feasibility analysis*, components of business planning

Thanks to WSARE for funding this webinar series - Western Sustainable Agriculture Research and Education



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TEAM INTRODUCTIONS

- Kynda Curtis, Agriculture & Food Marketing Specialist, USU Extension
- Ruby Ward, Agricultural Entrepreneurship & Taxation Specialist, USU Extension
- Ryan Larsen, Risk & Farm Management Specialist, USU Extension



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INTRODUCTIONS

- Name
- Location
- Job position/title
- What is your motivation for attending?



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RESOURCES AND EVALUATION

- All workshop materials can be found at:
<https://extension.usu.edu/apec/agribusiness-food/economicfeasibility>
- Previously recorded webinars at:
<https://extension.usu.edu/apec/extensionagentproject>
- Evaluation link at:
https://usu.co.l.qualtrics.com/jfe/form/SV_6KYOF3gZTSXgFoi



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WORKSHOP EVALUATION



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THANK YOU!

QUESTIONS?



This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2020-38640-31523 through the Western Sustainable Agriculture Research and Education program under project number WDP21-012. USDA is an equal opportunity employer and service provider. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.



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INTRO TO ECONOMIC FEASIBILITY ASSESSMENT

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KYNDA.CURTIS@USU.EDU



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COMPONENTS OF ECONOMIC FEASIBILITY ASSESSMENT

- Define product, service, etc.
- Assess potential demand (volume and pricing)
- Estimate cost of production
- Examine break-even volume and pricing
- Choose a profitable pricing approach

- Requires well researched marketing and financial information
- Basically, a partial business plan specific to the idea.....
- This workshop will give you the skills/tools required



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BABY STEP I: ANALYZING A NEW IDEA – ENTERPRISE, PRODUCT....




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ANALYZING A NEW IDEA – BUSINESS, ENTERPRISE, PRODUCT....

- Pre-Biz Plan Sketch Book (Developed by Utah Small Business Development Centers)
- Complete book available on our website
- Use to think through business ideas....
 - Understand the data needed to develop a business plan, examine the potential profitability/feasibility of a product, enterprise, etc.
 - Identify gaps in current knowledge or available data, research needs
 - Understand the difference between a “perception” (i.e. gut feeling) and a well-researched plan



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Why do people "need" (want) it?


It's always better to have a need than a want. If you have a want, then you have to spend effort in convincing people that's it's a need.

Another way of saying this is: "There is a problem out there and my business has a solution." After you write about the "need", fill in the check box below about how you have researched this need, just have a "gut feel" about it, or have no real knowledge about it. If you haven't researched your answer, it's all right. That's why you've come to learn!

Sample: People need this because there are thousands of new people moving to Washington county every year in addition to the thousands of snowbirds that migrate every winter. A sizeable percentage of these pay cash for homes and condos so they have disposable income. They are used to getting good service, but they don't know who to call. Many of them need someone to open their homes, buy groceries or arrange for repairs. On the other hand many businesses would like access to this market of receptive customers. Though they will not be able to pay for a good referral, they would like to; advertise on the Get Done web site.

People need my business because:


I've researched this
 I have a gut feeling it's true
 I don't know



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PRE-BUSINESS PLANNING QUESTIONS

- What is your idea?
 - Is there anything unique about it?
- Why do people "need" (want) it?
 - What problem or need does your business/product/service address?
- Who is your customer?
- How will you reach them?



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PRE-BUSINESS PLANNING QUESTIONS

- Who are your competitors?
- What is your comparative advantage?
 - What do you have or what can you do that others cannot?
- Who is on your business team?
 - Who will help you and what will they do?
- Where will customers buy your product(s)?



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PRE-BUSINESS PLANNING QUESTIONS

- What will you need to buy to get started?
- How much money do you need to get this idea to the point where you can start selling?
- Where will the money come from?
- How soon will you be able to start selling?



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PRE-BUSINESS PLANNING QUESTIONS

- The pre-business planning questions are meant to help identify:
 - What the product, service, business is
 - Who the product appeals to
 - What the financial needs are
 - And who makes up the support team
- Review the answers and decide which areas need the most attention or need to be further described/researched



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STEP 2: FULL BUSINESS PLANNING



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WHY IS A BUSINESS PLAN IMPORTANT?

- Is the product/service... feasible, is it likely to make money long term?
- Streamline and solidify ideas
- Visualize what works and what doesn't
- Clearly illustrate the path, goals, and vision for all involved
- Secure financing from lenders, private investors, government programs



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BUSINESS PLAN COMPONENTS

- Company Name, Location, Owners
- Mission Statement
- Board of Directors/Advisors
- Business Vision/Executive Summary
- **Product Description**
- **Market Segments (Target Customers) and Pricing**
- **Product/Service Annual Production Budget**
- **Start Up/Operating Capital Needed**
- Company Management and Roles



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PRODUCT DESCRIPTION

- Describe the product and relevant features
- How is the product different from existing products?
- How does the product fulfill a need or gap in the market?



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EXAMPLE PRODUCT DESCRIPTION

- Aubrey's Natural Meats, LLC

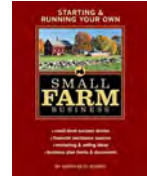
We will offer our premium steaks, hamburger, roast beef, and gourmet beef snacks through white-tablecloth restaurants that share our vision of providing consumers with a safe and delicious eating experience. Aubrey's Natural Meats will also be offered through key gourmet and natural retail stores so that the entire public will have an opportunity to purchase our meat for their families. Select grade meat and lower will be used to make ground beef, beef for stewing, beef snacks (including one-ounce sticks, salami, sausage, and beef jerky), and pastrami luncheon meat. Our products will also be available for mail order online. Products will be fresh and packaged in clear, vacuum-sealed bags. A state-approved label will be designed especially for Aubrey's Natural Meats. Customized cuts will be offered by order on a weekly basis.



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BUSINESS PLAN RESOURCES

- Building a Sustainable Business – Workbook, download or buy at: <https://www.sare.org/resources/building-a-sustainable-business/>
- Starting and Running Your Own Small Farm Business – Book sold online at: <https://www.amazon.com/Starting-Running-Your-Small-Business-ebook/dp/B0081J0JO4>
- AgPlan online software provided by the Center for Farm Financial Management – at: <https://agplan.umn.edu> videos at: <https://vimeo.com/showcase/8428877>



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OTHER

- Agritourism/Food Tourism - <https://extension.usu.edu/apec/agribusiness-food/farm-agritourism>
- USU Extension Business Management - <https://diverseag.org/business-management>
- Assessing Markets for Value Added/Season Extension - <https://extension.usu.edu/apec/agribusiness-food/extended-season-marketing-opportunities>



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BUSINESS PLAN WORKSHEETS PROVIDED

- Product description
- Resource Needs
- Customer Segmentation
- Competition Analysis
- Promotion Plan
- Sales (volume) Projections
- Pricing
- Annual Budgets
- Break Even Analysis
- Partial Budgets
- Projected Cash Flow
- Risk Analysis
- Financial Needs



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SMALL BUSINESS DEVELOPMENT CENTERS – FREE BUSINESS PLAN ADVISING

- Utah: <https://utahsbdc.org/locations/>
- Nevada: <https://nevadasbdc.org>
- Idaho: <https://idahosbdc.org>
- Oregon: <https://oregonsbdc.org>



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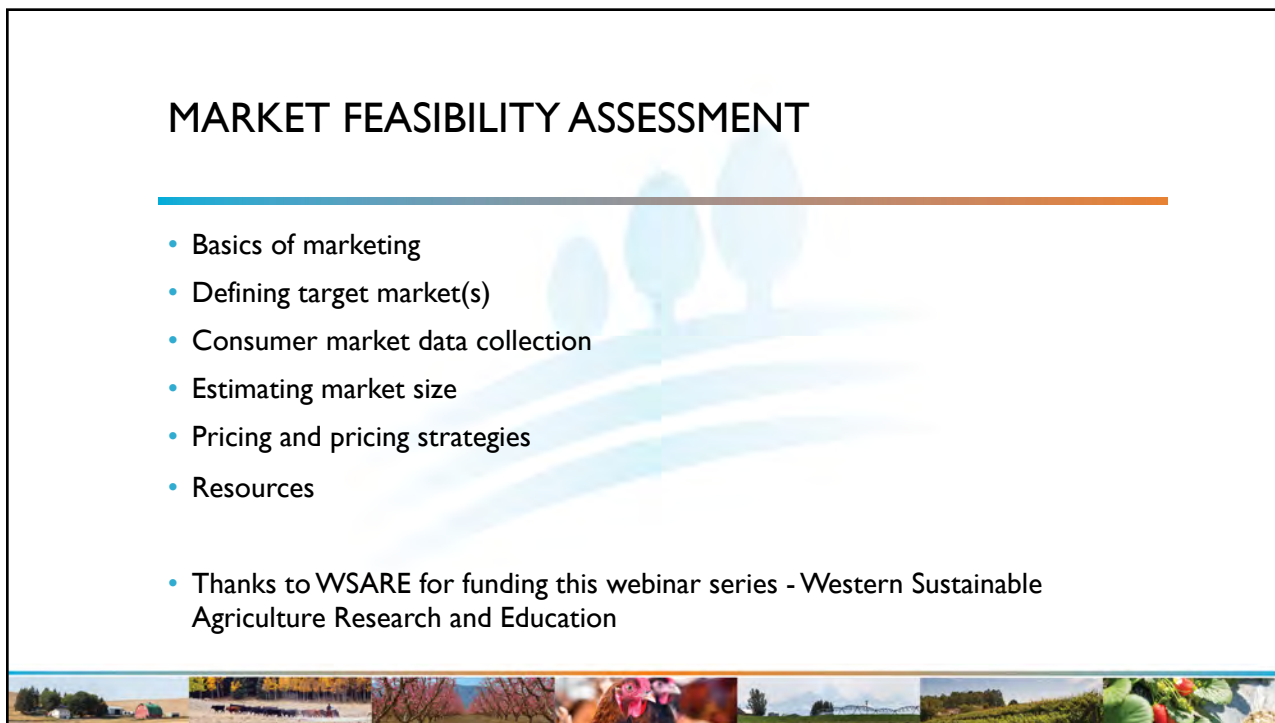
MARKET FEASIBILITY ASSESSMENT

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MARKET FEASIBILITY ASSESSMENT

- Basics of marketing
- Defining target market(s)
- Consumer market data collection
- Estimating market size
- Pricing and pricing strategies
- Resources

• Thanks to WSARE for funding this webinar series - Western Sustainable Agriculture Research and Education



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BASIC MARKETING QUESTIONS

- What am I selling?
- Who might want/need it?
- Where will I sell it?
- How do I let people know I have it?
- Can I sell them my product and make money?

4 P's Marketing

- Product
- Price
- Place
- Promotion



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WHAT AM I SELLING?

- Physical products attributes
- Lifestyle
- Heritage
- Special – eco friendly, local,.....
- Convenience – time, location, etc.
- Other?



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MARKET ASSESSMENT PROCESS

- Define target market(s) for the product or service
 - Consumers who have a need for the product or service and are willing to pay a profitable price for it
- Market assessment steps
 - Estimate market size
 - Available customer base and purchase amounts
 - Estimate a feasible range of prices
 - Must cover production costs
 - Assess consumer sensitivity to pricing



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HOW IS A TARGET MARKET DEFINED?

- Demographics
 - Age, location (state, county, etc.), gender, education level, income, children, marital status, etc.
- Psychographics
 - Interests, hobbies, or concerns regarding health, food safety, environmental, etc.
- Product/Service needs or preferences
 - Product or product characteristics (options, variety, location, package size, etc.) they require



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EXAMPLE TARGET MARKET

- **Climbers** is a hiking supply shop in a city known for its active population. Their target market includes men and women ages 18–30 who enjoy being in nature and take pride in their outdoor gear.
 - Active outdoors
 - Middle to high income
 - Higher level of education



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DEFINE YOUR TARGET MARKET

- Detailed picture of your target market(s) allows you to:
 - Implement effective and targeted promotion
 - Cater to most valuable customers
 - Design new products which serve customer needs
 - Select appropriate sales outlets for your products(s)
 - Provide services and support your market needs/demands



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CONSUMER DATA COLLECTION METHODS

- Survey existing or potential customers
- General market assessment surveys
- Conduct product/pricing trials
- Ask fellow providers (competitors)
- Use secondary data resources
 - USDA, marketing firms, Extension, other online resources



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EXISTING CUSTOMERS

- Past transactions, orders, and communications
- Online orders
 - Name and contact info is provided, spending habits, user preferences, etc.
- Surveys
 - At purchase, online, at events...
- Customer appreciation events, “disguised focus groups”
 - Conduct surveys, provide samples for feedback, make observations
- Competitions
 - “To win” must provide contact info and a few other details, may be demographic or interests...



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WHAT CUSTOMER DATA TO COLLECT?

- Name and contact information
- Transaction history
- Record of communication and responses
- Demographic profile (age, gender, profession, etc.)
 - Birthdays and anniversaries
- Psychographic profile (hobbies, interests, etc.)
- Spending habits



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NAME & CONTACT INFORMATION

- Market directly to the customer
- Customize/personalize communications
- Communicate about upcoming sales, new products, new flavors/varieties, etc.
- Communicate about late or out of stock items



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TRANSACTION HISTORY

- Basic preferences, which products they purchase and when/how
 - What products are most important to them
 - Where do they shop or purchase the product
 - Amount of the product (size, frequency, etc.)
- Amount they spend with your company on an annual, monthly, weekly, basis
 - How valuable are they
 - What specials or customer appreciation items/events you should offer to them



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RECORD OF COMMUNICATION & RESPONSES

- Effectiveness of different types of communication
 - One method may encourage sales more than others
- Customer preferred communication style/type
 - Email, phone, etc.
- Track communications so that spaced appropriately
 - Not overwhelming, or too many



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DEMOGRAPHIC PROFILE

- Age, location (state, county, etc.), gender, education level, income, children, marital status, etc.
 - Birthdays and anniversaries
 - Email/send birthday/anniversary card with promotion (% discount, coupon, etc.)
 - Personal touch and customer feels valued, reminds them of your company/products
- Harder to obtain
- Provides an improved description of your target market
 - Type of customer you should cater to, expand market



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PSYCHOGRAPHIC PROFILE

- Interests, hobbies, etc.
- Concerns regarding health, food safety, environment, etc.
- Difficult to obtain
- Use to select effective promotional channels
 - Magazines or publications of interest, social media, etc.
- Use to inform special labeling, packaging, certification
 - Organic, recyclable, low whatever....
- Use to inform corporate responsibility initiatives
 - Concerns of interests of customers
 - Sustainability, fair trade, worker health, etc.



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SPENDING HABITS

- How do your customers shop?
 - Thoughtful purchasing, impulse buys, or comparison (price) shopping
- Display products and structure pricing around habits
 - Grocery stores place candy and magazines near checkout for impulse buys
- Difficult to assess
 - Structured surveys, try different strategies to see which work, professional assistance from marketing agency



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IF NO CURRENT CUSTOMER BASE OUTSIDE DATA

- Existing research and statistics
 - Government stats and reports
 - Expenditures, investments, consumption
- Published reports
 - Trade associations, banks, government
- Market research organizations
 - Consumer panels, retail audits



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DATA EXAMPLES - GOVERNMENT

- Demographics from the most recent U.S. Census can be searched online by state and by zip code: <https://data.census.gov/cedsci/>
 - Ages, household and family size, income, ethnicity, etc.
 - All of which can provide information as to the characteristics of potential customers in the surrounding area
- Average annual consumption levels for hundreds of foods in the US can be found on USDA's Economic Research Service (USDA-ERS) website: <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-availability-and-consumption/>
 - ERS data is for standard, conventional products only



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CUSTOMER OR MARKET ASSESSMENT SURVEYS

- Surveys are the most popular method for collecting data
- Variety of methods including
 - Telephone survey
 - Face-to-face (in-person) survey
 - Internet survey
 - Dot survey
 - Observation
 - Informal interview



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TELEPHONE SURVEYS

- Telephone surveys are conducted by calling individuals and having them answer questions over the phone
- Advantages of telephone surveys
 - Interviewer can encourage respondent to answer all the questions
 - Responses can be analyzed immediately
- Disadvantages of telephone surveys
 - Expensive to pay telephone interviewers
 - As with mail surveys, random sampling is best, but call list can be put together from phone book if necessary
 - Many residents now only have cell numbers, unlisted numbers



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IN-PERSON INTERVIEWS

- An in-person interview is a survey administered face-to-face
- Advantages of in-person interviews
 - Interviewer can encourage respondents to fully complete survey
 - Results can be analyzed immediately
 - Specific populations can be targeted
 - Farmers' markets, grocery stores, etc.
- Disadvantages of in-person interviews
 - Costly to pay interviewers
 - Some respondents may be unwilling to reveal information about themselves to a stranger
 - Must have permission to conduct these interviews in a public place



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INTERNET SURVEY

- An web-based survey is conducted via software online
 - A letter, post card, or email is sent out inviting respondents to take the survey
- Advantages of internet surveys
 - May be completed faster than other survey types
 - May be less expensive to conduct than other survey types
 - Some software ensures that respondents have to answer all the questions
 - Results can be analyzed immediately
 - Some online survey providers can supply email listings of target audience



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INTERNET SURVEY, CONT.



- Disadvantages of Internet surveys
 - Population of interest must have Internet access
 - Contacting the population of interest may be more difficult than with other methods
 - Some individuals may be uncomfortable providing sensitive information (such as household income) over the Internet



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DOT SURVEY

- Dot surveys or posters are used to focus on just a few important questions
- Technique involves usually no more than four questions displayed on an easel
- Response categories are listed as well
- Respondents place stickers or “dots” in the proper category to indicate their response



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DOT SURVEY, CONT.

- Advantages of dot surveys
 - Offer an alternative to written and oral surveys
 - Simple to complete-has been found to increase response rates over other survey types
- Disadvantages of dot surveys
 - Can only ask a few questions
 - Respondents can see responses from other respondents-may be swayed by what they see
 - Argument that this effect is similar to real-world activity, such as fad items and impulse buying

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INTERVIEWS & OBSERVATION

- Used to understand behavior, evaluate reactions
 - Focuses on image, product usage, and associations with name
- Maybe focus groups in which a group of target customers is asked a lengthy set of questions
- Informal interviews consist of asking the same simple, but specific questions of many people
- Observation consists of observing consumers and taking note of their behavior, perhaps reaction to trying a new product or flavor
- Providing samples, comment cards, recording impressions/behaviors at sales venues, customer appreciation events, etc.



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ESTIMATING MARKET SIZE



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ESTIMATING MARKET SIZE – FARM TOURISM EXAMPLES

- Local Tourists
 - Local customers traveling for a day or weekend outing, such as in-state or less than 100 miles away
 - U-pick strawberry operation example
- Destination Tourists
 - Visitors on a long vacation to specific destinations
 - National and state parks, heritage sites, etc.
 - Farm tourism venture example



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LOCAL TOURISTS

- If selling items directly from farm/ranch
 - Consider how far you can expect customers to travel
- The USDA Forest Service's National Survey on Recreation found the average distance traveled to visit a farm was 80 miles
- Western operators find their consumers travel over 75 miles to participate in U-picks, farm festivals, and related farm activities
 - No alternatives exist in their metro area



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LOCAL TOURISTS

- Potential number of customers
 - Demographics and population size in the area are important for estimating demand
 - Demographics from the most recent U.S. Census can be searched online by state and ZIP code
 - Ages, household and family size, income, ethnicity, etc.
 - All of which can provide information as to the characteristics of potential customers in the surrounding area
- Potential purchase size
 - Examining current and historical consumption patterns can be helpful
 - Average annual consumption levels for hundreds of foods can be found on the USDA's Economic Research Service (USDA-ERS) website
 - ERS data is for standard, conventional products only



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U-PICK EXAMPLE

- A strawberry producer is considering turning one acre of the operation into a U-pick
- Estimates that each acre will yield 10,000 pounds
- The average annual consumption of strawberries per person is 8 pounds (ERS, 2014)
- Use the following equation to determine the appropriate market size when selling one week's consumption of strawberries

$$\frac{(\text{Acres in operation}) * (\text{Output per acre})}{(\text{Average consumption per person/year}) / (52 \text{ weeks/year})} = \text{Market size required}$$

$$= \frac{10,000}{8 / 52} = \frac{10,000}{.154} = 64,935$$

- The producer will need a market size of 64,935 consumers/visits annually to sell all output



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U-PICK EXAMPLE

- For the U-pick strawberry operation, the producer may be interested in targeting families.
 - Helpful to know if nearby communities have enough families to make up a portion of the 65,000 consumers needed to make the U-pick operation feasible.
- Bend/Redmond, OR
 - 26,073 families, average of 3.5 persons (2010 Census)
 - 91,255 potential customers



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U-PICK EXAMPLE

- What percentage might visit the u-pick?
 - If 40%, then 36,502 customers
 - Almost 30% of the U.S. population visited farms one or more times (2000)
 - But, agritourism has been growing at a rate of 6% annually
- If customers purchase 16 pounds annually for freezing/canning
 - Only need 32,467 customers/visits annually



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DESTINATION TOURISTS

- Many rural areas in the West are located between a major urban center and national/state parks, ski resorts, etc.
 - Vacation destinations for many foreign and out-of-state visitors
- Estimating the potential size of these markets requires information on
 - Where visitors are coming from
 - Where visitors are returning to



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GRAND CANYON NATIONAL PARK EXAMPLE

- Consider Grand Canyon National Park (GCNP)
 - Attracts around 4.4 million visitors annually
 - GCNP Statistics at <http://www.nps.gov/grca/learn/management/statistics.htm>
- Seasonal visitation is another important item to consider
 - Annual visits to the GCNP by season
 - Winter: 11% of total visits
 - Spring: 27% of total visits
 - Summer: 39% of total visits
 - Fall: 23% of total visits
 - Visitation by month at <https://irma.nps.gov/Stats/Reports/Park/GRCA>



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GRAND CANYON NATIONAL PARK EXAMPLE

- Where visitors to Grand Canyon National Park stayed before and after visiting the park

Destination	Before	After	Destination	Before	After
Flagstaff, AZ	17.5%	10.6%	St. George, UT	1.5%	1.4%
Williams, AZ	12.6%	7.3%	Scottsdale, AZ	1.4%	1.5%
Las Vegas, NV	9.4%	12.7%	Zion National Park, UT	1.4%	1.7%
Sedona, AZ	6.0%	6.7%	Jacob Lake, AZ	1.4%	<1%
Phoenix, AZ	5.3%	8.0%	Kingman, AZ	1.3%	2.1%
Tusayan, AZ	4.3%	2.4%	Tucson, AZ	1.2%	<1%
Page, AZ	3.4%	4.0%	Holbrook, AZ	1.1%	1.1%
Kanab, UT	1.9%	1.4%	Albuquerque, NM	1.0%	1.2%
Bryce Canyon National Park, UT	1.7%	2.1%	Cameron, AZ	1.0%	<1%



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GRAND CANYON NATIONAL PARK EXAMPLE

- Consider a business located between Page, AZ, and GCNP
 - 3.4% of visitors stayed in Page prior to visiting GCNP
 - 4.0% of visitors stayed in Page after visiting GCNP
- The average number of visitors who would pass by this business location can be found with the following equation:

$$\frac{(\text{Total annual visitors}) * (\text{Average percentage of visitors})}{12} = \text{Average monthly visits}$$

$$\frac{(4.4 \text{ million visitors}) * ((.034 + .040) / 2)}{12} = 13,567 \text{ visitors}$$

- The number of GCNP visitors that would pass by the business location each month averages 13,567
 - With a low of around 5,970 visitors during the winter months (11% of total)
 - And a high of 21,164 visitors during the summer months (39% of total)



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GRAND CANYON NATIONAL PARK EXAMPLE

- The Page, AZ, business is a farm tourism venture (hay rides, farm stays, etc.)
 - Assume venture needs to earn an average of \$10,000 in sales monthly to be viable
 - Expects average purchase of \$25/person
- Calculate the percentage of total visitors to GCNP the venture needs to attract

$$\frac{\text{Monthly sales needed/Expected sales per visitor}}{\text{Estimated monthly visitors}} = \text{Percentage of total visitors needed}$$

$$\frac{\$10,000/\$25}{13,567} = 2.9\%$$



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GRAND CANYON NATIONAL PARK EXAMPLE

- The venture would need to attract 2.9%, on average, of the monthly GCNP visitors
 - 6.7% of winter visits
 - 1.9% of summer visits
- This is a high percentage of total visitors
- For the business plan to work, the venture may try
 - Starting the venture on a smaller scale
 - Attracting more of the heavy summer traffic



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PRODUCT PRICING



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ESTIMATING PRODUCT PRICE

- Major pricing approaches
 - Cost-based
 - Demand-oriented
 - Competition-oriented
 - Not normally used independently



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COST-BASED PRICING

- Cost-plus pricing
 - Price equals total costs divided by number of units
- Shortcomings
 - Not tied to consumer demand
 - No incentive to reduce costs
 - Adjustments for rising costs poor
- Mark-up pricing
 - Add a percentage to the cost of product (mark-up)
 - Very popular for retailers and wholesales
 - Easy, too many products to estimate demand
 - Shortcomings
 - Not tied to demand
 - Profit biased by pricing



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RETAIL DISTRIBUTION EXAMPLE

- Plan to sell product retail
- Set pricing at retail level and then evaluate demand
 - Ask wholesales and retailers what margin they require
- Example
 - \$5.00 cost of production
 - Multiply by 1.25 for wholesale price (Average 20-30%)
 - \$6.25 wholesale
 - Multiply by 1.40 for retail price (Average 30-50%)
 - \$8.75 retail
- Will consumers pay \$8.75?
- Need to use this price at all outlets



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DEMAND-ORIENTED PRICING

- Price at customer value (willingness to pay)
- Price skimming
 - Charge high price at first to pick up consumers willing to pay more
 - Gradually reduce price to pick up consumers who are more price sensitive
- Penetration pricing
 - Initial low price to capture market share
 - Discourages competition
 - Price is increased later when consumers are hooked
 - Common in new food products



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COMPETITION-ORIENTED PRICING

- Simple form of pricing
- Ideal when similar products exist
- Penetration pricing
 - Lower than competition price
 - Creates demand
- Parity pricing
 - Equal to competition price
- Premium pricing
 - Higher than competition price
 - Signals higher quality



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COMPETITIVE ANALYSIS

- How many competitors operate in the market?
- Are competitors large or small? Near or far?
- What types and numbers of products do they sell?
- What pricing methods do they use?



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CONSIDER EXTERNAL FACTORS IN PRICING

- Distribution
 - Wholesale and retail margins
 - Transportation and packaging costs
- Environmental factors
 - Taxes, weather events, fad diets, energy policy
- Legal/regulatory factors
 - Labeling, certification, permits, safety



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POMEGRANATE JUICE PRICING EXAMPLE

- Produce and sell juice at specialty/health stores
- Cost of production is \$0.80 per 8 oz. juice
 - \$0.80 cost of production (multiply by 1.20)
 - \$0.96 cost with profit (multiply by 1.25)
 - \$1.20 wholesale price (multiply by 1.40)
 - \$1.68 minimum retail price required
- \$1.47 per 8 oz. retail price (ERS, 2013)
 - Pricing data is U.S. average, specialty retail price may be much higher
 - Target market may be willing to pay more (health benefits, families with children, seniors, etc.)
 - What packaging, labeling, etc. may differentiate the product?



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U-PICK PRICING EXAMPLE

- Strawberry U-pick operation
 - 10,000 pounds per acre
 - \$23,600 in revenue per acre
 - \$2.36 per pound retail price (ERS, U.S. average 2013)
 - \$18.88 in revenue per person
 - Average consumption is 8 pounds/year (ERS, 2014)
- Need to know the cost of production (including visitor services, permits, etc.)



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U-PICK PRICING EXAMPLE

- Considerations
- Visitors may purchase much more than 8 pounds annually (processing, events, etc.)
- Visitors may be willing to pay more or less than retail depending on...
 - Experience
 - Family outings, may pay much more per pound for the farm experience
 - Amount purchased
 - Bulk purchases for canning, freezing, etc., may pay less per pound
 - Specialty item
 - For organic, and other specialty labels or designations may pay more per pound
 - \$3.48 organic wholesale price per pound (ERS, San Fran 2013)



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ASSESSING CONSUMER SENSITIVITY TO PRICING

- Nine primary effects influence consumer price sensitivity
 - Perceived substitute effect
 - How many substitutes exist? If many, consumers will be more price sensitive
 - Unique value effect
 - Consumers less price sensitive if the product is "unique"
 - Increase market share through differentiation
 - Switching cost effect
 - Cost of changing from one product to another
 - People are reluctant to change and seek out new information
 - Consumers less price sensitive given large switching costs



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ASSESSING CONSUMER SENSITIVITY TO PRICING

- Difficult comparison effect
 - If products/services are hard to compare, consumers are less price sensitive
- Price-quality effect
 - Often associate a higher price with higher quality
- Expenditure effect
 - More sensitive to price changes on large, expensive items than small, inexpensive ones
 - Price changes on meat compared to salt



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ASSESSING CONSUMER SENSITIVITY TO PRICING

- Fairness effect
 - Impacted by what they consider fair (sense of value-added)
- Inventory effect
 - Seasonality affects price sensitivity
 - Higher demand for steak in summer due to outdoor grilling
- End-benefit effect
 - Some consumers willing to pay more for products that protect the environment, preserve open space, support family farms, etc.



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MARKET ASSESSMENT PROCESS

- Define target market(s) for the product or service
 - Consumers who have a need for the product or service and are willing to pay a profitable price for it
- Market assessment steps
 - Estimate market size
 - Available customer base and purchase amounts
 - Estimate a feasible range of prices
 - To cover production costs
 - Assess consumer sensitivity to pricing



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MARKET RESOURCES

- Target marketing tools and guides, Western Extension Marketing Committee - <http://valueaddedag.org/>
- USU Extension Business Management - <https://diverseag.org/business-management>
- USU Applied Econ Extension - <https://extension.usu.edu/apec/>
- Starting and Running Your Own Small Farm Business, Chapters 2, 7-9 – Book: <https://www.amazon.com/Starting-Running-Your-Small-Business-ebook/dp/B0081J0J04>
- Cooperative Extension Service, available in each state – Utah State University (<https://extension.usu.edu/>), University of Nevada, Reno (<https://extension.unr.edu/default.aspx>) University of Arizona (<https://extension.arizona.edu/>), and Oregon State University (<http://extension.oregonstate.edu/>)
- National Sustainable Agriculture Assistance Program (ATTRA) - <https://attra.ncat.org/index.php>
- U.S. Census data: <https://data.census.gov/cedsci/>
- Average annual consumption levels at USDA's Economic Research Service (USDA-ERS): <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-availability-and-consumption/>



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MARKETING WORKSHEETS PROVIDED

- Target Consumer Description(s)
- Promotion Plan
- Sales Volume Projections
- Pricing Strategies



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THANK YOU!

QUESTIONS?



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FINANCIAL FEASIBILITY ASSESSMENT: BUDGET & PROFIT BASICS

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1

HOBBY VS. BUSINESS

You **WANT** to have **FUN**

Profit is not main concern

Other reasons:

- Teach skills to children or community members
- Produce food in a certain way
- Fun

You **WANT** to make a **PROFIT**

Profit is the main concern

How can I effectively run a food business to provide income?




2



WATER LEVEL

Money flows in

What is left in the tank?



Money flows out




3

WATER LEVEL



Money flows in

What is left in the tank?



Money flows out

What flows in less what flows out



4

HOW CAN THE WATER LEVEL GO UP?



5

WHAT IS THE BOTTOM LINE USED FOR?



6

WHAT IS THE BOTTOM LINE USED FOR?

Money
flows in

Water
level



Money
flows out

- Service debt (principal payments)
- Reinvest in business (working capital, down payment, etc.)
- Money taken out of business for family



7

TYPES OF COST

- **Variable** – When I make another unit my total cost will increase
 - Package, ingredients, etc.
 - Seeds, fertilizer, feed
- **Fixed** – Stays the same whether I make another unit or not
 - Depreciation on equipment
 - Building rent
 - Insurance and property tax



8

PRICE AND PROFIT

$$\text{Profit} = (\text{price} - \text{variable cost}) \text{ quantity} - \text{fixed cost}$$

Margin Per Unit

Funds left to cover
fixed cost & profit

Price needs to be large enough to

- Have positive margin
- Cover fixed costs
- Make profit



9

ANALYZE MARGINS

$$\text{Margin} = (\text{Price} - \text{Variable Cost}) * \text{Quantity}$$

- Do you have a low margin?
- Is price greater than variable costs?
- What happens if cost increases by 10%? 20%?
- What happens if price drops by 10%? 20%?



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HOW CAN THE WATER LEVEL GO UP?

Price
Money
flows in

Water
level



Money
flows out Variable cost

- More flow in
- Less flow out
- Change with more flow in than flows out



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ANALYZE FIXED COSTS

$$\text{Margin} = (\text{Price} - \text{Variable Cost}) * \text{Quantity}$$

- Are fixed costs too high?
- How many units to cover fixed costs (fixed cost / margin)?
- Do you have equipment that sits idle for long periods of time?
- How many bulls per cow do you have?
- Is your horse trailer or truck the envy of your neighbors?
- Is your Hobart mixer the envy of bakers everywhere?



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Analyze Fixed Cost

Profit = (price – Variable Cost) quantity – fixed cost

- Are fixed costs too high?
- How many units to cover fixed costs (fixed cost / margin)?
- Do you have equipment that sits idle for long periods of time?
- How many bulls per cow do you have?
- Is your horse trailer or truck the envy of your neighbors?



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Situation	Strategy	Examples
Negative Margin	Quit and do something else	Other crops or livestock, other markets
Low Margin	Increase Price	Pool livestock, Charge more
	Decrease Variable Costs	Use pasture longer, less labor, EQIP for better range Source ingredients with lower cost, be more efficient.
Sufficient Margin	Look at Fixed Costs	
High Fixed Costs	Decrease Fixed Costs	Sell equipment
	Increase Revenue from FC	Do custom work
	Increase Volume	Plant more acres, increase herd size, sell more product
Average Fixed Costs	Increase Volume	Plant more acres, increase herd size, sell more product
Low Fixed Costs	Good Job!	

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ENTERPRISE BUDGET

- The physical and financial planning for a specific enterprise (jam, salsa, alfalfa, cattle, etc.)
- Estimates the receipts and expenses for a set period of time



15

BASIC PARTS OF AN ENTERPRISE BUDGET

- A section of quantity price and sales
- A section of variable costs
- A section of fixed/overhead costs
- An estimate of profit or net income
 - Can be per unit or some other variable



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Example of an Enterprise Budget

Enterprise Budget for 14' x 100' Tomato Bed

Revenue Product	Quantity	Unit	Price	Total	% of Revenue
Individual product	number sold	size of unit	price per unit	Total revenue	
Tomatoes Average Price	450	lbs	\$ 1.50	\$ 675.00	100%
Total Revenue				\$ 675.00	100%

Revenue from an individual product is totaled on top.

Expenses for the individual product are broken down into different sections.

Expenses	Total	% of Revenue
Materials	\$ 129.00	
Labor	\$ 530.00	
Marketing	\$ 20.00	
Ownership Expenses (Fixed Costs)	\$ 125.00	
Total Expenses	\$ 804.00	119%

Variable expenses were broken down by

- Materials Needed
- Labor
- Marketing

Net income before taxes (revenue minus expenses)	\$ (129.00)	-19%
Income and self employment taxes	\$ (19.35)	-3%

This is not the only way to lay out the variable expenses, as long as all expenses are included for the individual product.

Net profit	\$ (109.65)	-16%
-------------------	--------------------	------

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Analyze Profit – CSA

Budget for .5 ac Small Farm Full Cost

Revenue Product	Unit	Price	Quantity	Total	% of Revenue
Individual product	size of unit	\$/unit	number sold	Total revenue	
CSA 18 week shares	share	583.2	10	5832	100%
				0	0%
Total Revenue				5832	100%
Expenses	Unit	Price	Quantity	Total	
Total Inputs				1145	20%
Total Labor Costs				4460	76%
Total Fixed costs				550	9%
Total Expenses				6155	106%
Net income before taxes (revenue minus expenses)				-323	-6%
Income and self employment taxes			30%	-96.9	-2%
Net profit				-226.1	-4%

Price per Unit = \$583.20
 Total Variable Cost = \$5,605
 Variable Cost per Unit = \$560.50
 Margin per unit = \$22.70

Will increasing quantity increase profit?

What could be done to increase margin?

What about fixed cost?

But adjustment can be made on paper!!

Note: Net profit must be used to pay principal part of loans, purchase new equipment, add to working capital, and withdrawals for owners.

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RESOURCES

- USU Extension Small Business Start Up Guides - <https://diverseag.org/microentrepreneurs>
- USU Extension Business Management - <https://diverseag.org/business-management>
- USU Applied Econ Extension - <https://extension.usu.edu/apec/>
- Starting and Running Your Own Small Farm Business, Chapters 1 and 3 – Book: <https://www.amazon.com/Starting-Running-Your-Small-Business-ebook/dp/B0081J0JO4>
- Cooperative Extension Service, available in each state – Utah State University (<https://extension.usu.edu/>), University of Nevada, Reno (<https://extension.unr.edu/default.aspx>) University of Arizona (<https://extension.arizona.edu/>), and Oregon State University (<http://extension.oregonstate.edu/>)
- National Sustainable Agriculture Assistance Program (ATTRA) - <https://attra.ncat.org/index.php>



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WORKSHEETS PROVIDED

- Food Product Enterprise Budget
- Farm Product Enterprise Budget
- Enterprise Breakeven Analysis
- Partial Budgets



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THANK YOU!

QUESTIONS?



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FINANCIAL FEASIBILITY ASSESSMENT: BUDGETS AND FINANCIAL STATEMENTS

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WHAT IS PROFIT?

$$\textit{Profit} = \textit{Gross Revenue} - \textit{Total Costs}$$



2

WHAT IS PROFIT?

$$\textit{Profit} = \textit{Gross Revenue} - \textit{Total Costs}$$


$$\textit{Gross Revenue} = \textit{Price per Unit} \times \textit{Total Units}$$



3

WHAT IS PROFIT?

$$\textit{Profit} = \textit{Gross Revenue} - \textit{Total Costs}$$


$$\textit{Total Costs} = \textit{Variable Costs} + \textit{Fixed Costs}$$



4

DEFINING COSTS

$$Total\ Costs = Variable\ Costs + Fixed\ Costs$$

Variable Costs: expenses that vary with output within a production period and result from the use of purchased inputs and owned assets



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DEFINING VARIABLE COSTS

	Quantity per Acre	Unit	Per Acre			Total Acres	
			Price/Unit	Value/Acre	Total	Total Acres	Value/Acre
Receipts							
HRW Wheat (12% Protein)	35	bushels	\$4.63	\$162.05		1,000	\$162,050
Subtotal Receipts					\$162.05		\$162,050
Inputs and Services							
Insurance							
Crop Insurance	1	acre	\$15.00	\$15.00			\$15,000
Fertilizer							
Anhydrous Ammonia	45	units	\$0.56	\$25.18			\$25,179
N-Serve	1	pt	\$3.38	\$3.38			\$3,375
Application	1	acre	\$4.50	\$4.50			\$4,500
Herbicides							
Ally	0.75	oz	\$7.08	\$5.31			\$5,310
Application	1	acre	\$4.50	\$4.50			\$4,500
Seed							
	65	pounds	\$0.18	\$11.70			\$11,700
Seasonal Employees							
	1	acre	\$8.17	\$8.17			\$8,170
Interest on Operating Capital							
Rate '15		Term	Principle				
5.0%	0.50/yr		\$28.86	\$0.71			\$709
Subtotal Inputs and Services					\$78.44		\$78,443
Field Operations							
	Times	Unit	per Unit	Acre			
Fall Chisel Plow	1	acre	\$11.34	\$11.34			\$11,340
Spring Chisel Plow	1	acre	\$11.34	\$11.34			\$11,340
Weeding	2	acre	\$7.56	\$15.12			\$15,120
Planting	1	acre	\$9.45	\$9.45			\$9,450
Harvest	1	acre	\$21.55	\$21.55			\$21,546
Storage	35	bushels	\$0.20	\$7.00			\$7,000
Hauling	35	bushels	\$0.40	\$14.00			\$14,000
Subtotal Field Operations Costs					\$89.80		\$89,796
Total Input, Services and Field Operation Costs					\$168.24		\$168,239



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DEFINING COSTS

$$\text{Total Costs} = \text{Variable Costs} + \text{Fixed Costs}$$

Fixed Costs: expenses that do not vary with output and result from ownership of assets.



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FIXED COSTS

-
- Depreciation
 - Taxes
 - Interest on investment
 - Land
 - Insurance
 - Management fee



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FIXED COSTS EXAMPLE

Contribution Margin	(\$6.19)	-\$6,189
Overhead		
Accounting, liability insurance, vehicle cost, office expense	\$10.00	\$10,000
Cash lease/opportunity cost for land	\$30.00	\$30,000
Total Overhead	\$40.00	\$40,000
Total Costs	\$208.24	\$208,239
Net Returns to Owner (for unpaid management and risk)	(\$46.19)	-\$46,189

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COST OF PRODUCTION

$$\text{Cost of Production} = \frac{\text{total cost}}{\text{yield}}$$

$$\text{Cost of Production} = \frac{208.24}{35}$$

$$\text{Cost of Production} = \$5.95/\text{bushel}$$

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BREAK-EVEN YIELD

$$\text{Break - even yield} = \frac{\text{total cost}}{\text{output price}}$$

$$\text{Break - even yield} = \frac{208.24}{5.00}$$

Break - even yield = 41.6 bushels per acre



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BREAK-EVEN YIELD

Price per Bushel	Total Costs				
	\$108	\$158	\$208	\$258	\$308
\$5.63	19 bu	28 bu	37 bu	46 bu	55 bu
\$5.13	21 bu	31 bu	41 bu	50 bu	60 bu
\$4.63	23 bu	34 bu	45 bu	56 bu	67 bu
\$4.13	26 bu	38 bu	50 bu	63 bu	75 bu
\$3.63	30 bu	44 bu	57 bu	71 bu	85 bu



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BREAK-EVEN PRICE

$$\text{Break - even price} = \frac{\text{total cost}}{\text{expected yield}}$$

$$\text{Break - even price} = \frac{208.24}{45}$$

$$\text{Break - even price} = \$4.63/\text{bushel}$$



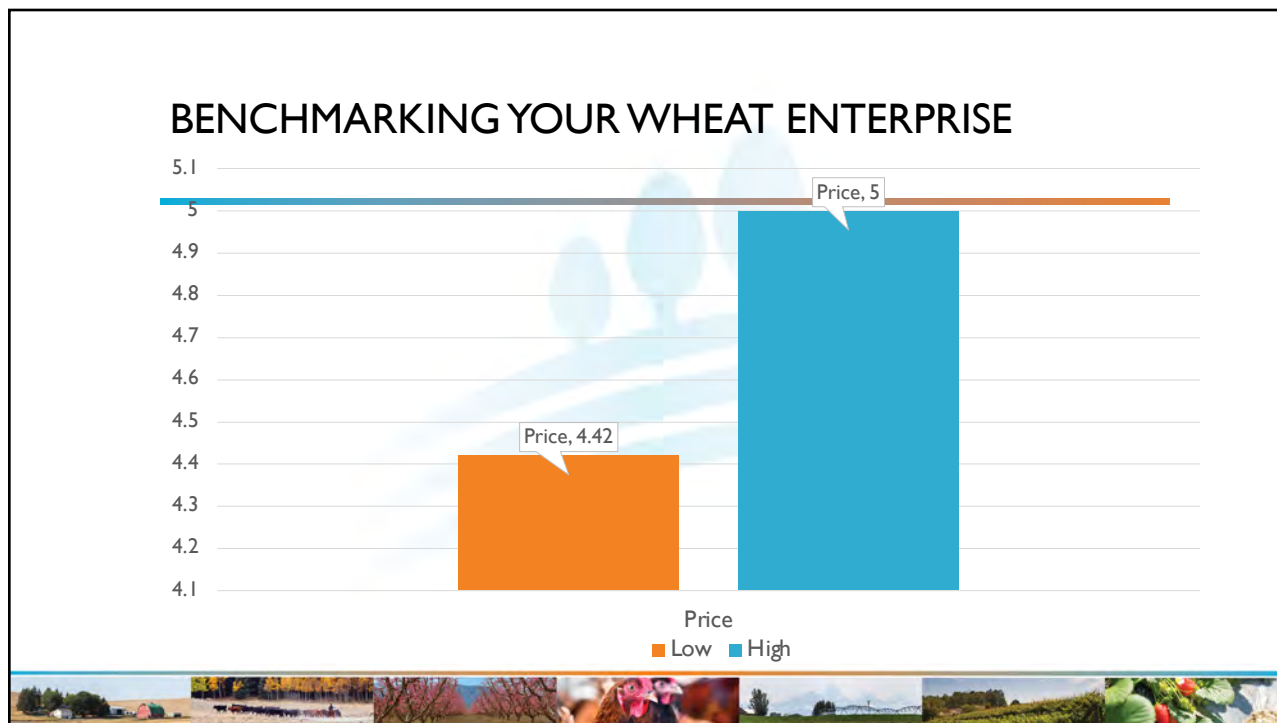
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BREAK-EVEN PRICE

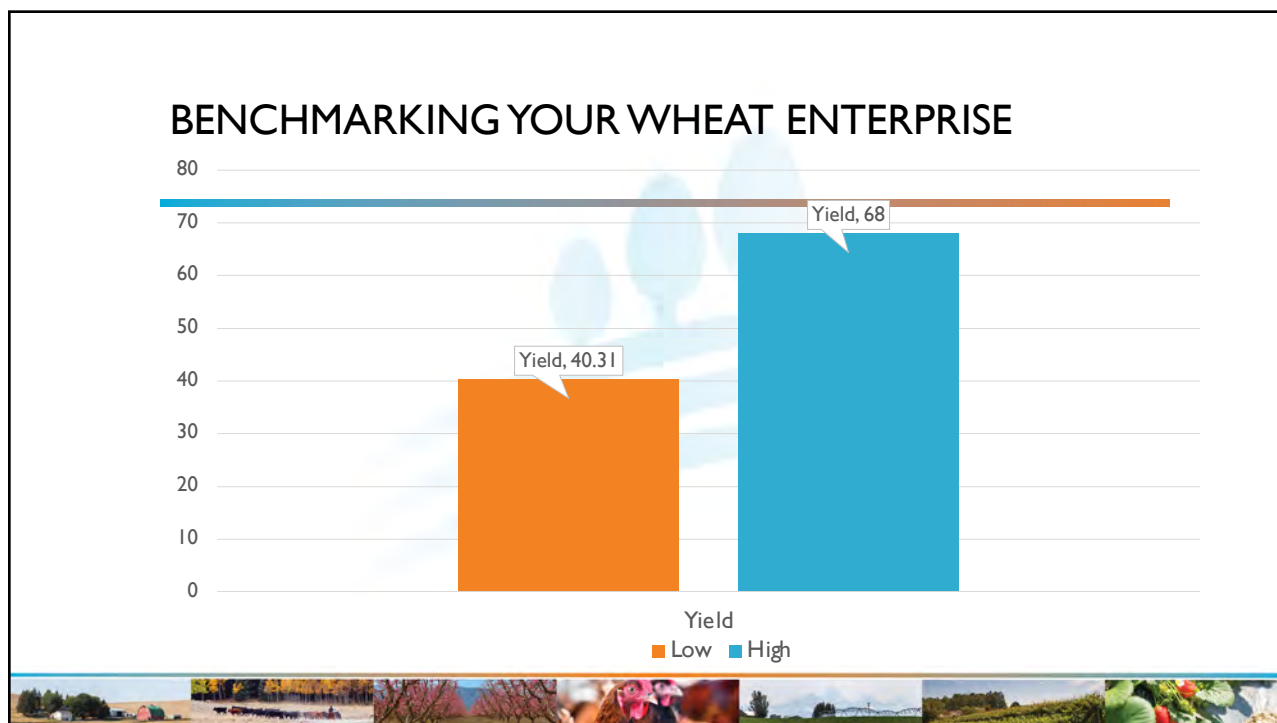
Yield per Acre	Total Costs				
	\$108	\$158	\$208	\$258	\$258
45 bu	\$2.41/bu	\$3.52/bu	\$4.63/bu	\$5.74/bu	\$5.74/bu
40 bu	\$2.71/bu	\$3.96/bu	\$5.21/bu	\$6.46/bu	\$6.46/bu
35 bu	\$3.09/bu	\$4.52/bu	\$5.95/bu	\$7.38/bu	\$7.38/bu
30 bu	\$3.61/bu	\$5.27/bu	\$6.94/bu	\$8.61/bu	\$8.61/bu
25 bu	\$4.33/bu	\$6.33/bu	\$8.33/bu	\$10.33/bu	\$10.33/bu



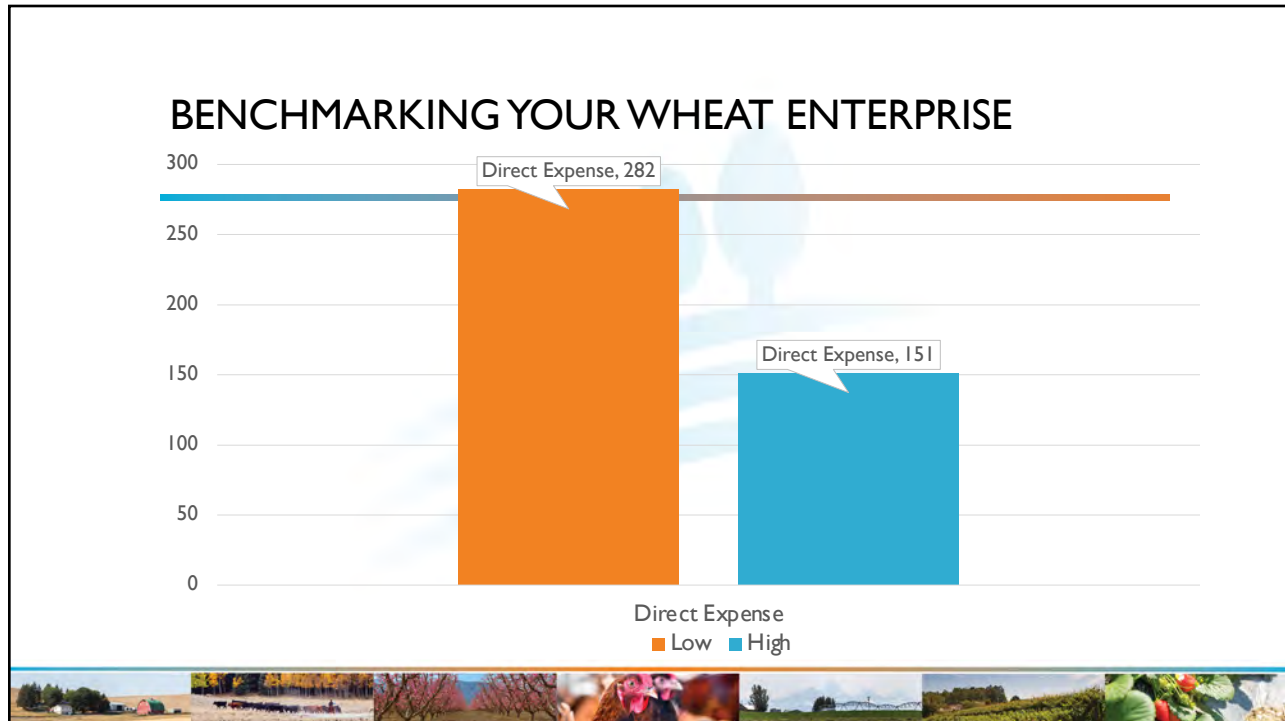
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INTRODUCTION

- Why do we need consistent financial statements?
- Balance Sheet
- Income Statement
- Statement of Owner Equity
- Statement of Cash Flows
- Statement Linkages

18

WHY FINANCIAL STATEMENTS?

- From a Lender's perspective
- From a Manager's perspective
- Past performance
- Future performance
- Decision Making
- Financial statements organize the data needed to analyze the risk, profitability, liquidity, efficiency, and other criteria



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BALANCE SHEET

- Definition
 - Systematic listing of all that the business owns and all that it owes at a specific moment in time
- Also called
 - Net worth statement
 - Statement of financial condition
 - Statement of financial position
- Static Picture



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BASIC STRUCTURE OF THE BALANCE SHEET

<u>Assets:</u>	<u>Liabilities and Net Worth:</u>
<p>Current assets</p> <p><i>plus</i> Intermediate assets</p> <p><i>plus</i> Long term assets</p> <p><i>equals</i> Total assets worth</p>	<p>Current liabilities</p> <p><i>plus</i> Intermediate liabilities</p> <p><i>plus</i> long term liabilities</p> <p><i>plus</i> Net worth</p> <p><i>equals</i> Total liabilities and net worth</p>

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CURRENT ASSET SEGMENT

Current assets:

- Cash _____
- Savings and time deposits _____
- Marketable securities _____
- Accounts receivable _____
- Short term notes receivable _____
- Unsold production inventories _____
- Unsold livestock inventories _____
- Supplies _____
- Prepaid expenses _____
- Other _____
- Total current assets**

Implications for liquidity

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INTERMEDIATE ASSET SEGMENT

Intermediate assets:

Intermediate notes receivable	_____
Machinery and motor vehicles	_____
Breeding livestock	_____
Retirement accounts	_____
Cash value of life insurance	_____
Non-marketable securities	_____
Personal vehicles	_____
Household goods	_____
Other	_____
Total intermediate assets	_____



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LONG TERM ASSET SEGMENT

Long term assets:

Long term contracts and notes receivable	_____
Land	_____
Buildings	_____
Residence	_____
Non farm real estate	_____
Other	_____
Total long term assets	_____



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CURRENT LIABILITIES SEGMENT

Current liabilities:

Accounts payable	_____
Short term notes payable	_____
Current payment on term loans	_____
Accrued interest	_____
Accrued taxes	_____
Accrued rents and leases	_____
Contingent tax on current assets	=====
Total current liabilities	<input type="text"/>

Implications for liquidity



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INTERMEDIATE LIABILITIES SEGMENT

Intermediate liabilities:

Intermediate notes less current payment	_____
Sales contract less current payment	_____
Life insurance loan less current payment	_____
Contingent tax on intermediate assets	_____
Other	=====
Total intermediate liabilities	



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LONG TERM LIABILITIES SEGMENT

Long term liabilities:

Farm mortgages less current payment	_____
Land contracts less current payment	_____
Nonfarm mortgages less current payment	_____
Contingent tax on long term assets	_____
Other	=====
Total long term liabilities	

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BALANCE SHEET CONT.

- Classic accounting identity
 - Assets = Liabilities + Net Worth
- Liabilities
 - Claims on the firm's assets by lenders and other creditors
- Net worth
 - Represents the claims of owners on those assets

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TYPES OF ASSETS

- Assets are classified according to liquidity
- Liquidity
 - Firm's capacity to generate cash quickly and efficiently to meet its financial commitments as they fall due
 - In other words, how fast can I convert it to cash.



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CURRENT ASSETS

- Be converted to cash with little or no delay or loss in net value
 - Cash
 - Savings accounts, CD's
 - Notes and accounts receivable
 - Hedging accounts
 - Prepaid expenses
 - Market livestock
 - Crops on hand
 - Marketable stocks, bonds, and cash value of Life Insurance
 - Inventories of supplies



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NON-CURRENT ASSETS

- Yield services to a business over several years
- Usually are fully depreciated and replaced
 - Machinery and equipment
 - Breeding livestock
 - Buildings and other real estate
 - Notes receivable with maturities greater than one year
 - Retirement accounts
 - Non marketable equities
 - Water handling facilities
 - Mineral and hunting rights



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HOW TO VALUE ASSETS

- Two methods
 - Current market valuation
 - Current fair market value
 - Cost-basis valuation
 - Assets are valued at original cost less accumulated depreciation
- Many institutions use both methods on financial statements



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CLASSIFICATION OF LIABILITIES

- Current and Noncurrent liabilities
- Current Liabilities
 - Due with the year
 - Accounts payable to merchants and suppliers
 - Accrued expenses
 - Expenses that have been incurred but have not been paid
 - Interest
 - Taxes
 - Rent and lease payments
 - Notes payable to lending institutions
 - Current portions of noncurrent liabilities



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CLASSIFICATION OF LIABILITIES CONT

- Noncurrent liabilities
 - Obligations having a maturity greater than one year
 - Noncurrent portion of notes payable
 - Both for non-real estate and real estate notes



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NET WORTH

- Calculated as
 - Total Assets – Total Liabilities
- Net worth contains two components
 - Valuation component
 - Represents the difference between the cost value of the assets and the current market value
 - Retained earnings/contributed capital component
 - Represents the capital contributed by owners plus all the accumulated retained earnings



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INCOME STATEMENT

- Summary of the revenue and expenditures of the business over a specified period of time
 - Annually
 - Monthly
 - Quarterly
- Also known as profit and loss statement
- Is not static like the balance sheet



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INCOME STATEMENT

- Four Parts
 - Farm Revenue
 - Farm Expenses
 - Nonfarm adjustments
 - Income taxes



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FARM REVENUE

- Sale of production items
- Government payments



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FARM EXPENSES

- Operating expenses
 - Inputs
 - Labor
 - Cash operating expenses
 - Noncash adjustments
 - Changes in inventories
 - Interest expenses
- Nonfarm adjustments
 - Depreciation
 - Accounting procedure by which the purchase cost of a depreciable asset is prorated over its projected economic life
 - Land?
 - Three methods
 - Straight-line
 - Declining balance
 - Sum-of-the-year's digits



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STATEMENT OF CASH FLOWS

- Cash is King
- Balance Sheet and Income Statement give limited information regarding the sources and uses of cash during the accounting period
- Statement of Cash Flows
 - Summary of the cash inflows and outflows over a specified period of time



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STATEMENT OF CASH FLOWS

- Separates cash inflows and outflows into three sections
 - Operating activities
 - Cash received from farm production, government payments
 - Cash paid for farm expenses, income taxes, family living withdrawals
 - Financing activities
 - Proceeds from loans
 - Cash from capital contributions
 - Payments of debt, capital leases, dividends
 - Investment activities
 - Capital sales, withdrawals from savings, sales of personal assets
 - Capital purchases, deposits to savings accounts, purchases of personal assets



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CASH FLOW BUDGET

- Projection of all the cash transactions relating to the business that occur during the accounting period
- Usual format
 - Cash Available
 - Cash Required
 - New borrowings and savings withdrawals
 - Repayment of operating loan and savings deposits



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STATEMENT LINKAGES

Cash flow statement **to** income

statement:

1. Cash receipts for crops and livestock
2. Cash operating expenses
3. All other cash items (e.g., interest payments)

Cash flow statement → Income statement Balance Sheet



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STATEMENT LINKAGES

Cash flow statement **to** balance sheet:

1. Ending cash balance
2. Loan balances (current liability portion separate from intermediate and long term portion)
3. Asset adjustments if capital expenditures are made
4. Additions and withdrawals from savings

Cash flow statement → Income statement Balance Sheet




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Interrelationships Between Financial Statements

<p>2021 Cash Flow Statement</p> <p><u>Sources of cash:</u> Beginning cash balance Cash receipts from product sales Other sources of cash Total sources of cash</p> <p><u>Uses of cash:</u> Cash operating expenses Interest payments Principal payments Capital expenditures Withdrawals of cash Other selected uses of cash Ending cash balance Total uses of cash</p> <p><u>Basic structure:</u> Total sources = total uses</p>	<p>2021 Income Statement</p> <p>Cash receipts from product sales Other income Total income</p> <p>Cash operating expenses Interest payments</p> <div style="background-color: yellow; text-align: center; padding: 5px; font-weight: bold;"> Start with the Cash Flow Statement </div> <p>Net income from operations Allowance for taxes Net income</p> <p><u>Basic structure:</u> EBIT = total income – total expenses + interest payments</p>	<p>Balance Sheet 12/31/21</p> <p>Ending cash balance Other current assets Total current assets</p> <p>Machinery and equipment Buildings and improvements Land Total assets</p> <p>Accounts payable Current loan payment Allowance for taxes Other current liabilities Total current liabilities</p> <p>Remaining balance on loans Total liabilities</p> <p>Equity</p> <p><u>Basic Structure:</u> Equity = total assets – total Liabilities ΔEquity = Retained net Income + asset revaluations</p>
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Other statements and schedules:
 Statement of Change in Owner Equity
 Depreciable asset schedules




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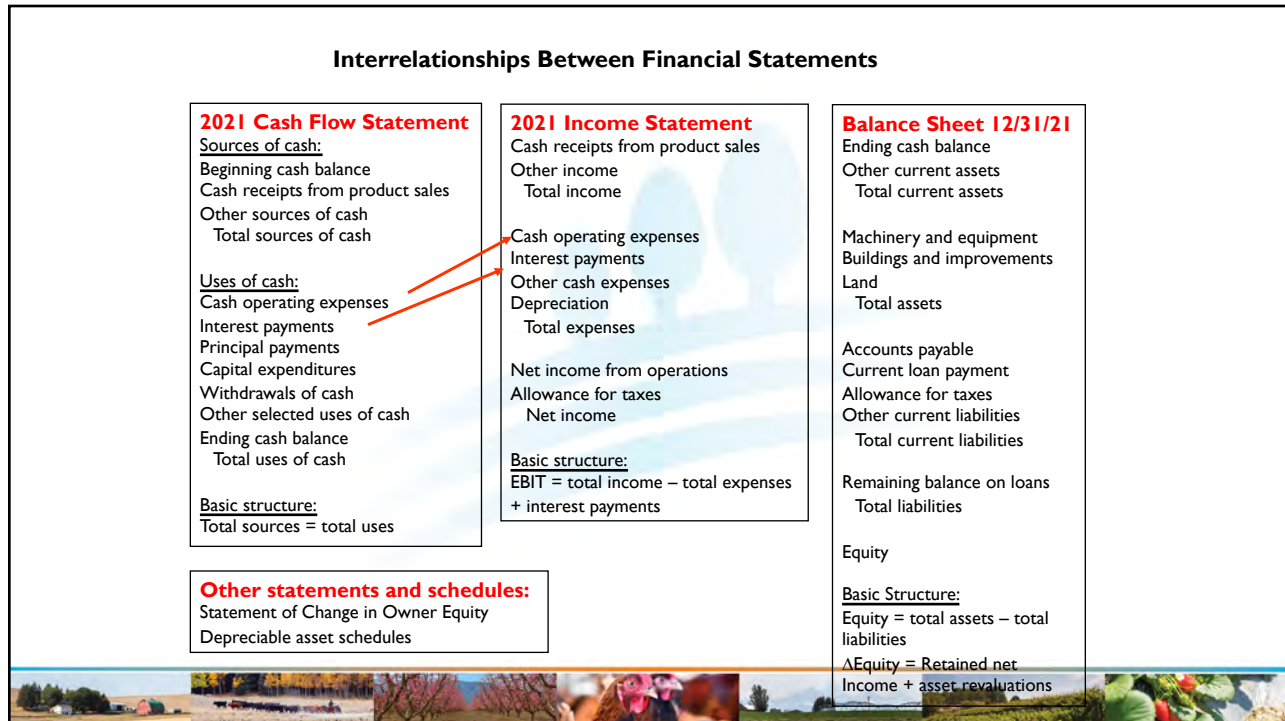
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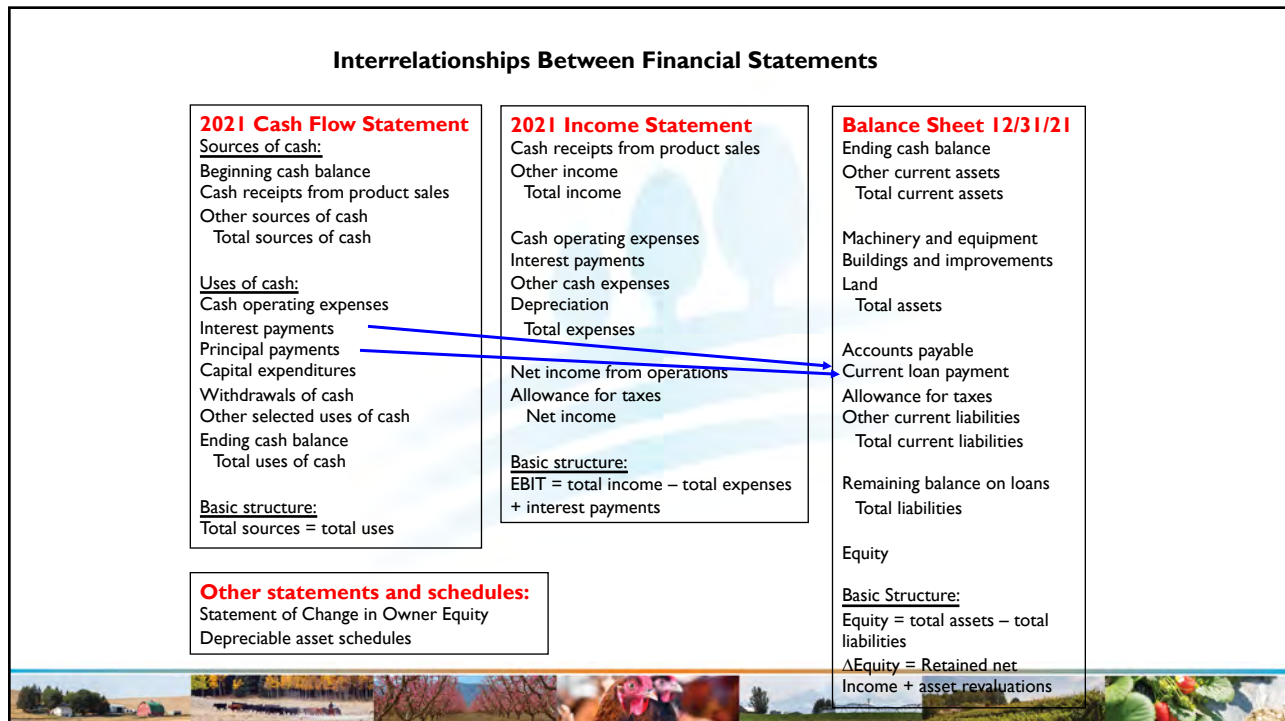
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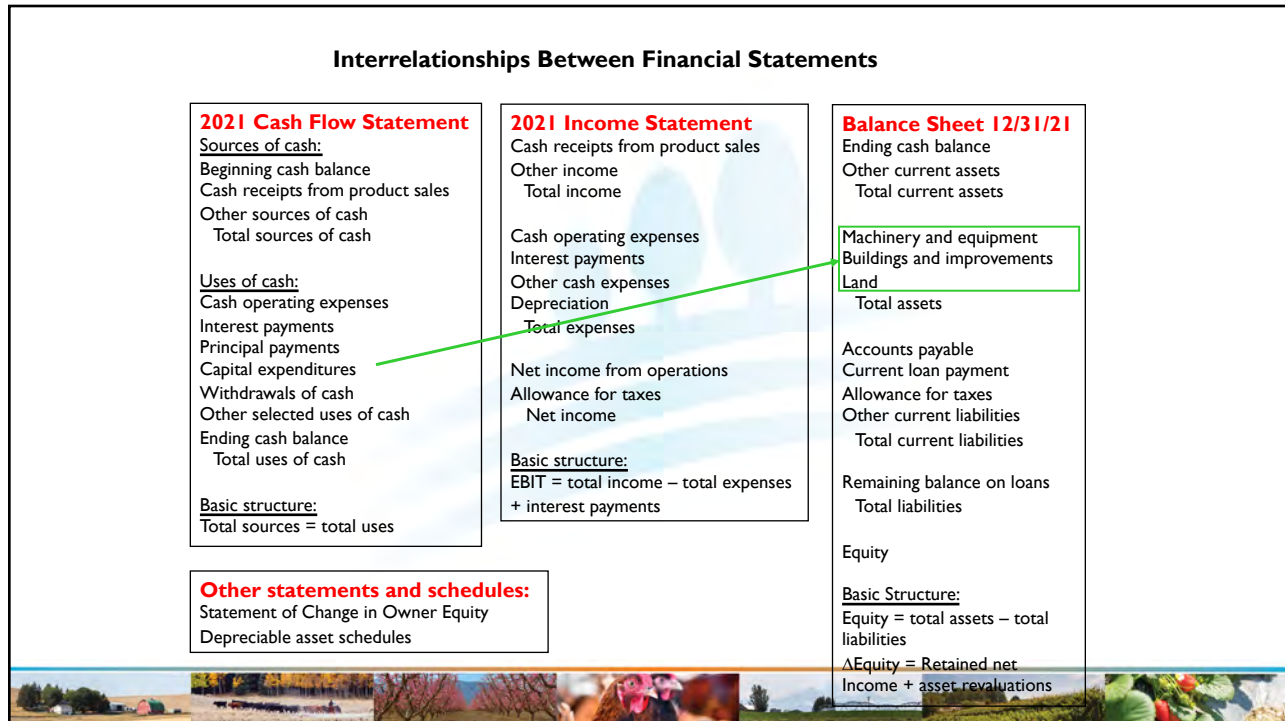
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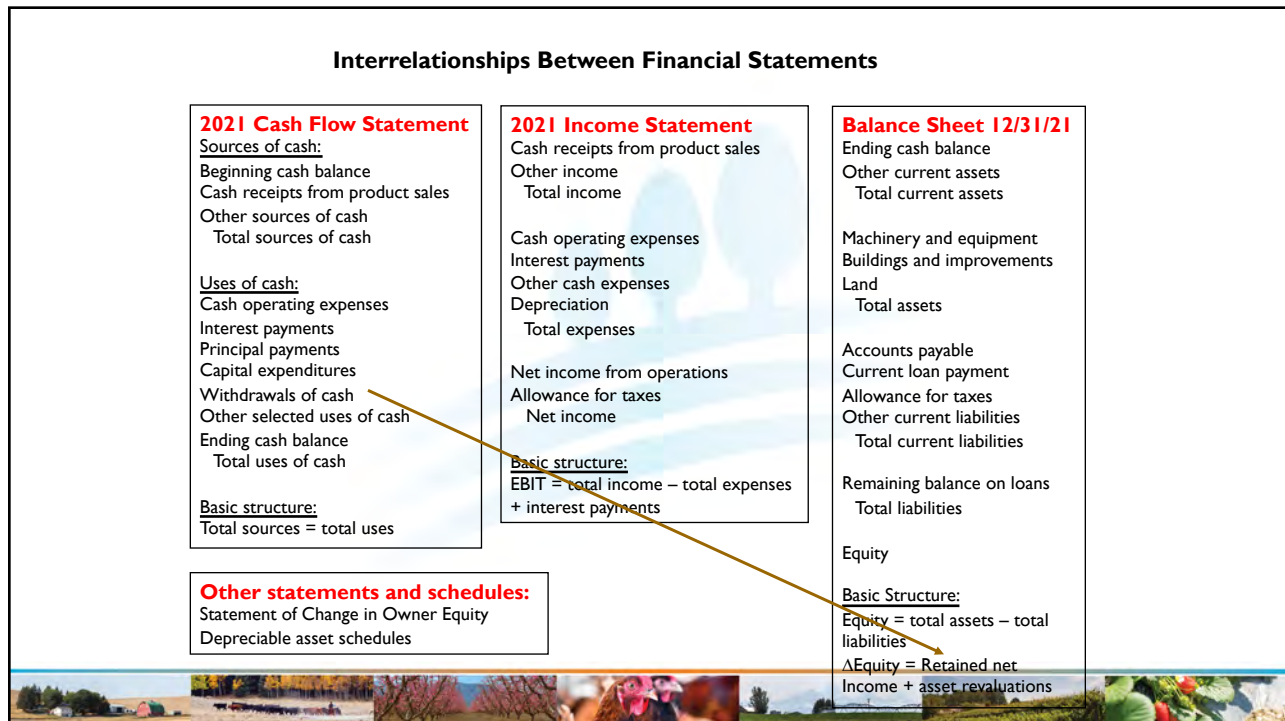
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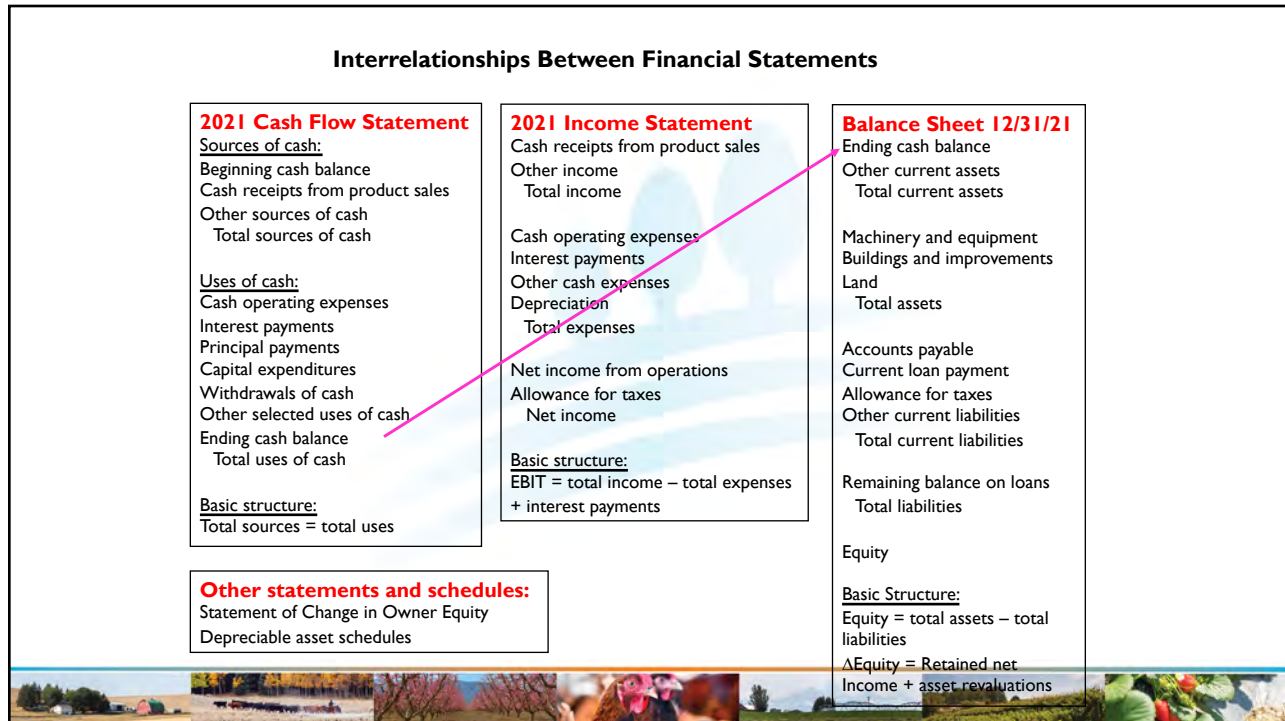
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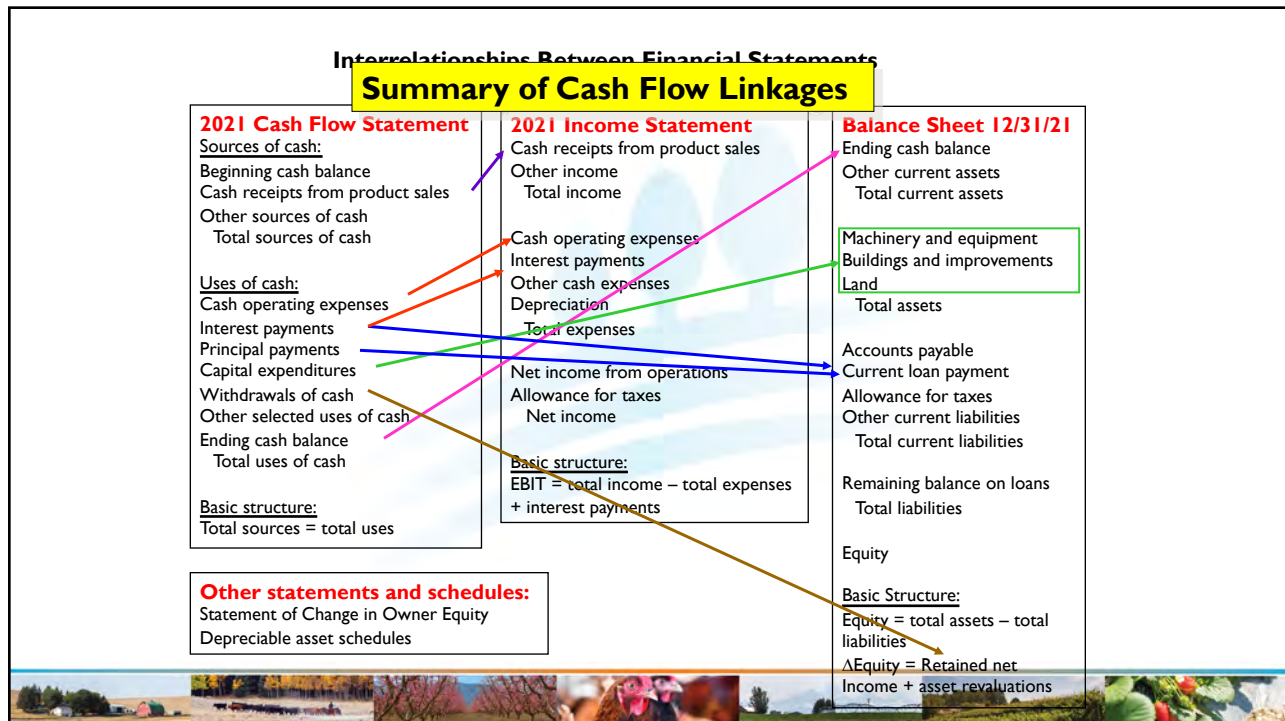
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Interrelationships Between Financial Statements

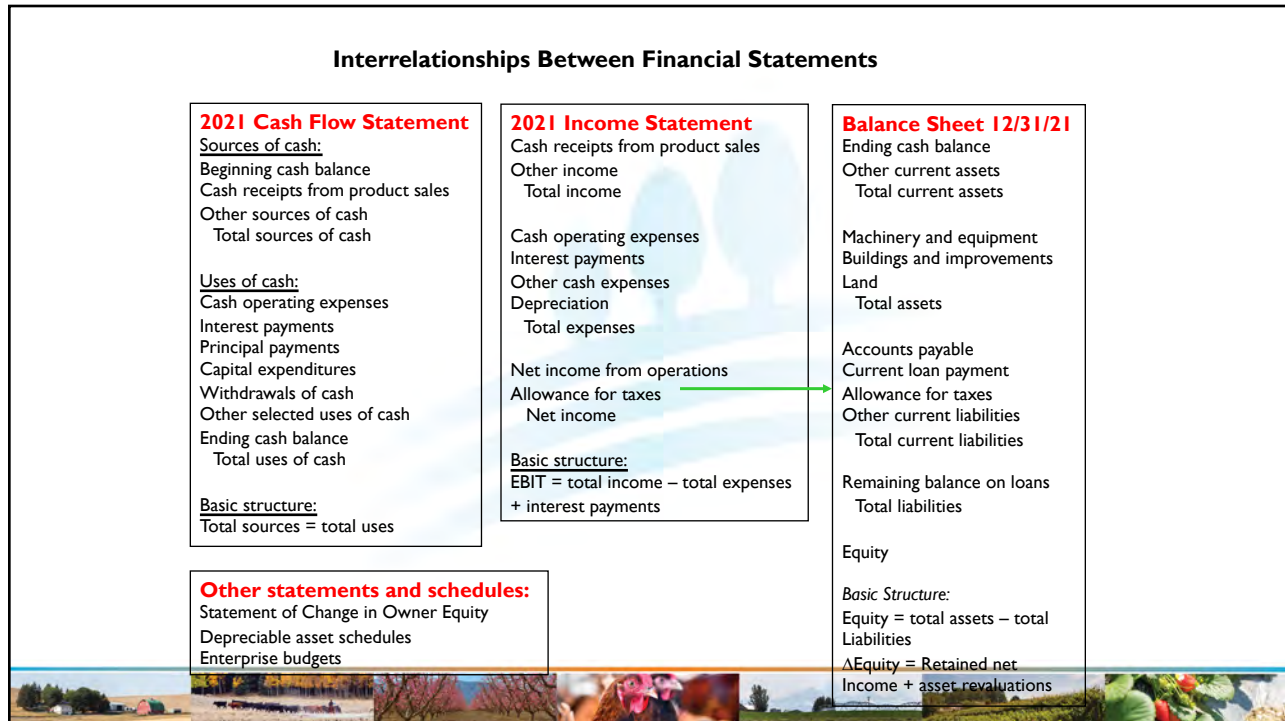
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<p>Income Statement Linkages</p>		
<p>Other statements and schedules: Statement of Change in Owner Equity Depreciable asset schedules Enterprise budgets</p>		

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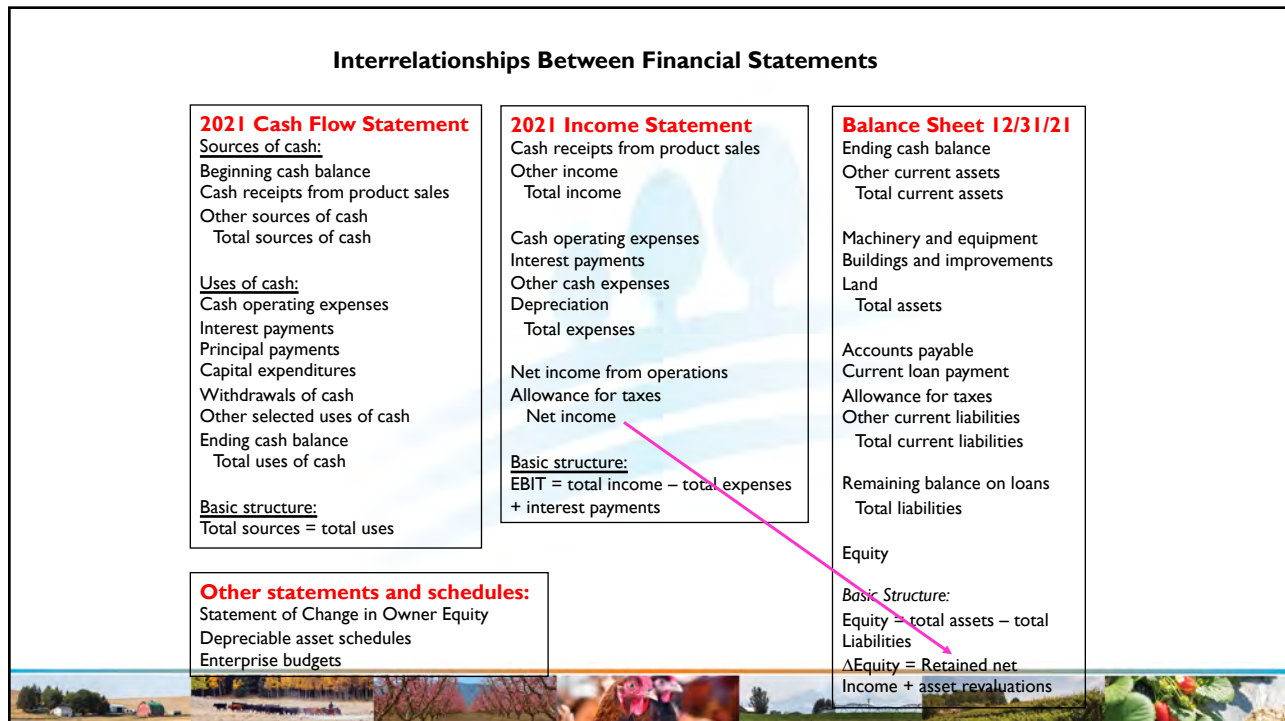
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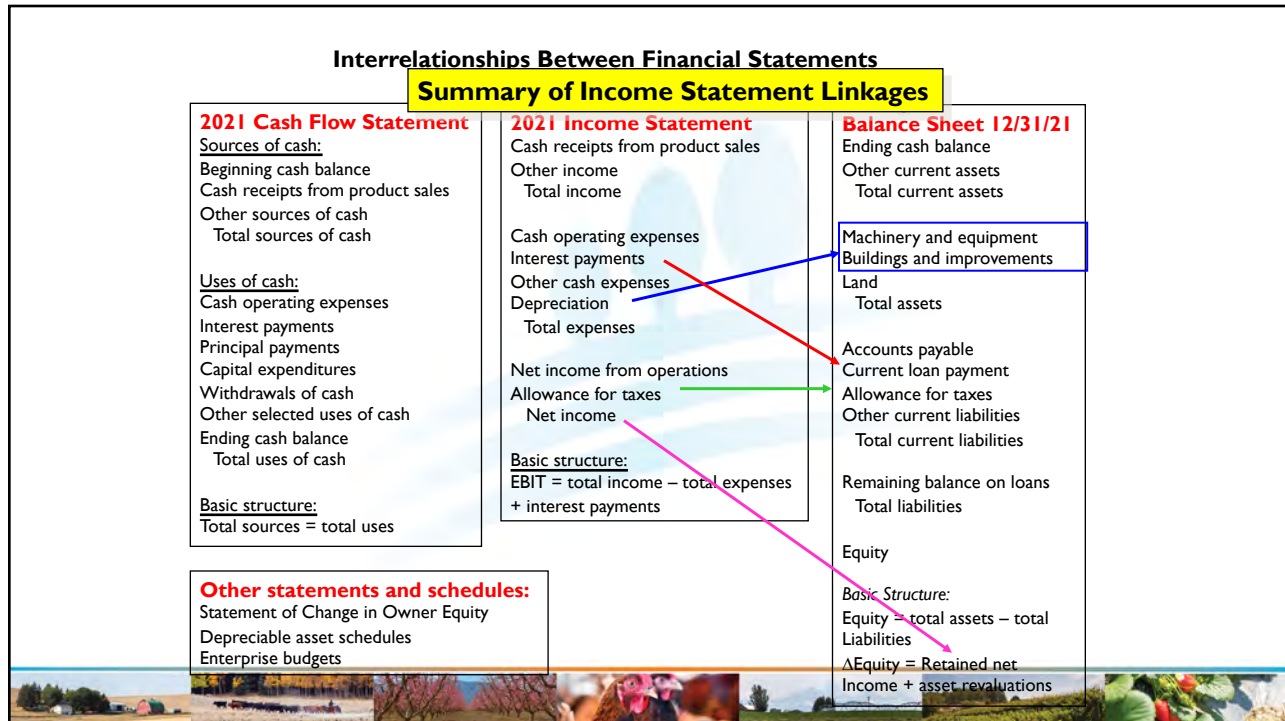
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RESOURCES

- Quick Books at: <https://quickbooks.intuit.com>
- USU Extension Farm Analysis at: <https://farmanalysis.usu.edu/>
- The Farm Financial Management Database at: <https://finbin.umn.edu/>
- Center for Farm Financial Management at: <https://www.cffm.umn.edu/>

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THANK YOU!

QUESTIONS?



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FINANCIAL FEASIBILITY ASSESSMENT: FINANCIAL ANALYSIS

DRS. RUBY WARD AND RYAN LARSEN, RUBY.WARD@USU.EDU,
RYAN.LARSEN@USU.EDU



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5 KEY RATIOS

- 1. Working Capital to Gross Revenue
- 2. Operating Profit Margin
- 3. Operating Expense Ratio
- 4. Return on Assets
- 5. Term Debt Coverage Ratio



2

RATIO I: WORKING CAPITAL TO GROSS REVENUE

- Working capital divided by Gross revenues gives a relationship of the working capital to the size of the farm business. The higher the ratio, the greater the liquidity.
- Working capital is defined by the difference between current assets and liabilities
- Gross revenues is defined simply as the price by quantity of output.

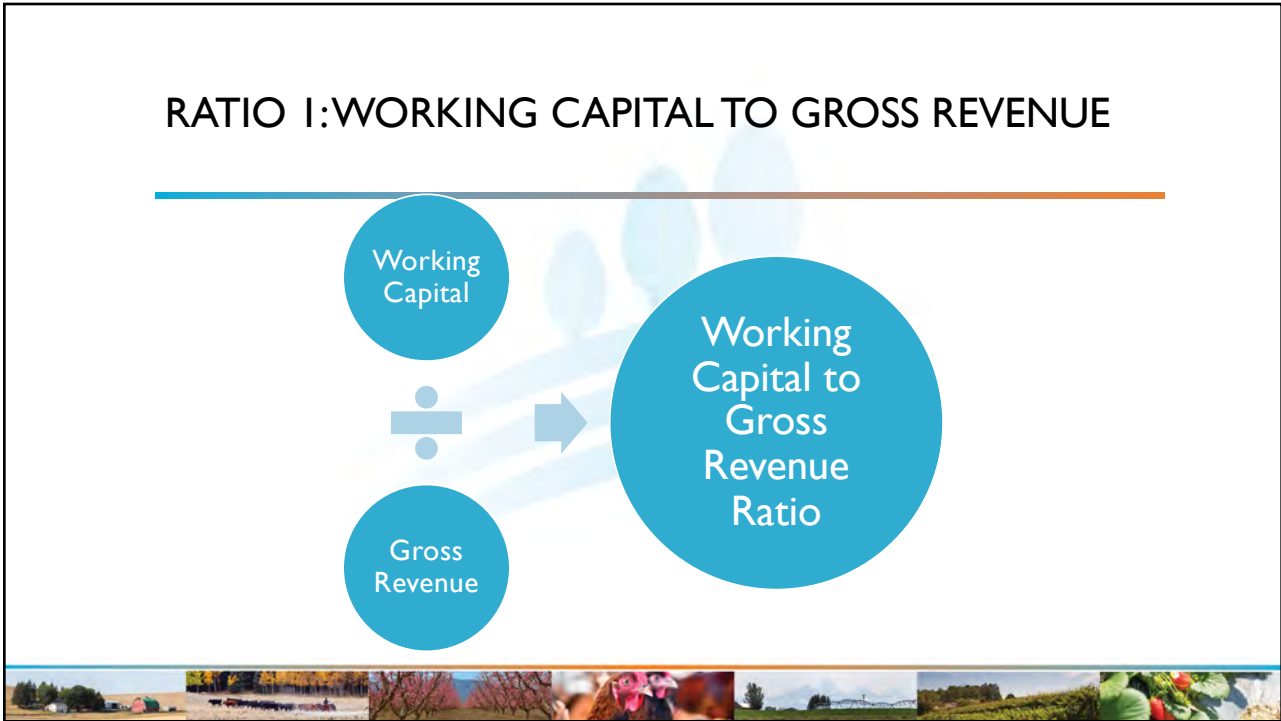


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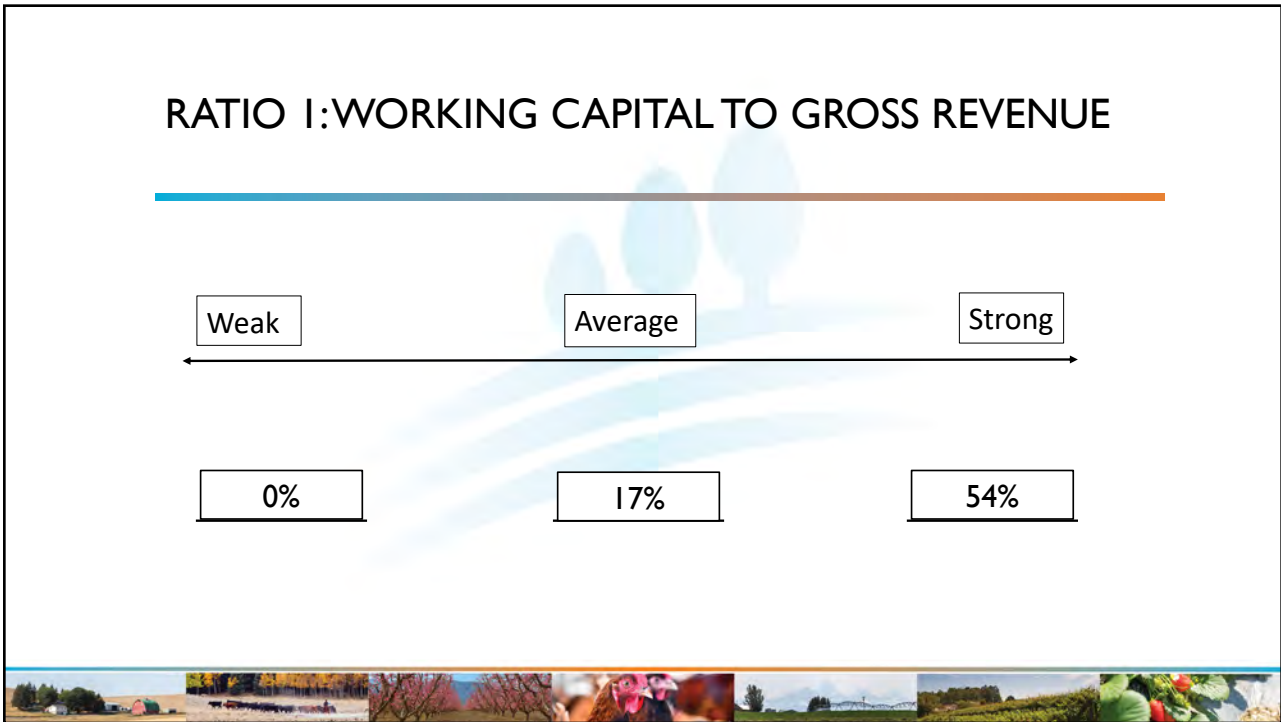
WORKING CAPITAL



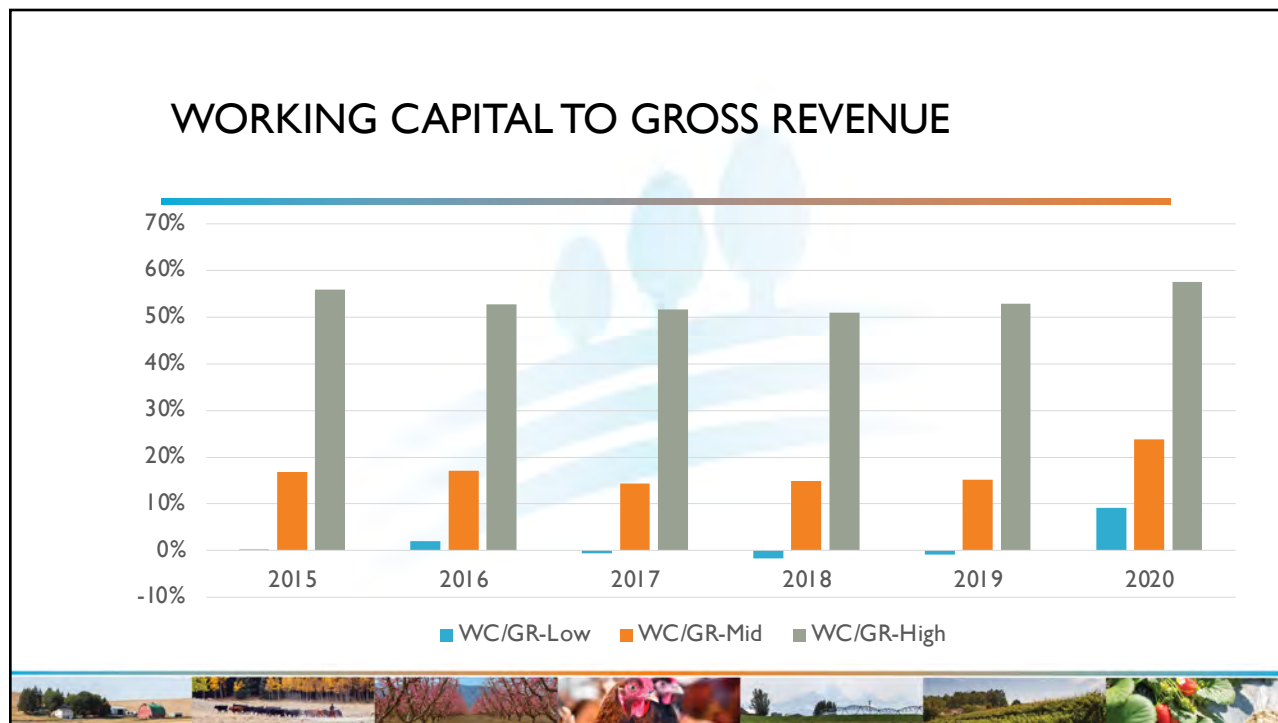
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7

RATIO 2: OPERATING PROFIT MARGIN

- This ratio measures profitability in terms of return per dollar of gross revenue. A farm business has two ways to increase profits—either by increasing the profit per unit produced or by increasing the volume of production (if the business is profitable).

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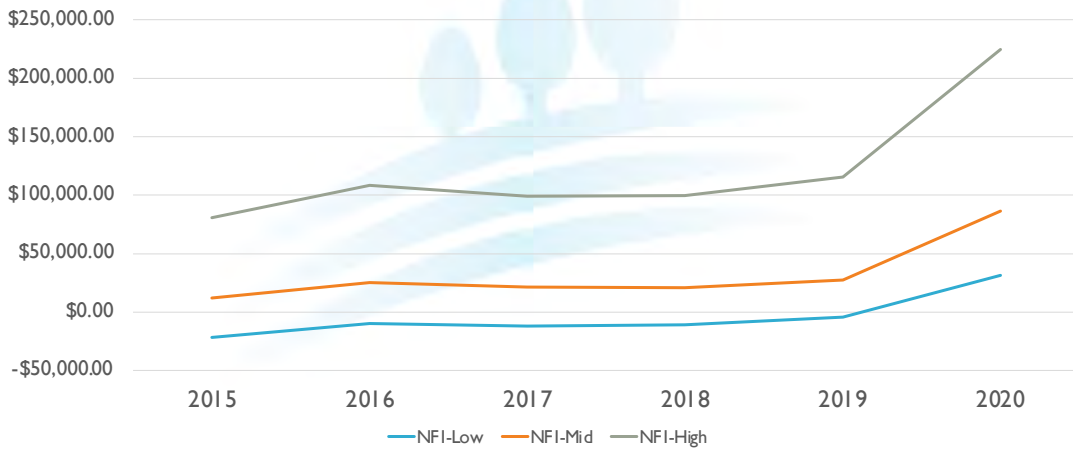
RATIO 2: OPERATING PROFIT MARGIN

$$\frac{\left(\begin{array}{l} \text{Net Farm Income} + \\ \text{Farm interest expense} \\ - \text{Owner withdrawals} \end{array} \right)}{\text{Gross revenues}} = \text{Operating Profit Margin}$$

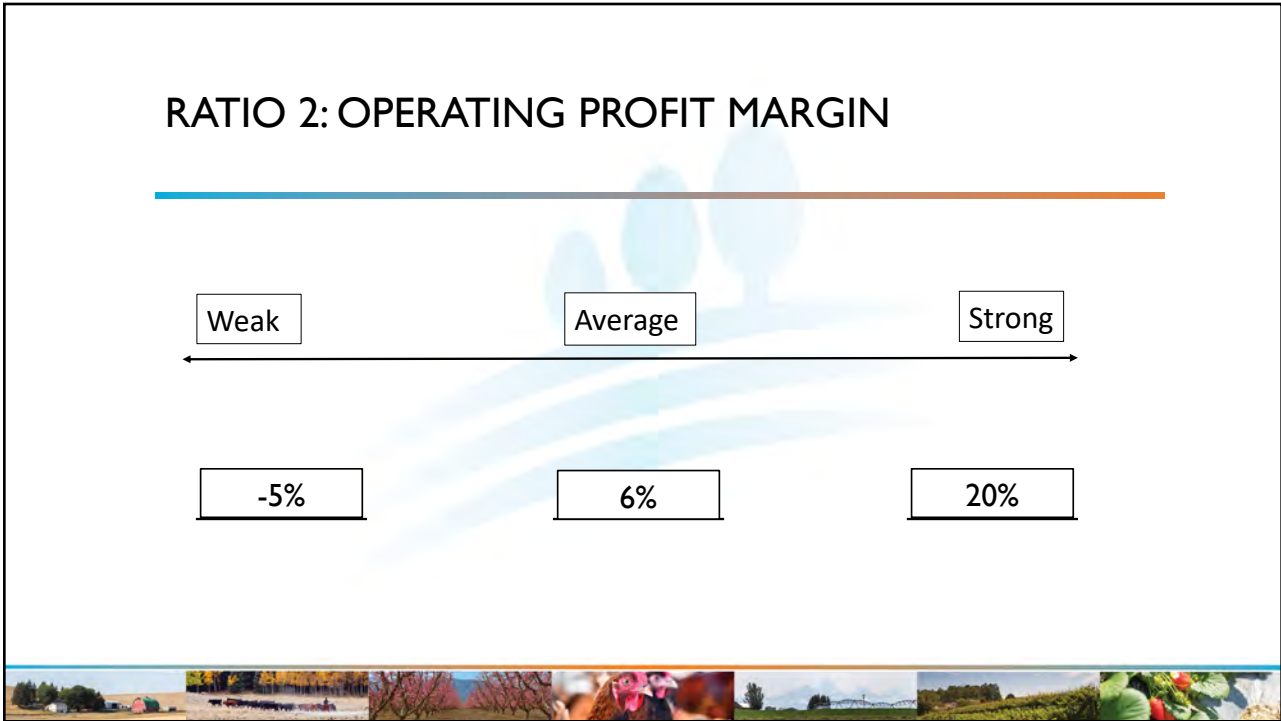


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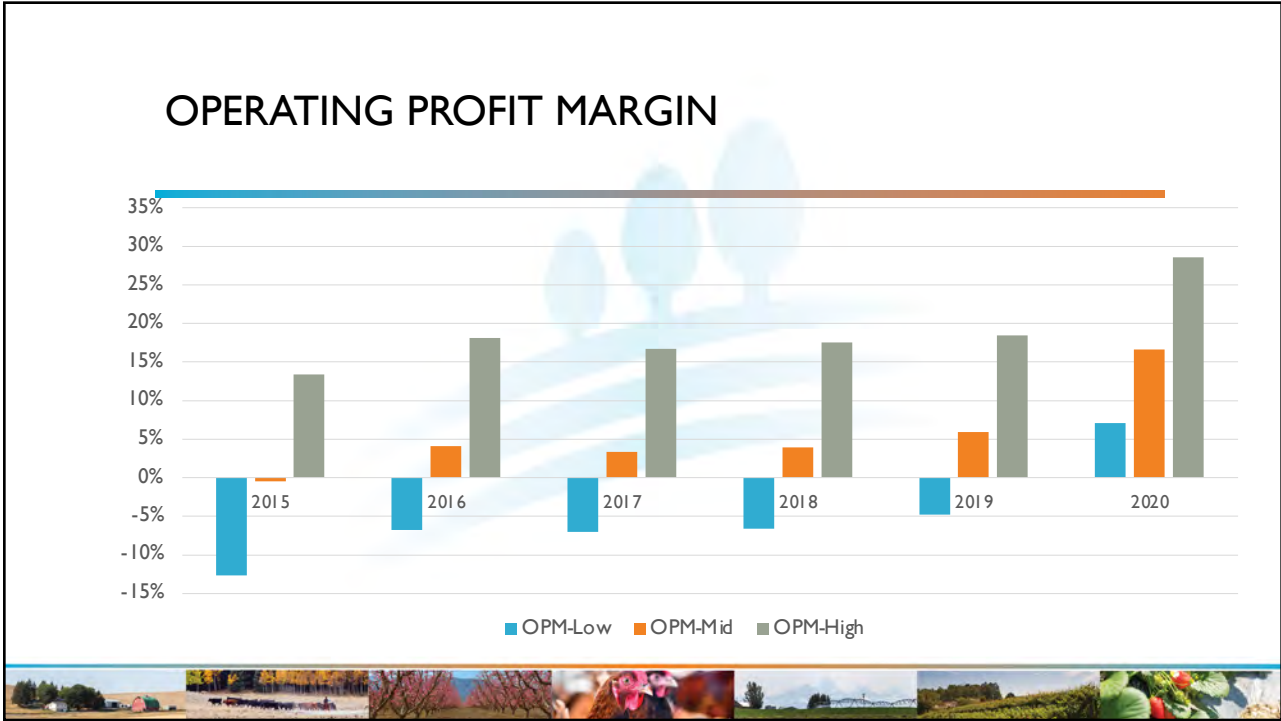
NET FARM INCOME



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11



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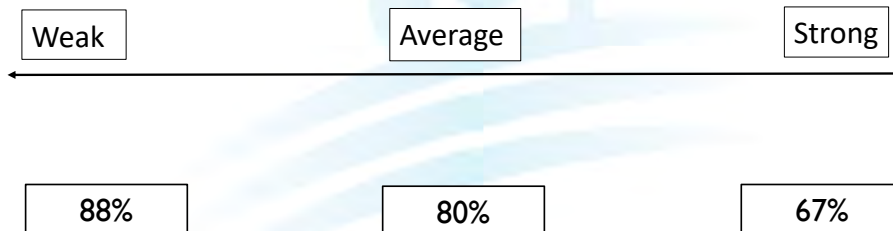
RATIO 3: OPERATING EXPENSE RATIO

- The operating expense ratio reflects the relationship of all operating expenses to gross revenues.
- $(\text{Total operating expenses} - \text{Depreciation/amortization expense}) \div \text{Gross revenues}$

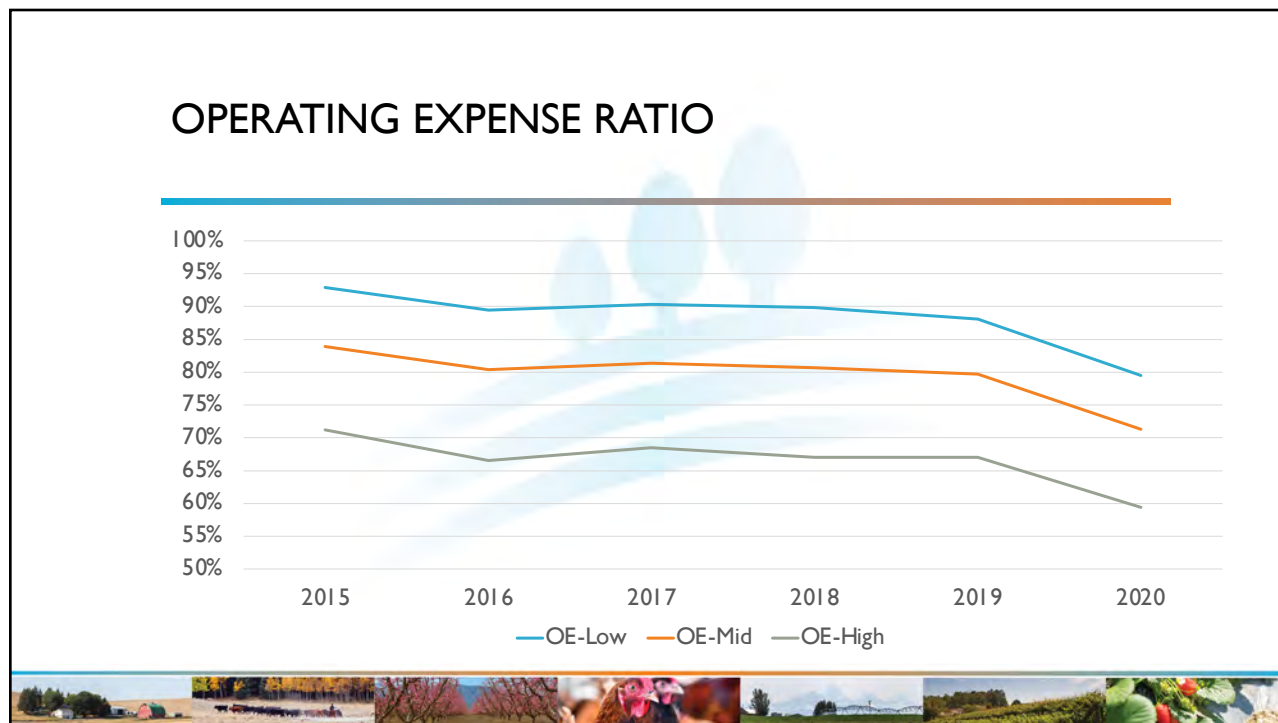


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RATIO 3: OPERATING EXPENSE RATIO



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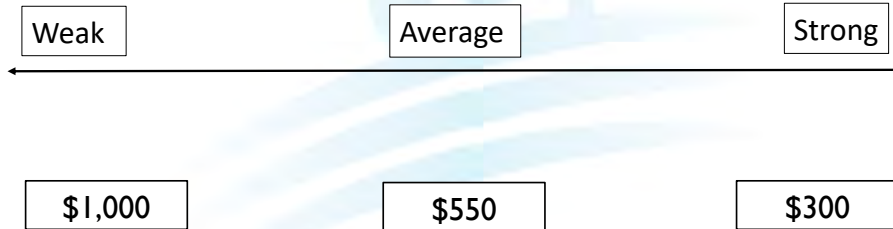
RATIO 4: MACHINERY VALUE PER ACRE

- Measures the value of machinery on a per acre basis. Used to analyze whether farm is over invested or under invested in machinery.

$$\bullet \frac{\text{Value of Machinery}}{\text{Acres}} = \text{Machinery Value per Acre}$$

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RATIO 4: MACHINERY VALUE PER ACRE



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RATIO 5: TERM DEBT COVERAGE RATIO

- The ratio provides a measure of the ability of the borrower to cover all term debt and capital lease payments before acquisition of unfunded assets. The greater the ratio, over 1:1, the greater the margin to cover the payments.
- **Capital debt repayment capacity ÷ Total principal and interest on term**

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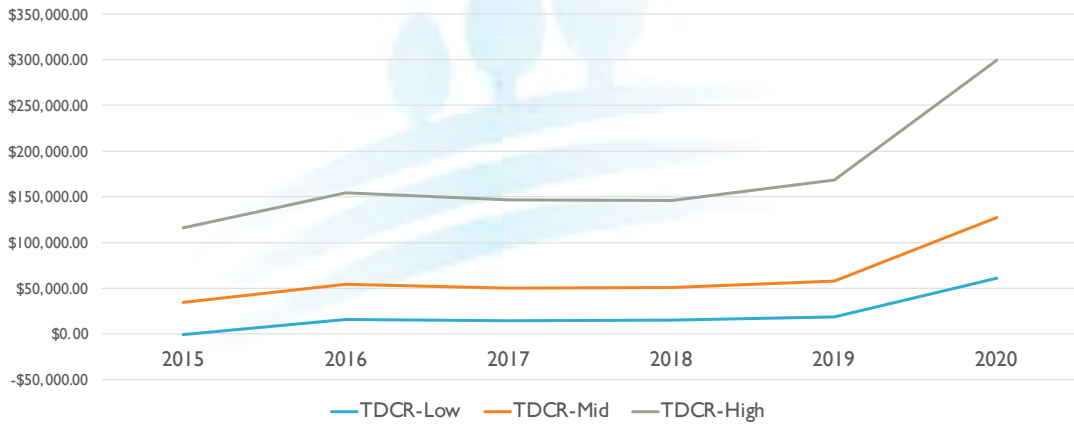
RATIO 5: TERM DEBT COVERAGE RATIO

- + Net farm income from operations
- +/- Total miscellaneous revenues/expenses
- + Total non-farm income
- + Depreciation/amortization expense
- - Total income tax expense
- - Owner withdrawals (total)
- + Interest expense on term debt
- = **Capital debt repayment capacity**

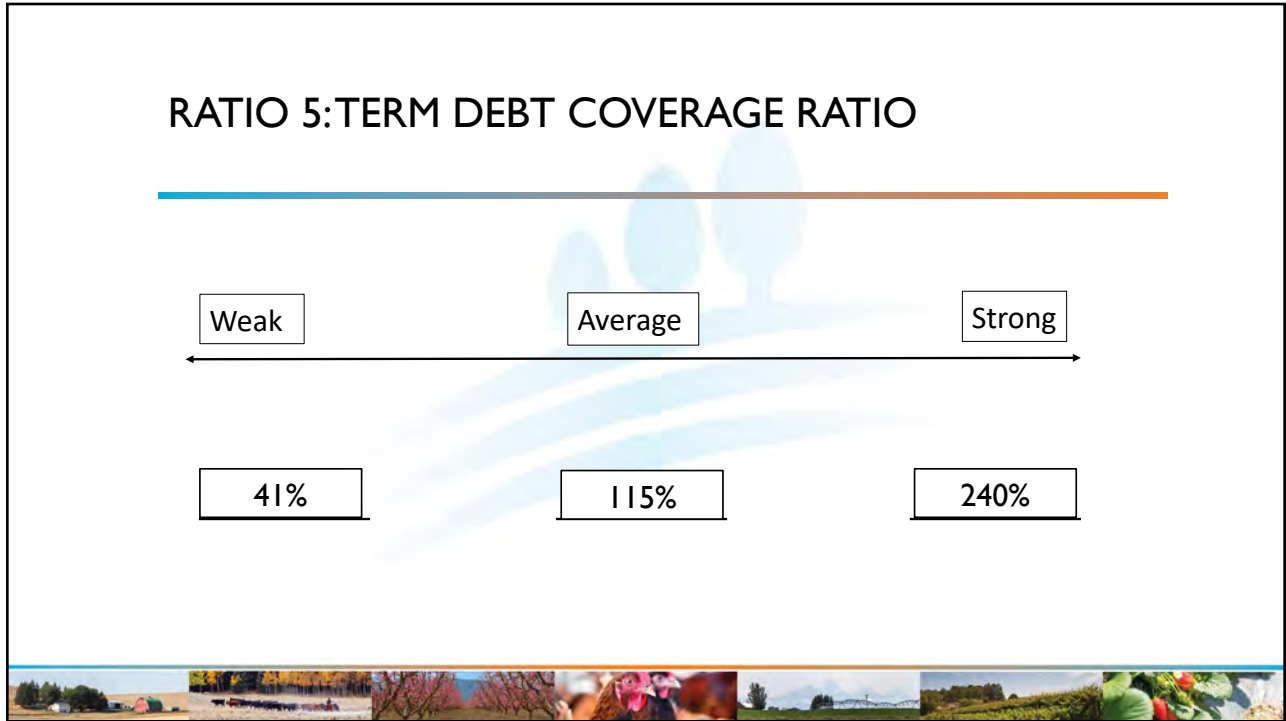


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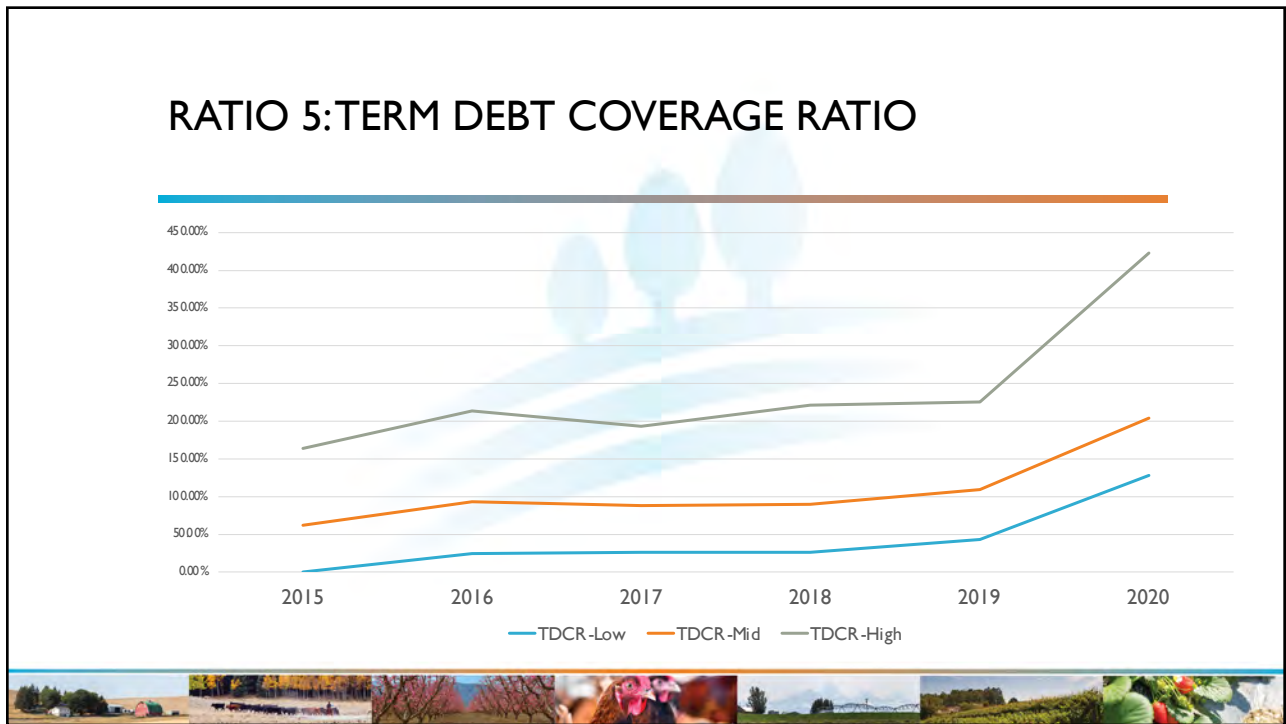
CAPITAL DEBT REPAYMENT CAPACITY



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DUPONT FINANCIAL ANALYSIS

- The DuPont system provides a straightforward method to analyze the financial strengths and weaknesses of a firm.
 - It takes into account the major levers of firm profitability
 - Efficiency or earnings
 - How efficiently the firm is using inputs to generate profits
 - Asset use
 - How well capital assets are being used to generate gross revenues
 - Debt leverage
 - How well the business is leveraging its debt capital

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DUPONT FINANCIAL ANALYSIS

$$\text{Total Assets} = \text{Total Liabilities} + \text{Total Equity}$$

Total amount of **stuff** used in the business to make profits (supplies, inputs breeding stock, machinery, etc.)

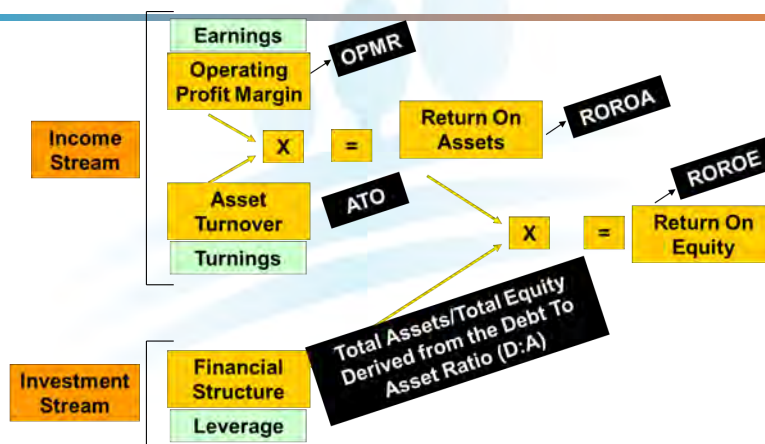
How much of that stuff is financed by the "bank", that is, debt capital.

How much of that stuff is financed by your own money, that is, equity capital.

So, when you make profits, those profits are a return to all the assets, some of which is a return to your money invested (equity capital) and some of which is a return to the bank's money (debt capital).

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DUPONT FINANCIAL ANALYSIS



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DuPont Financial Analysis			
	Operation 1	Operation 2	Operation 3
Net Farm Income from Operations	\$282,577	\$115,728	\$191,590
Unpaid Labor & Mgmt	\$100,000	\$50,000	\$75,000
Interest Paid	\$116,159	\$57,065	\$64,972
Gross Revenue	\$5,741,727	\$579,258	\$871,460
Total Assets	\$18,377,052	\$3,844,722	\$3,182,920
Net Worth	\$13,971,621	\$2,655,607	\$2,275,056
Operating Profit Margin			
Asset Turnover Ratio			
Rate of Return on Assets			
Leverage Ratio			
Rate of Return on Equity			

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KEY TAKEAWAYS

- Need to understand these ratios
 - Help with management decisions
 - Identify strengths and weaknesses in the operation
 - Manage expenses and benchmark operation



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MyFi Assist App



- MyFi Assist – an app for “My Financial Assistant”
 - Free
 - Available in IOS and Android
 - Can be personalized to your situation

More information about the app and other materials are available at DiverseAg.org/Money



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MyFi Financial Assistant
USDA FINANCIAL ASSISTANT

Personal Preferences

Choose or change your item and its value below:

Turn Preferences on/off

1. What is your item?
calves
Examples: hours worked, head of calves, bales of hay, etc.

2. What is the value of this item?
500
Example: the value of each hour worked is \$10

Visit: DiverseAg.org/money for more information

Personal Preferences – Ranch Example

- Input calves as the item of interest
- In this example, each calf is valued at \$500
- What is the monthly payment of a truck bought for \$30,000?
- The interest on the loan is 6%, and there is no down payment
- Plan to pay the loan off in 4 years

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MyFi Financial Assistant
USDA FINANCIAL ASSISTANT

Paying for a Loan

When you use a loan or a credit card to buy something, you will pay back the amount of the loan plus interest and any fees. Fill in the information in the grey boxes below to find out the total cost of buying using credit.

What is the annual interest rate?

How many years will you take to pay the loan back?

How much do you owe or does the item cost?

What is the amount of your down payment if any?

Your monthly payment will be \$704.55

The total amount you will pay in interest is 3,818.44
After making all your payments you will pay 33,818.44
Your interest cost is equivalent to 13% of the original cost

You will need 1.4 calves each month
16.9 calves each year
The total amount is equivalent to 67.6 calves
The total interest is equivalent to 7.6 calves

Personal Preferences – Ranch Example

- You would like to purchase a pickup and need to borrow \$30,000 now. You will pay it off with monthly payments over 4 years. The interest rate is 6% annually.
- Use MyFi Assist, "Paying for a Loan"
 - Calculate the monthly payment
 - Calculate how many calves you would have to sell to make the truck payment
 - What is the total you will pay for the pickup?

30

Your monthly payment will be **\$704.55**

The total amount you will pay in interest is 3,818.44
After making all your payments you will pay 33,818.44

Your interest cost is equivalent to 13% of the original cost

You will need 1.4 calves each month
16.9 calves each year

The total amount is equivalent to 67.6 calves
 The total interest is equivalent to 7.6 calves

[Menu](#)

- Can the business justify buying this truck?
- How many more bales of hay or calves will you need to sell to cover it?
- Think about not just this decision but potential effect on other decisions

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MyFi Financial Assistant

How long will it take to pay off my debt?

Sometimes rather than purchasing products for cash, we charge them on credit cards or take out a loan. If not repaid, credit card balances can get pretty big. Often we want to know how long (how many payments) it will take to pay off a loan or credit card balance. This can also be used to find out how long it will take to pay if you increased your payment each month. Fill in the information in the gray boxes below to find out how long it will take to pay off the credit card balance.

What is the annual interest rate?

What's the balance you owe today?

How much will you pay each month?

[Calculate](#)

Time to pay off balance 0

The total amount you will pay in interest is \$0
After making all your payments you will pay \$0

Your interest is equivalent to 0% of the original cost

You will need \$0
\$0

[Menu](#)

Credit Card

- You want to pay off a credit card with a balance of \$1,800. The interest rate on the credit card is 12%.
- If you were to make the minimum monthly payments of \$25, how long would it take for you to pay it off?
- How long would it take to pay it off if you increased the monthly payments to \$75?

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MyFi Financial Assistant
PAY OFF CREDIT CARD

How long will it take to pay off my debt?

Sometimes rather than purchasing products for cash, we charge them on credit cards or take out a loan. If not watched, credit card balances can get pretty big. Often we want to know how long those many payments it will take to pay off a loan or credit card balance. This can also be used to find out how long it will take to pay if you increased your payment each month. Fill in the information in the gray boxes below to find out how long it will take to pay off the credit card balance.

What is the annual interest rate?

What's the balance you owe today?

How much will you pay each month?

Calculate

Time to pay off balance 127.93 Months

The total amount you will pay in interest is 1,398.25
After making all your payments you will pay 3,198.25
Your interest cost is equivalent to 88% of the original cost.

You will need 2.1 hours worked each month
25 hours worked each year
The total amount is equivalent to 266.5 hours worked
The total interest is equivalent to 116.5 hours worked

Menu

Credit Card Cont.

- If you were to make the minimum monthly payments of \$25, how long would it take to have you pay it off?
 - **128 months and \$1,398 in interest on the original balance**
- How long would it take to pay it off if you increased the monthly payments to \$75?
 - **28 months and \$269 in interest on the original balance**

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Paying for Home Loans

- MyFi Assist can also be used to look at home loans
- Use “Paying for a Loan” to look at how much monthly payments would change with different interest rates and different down payment amounts
- Use “Pay Off Credit Card” to look at how making larger payments can reduce the amount of time to pay off the mortgage

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RESOURCES

- MyFi Financial Assistant at: <https://diverseag.org/money/index>
- Quick Books at: <https://quickbooks.intuit.com>
- USU Extension Enterprise Budgets at: <https://extension.usu.edu/apec/agribusiness-food/enterprise-budgets>
- USU Extension Farm Analysis at: <https://farmanalysis.usu.edu/>
- The Farm Financial Management Database at: <https://finbin.umn.edu/>
- Center for Farm Financial Management at: <https://www.cffm.umn.edu/>
- The 5 C's Of Credit at: <https://www.forbes.com/advisor/credit-score/5-cs-of-credit/>



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ENTERPRISE FINANCING: FEDERAL GRANT AND LOAN PROGRAMS



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1

AGENCY CONTACTS

- Jamie Rex – USDA Farm Service Agency
- Travis Mote – USDA Natural Resource Conservation Service
- Jason Justesen – USDA Rural Development
- USDA Agricultural Marketing Service Programs (online)



2



3

WHO IS FSA

- The Farm Service Agency (FSA), is an agency within the United States Department of Agriculture (USDA).
- FSA's Farm Loan Programs (FLP) provide temporary credit to agricultural producers who are unable to obtain private, commercial credit. FSA places special emphasis on providing loans to beginning, minority and women farmers and ranchers.
- Goal of FSA's loan programs is to graduate the borrowers to commercial credit.

A horizontal strip of small images related to agriculture, including a farm, a field, a person, and various crops.

4

INTRO TO FSA LOAN PROGRAMS

- If you are a farmer or rancher who is unable to obtain credit from another lender to start, purchase, sustain, or expand your family farm you may be able to get a loan through FSA's Farm Loan Programs.
- FSA has different types of loans depending on your current situation and what you need the loan for.



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GUARANTEED LOANS

- Commercial lender
 - EZ Guarantee
 - Farm Ownership
 - Operating



6

TYPE OF LOAN	MAXIMUM LOAN AMT	RATES AND TERMS
EZ Guarantee	\$100,000	Same as guaranteed farm ownership and guaranteed operating.
Farm Ownership	\$1,776,000 – adjusted annually for inflation.	<ul style="list-style-type: none"> • Term: Up to 40 years • Rate: Determined by lender.
Farm Operating	\$1,776,000 – adjusted annually for inflation.	<ul style="list-style-type: none"> • Term: 1-7 years • Rate: Determined by lender.



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DIRECT LOANS

- FSA is the lender
 - Farm Ownership
 - Operating
 - Microloans (Farm Ownership and Operating)
 - Emergency



8

Type of Loan	Maximum Loan Amount	Rates and Terms
Farm Ownership	\$600,000	<ul style="list-style-type: none"> • Term: Up to 40 years • Interest Rate: Fixed**
Farm Ownership Participation	\$600,000	<ul style="list-style-type: none"> • Term: Up to 40 years • Interest Rate: Fixed** • At least 50% of loan amount provided by another lender
Direct Down Payment	The lesser of the following: <ul style="list-style-type: none"> • 45% of the farm or ranch purchase price • 45% of the appraised value • \$667,000 	<ul style="list-style-type: none"> • Term: Up to 20 years • Interest Rate: Fixed** • Down payment of at least 5% • Must be a beginning farmer.
Farm Ownership Microloan	<ul style="list-style-type: none"> • \$50,000 	<ul style="list-style-type: none"> • Term: Up to 25 years • Interest Rate: Fixed**

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Type of Loan	Maximum Loan Amount	Rates and Terms
Direct Operating	\$400,000	<ul style="list-style-type: none"> • Term: 1 to 7 years • Interest Rate: Fixed**
Direct Operating Microloan	\$50,000	<ul style="list-style-type: none"> • Term: 1 to 7 years • Interest Rate: Fixed**
Emergency	The lowest of the following: <ul style="list-style-type: none"> • 100% of actual or physical losses • \$500,000 	<ul style="list-style-type: none"> • Term: 1 to 7 years (possibly up to 20 years) for non-real estate purposes • Up to 40 years for physical losses on real estate • Interest Rate: Fixed**
Youth	<ul style="list-style-type: none"> • \$5,000 	<ul style="list-style-type: none"> • Term: 1 to 7 years • Interest Rate: Fixed**

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ELIGIBILITY

- Eligibility requirements different for each type of loan
 - BASICS
 - Credit history
 - Credit elsewhere
 - Managerial experience
 - Owner operator
 - Family sized operation



11

MICROLOANS

- The Microloan (ML) program was developed to better serve the unique financial operating needs of beginning, niche and the smallest of family farm operation
- The application process for microloans is simpler, requiring less paperwork, to coincide with the smaller loan amount. Requirements for managerial experience have been modified to accommodate smaller farm operations, beginning farmers and those with no farm management experience.



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BEGINNING FARMER

- Has not operated a farm for more than 10 years.
- Meets the loan eligibility requirements of the program to which he/she is applying.
- Substantially participates in the operation of the farm.
- Applicants for FO purposes must be participated in the business operations of a farm for at least 3 out of the last 10 years.
- For FO purposes, does not own a farm greater than 30 percent of the average size farm in the county, at the time of operation.



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Essential Calculators for the Web Standard Loan Calculator Results


Operating Loan

Loan Amount:	\$400,000.00
Interest Rate:	2.25%
Number of Years:	7
Number of Periods Per Year:	1
Payment Amount:	\$62,400.10
Total Interest Paid:	\$36,800.69



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Essential Calculators for the Web Standard Loan Calculator Results	
Farm Ownership	
Loan Amount:	\$400,000.00
Interest Rate:	2.875%
Number of Years:	40
Number of Periods Per Year:	1
Payment Amount:	\$16,957.02
Total Interest Paid:	\$278,280.84



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THINGS TO THINK ABOUT?

- Must be producing an agricultural commodity
- What are you going to produce?
- Where are you going to market the products?
- How are you going to repay the loan?
- What are your goals for the operation?



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FSA FARM PROGRAMS

- Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC)
- Conservation Reserve Program
- Dairy Margin Coverage Program (DMC)
- Emergency Assistance for Livestock, Honeybees, and Farm Raised Fish (ELAP)
- Livestock Forage Disaster Program(LFP)
- Livestock Indemnity Program (LIP)
- Noninsured Crop Disaster Assistance Crop Program (NAP)



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CONTACT INFORMATION

- Jamie Rex-Farm Loan Officer
 - jamie.rex@usda.gov
 - 435-336- 5573 Ext. 101
- Travis Cartright, Farm Loan Manger
 - travis.cartright@usda.gov
 - (435) 283-8002 Ext. 103
- Demsey Mills, Program Technician
 - demsey.mills@usda.gov
 - (435) 336-5573 Ext 100



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TRAVIS MOTE – USDA NATURAL RESOURCE CONSERVATION SERVICE (NRCS)



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NRCS TODAY

- **Technical Assistance:** NRCS conservationists provide technical expertise and conservation planning for farmers, ranchers and forest landowners wanting to make conservation improvements to their land.
- **Financial Assistance:** Farmers, ranchers and forest landowners can receive financial assistance from NRCS to make improvements to their land.



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OPPORTUNITIES ALL SIZES OF AGRICULTURAL OPERATION INCLUDING URBAN & SMALL FARMS



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SOIL HEALTH

NRCS conservationists can advise small and urban growers on things like what cover crops to grow, mulching, and crop rotation to increase organic matter.



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HIGH TUNNELS

NRCS can provide financial assistance for high tunnels, used to extend the growing season and to protect plants from harsh weather.



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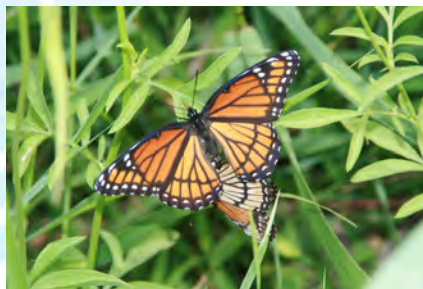
IRRIGATION

We can help small and urban growers conserve water, by assisting with things like drip irrigation.



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WEEDS AND PESTS



We can help with pest and weed management by planting buffers for beneficial insects and pollinator habitat and eradicating invasive species.



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PASTURE MANAGEMENT



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RANGE MANAGEMENT



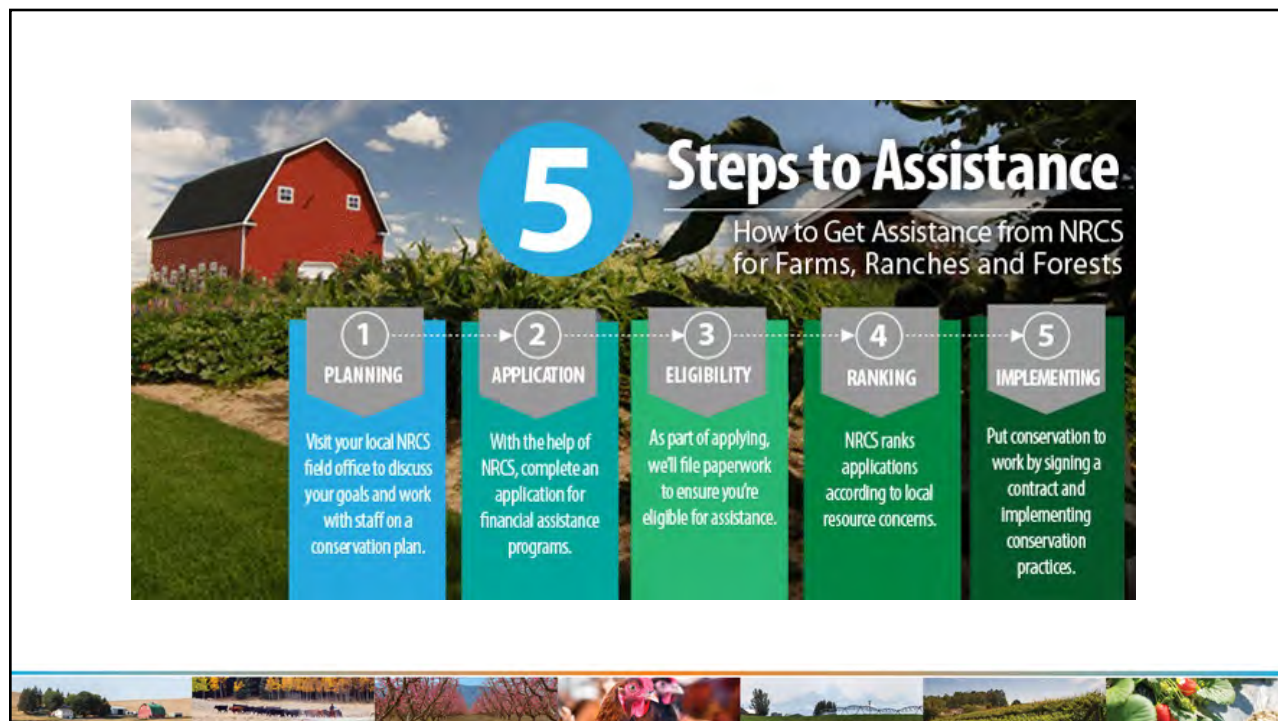
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FINANCIAL ASSISTANCE PROGRAMS

- **Environmental Quality Incentive Program (EQIP)**
- **Agricultural Management Assistance (AMA)**
- **Conservation Stewardship Program (CStP)**
- **Agricultural Conservation Easement Program (ACEP)**



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NEW FOCUS ON URBAN FARMING

- 1. USDA services are available to those who produce food or fiber in urban areas.**
- 2. Land and other areas used for food production in urban areas, regardless of size, is eligible for farm and tract numbers.**
- 3. There is not a specific program for our urban agriculture efforts. We will use our existing program authorities to provide assistance.**
- 4. Many urban lands are suitable for providing foods to their local communities.**
- 5. For conservation programs, there is no minimum income level to be eligible to participate.**

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NEW FOCUS ON URBAN FARMING

Funding pools that will prioritize funding to urban farming operations

Urban farming planners in offices along the Wasatch Front offices.



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UPCOMING APPLICATION PERIODS

AMA-RMA: TBD

Prioritizes urban farming operations who adopt practice to improve plant health, improve soil quality, and solve operational natural resource concerns.

EQIP-CIC: April

Program focus is on improving water quality and soil health through the adoption of management practices.



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JASON JUSTESEN – USDA RURAL DEVELOPMENT (RD)



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USDA RURAL DEVELOPMENT - UTAH

- Amy Sorensen B&CP Director
 - amy.sorensen@usda.gov
- Jason Justesen B&CP Specialist/Energy Coordinator
 - jason.justesen@usda.gov
- Barry Christensen B&CP Specialist
 - barry.Christensen@usda.gov



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RURAL ENERGY FOR AMERICA REAP

- Loan guarantee funds
- Grant funds (25%)
- Energy Efficiency Improvements (EEI)
 - Replacing equipment with high efficiency equipment, lighting, insulation, doors windows, vfd's
- Renewable Energy Systems (RES)
 - Implementing renewable energy systems = solar, wind, geothermal, hydropower, biomass



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VALUE ADDED PRODUCER GRANT

- Grant Funding (50%)
- Planning Activities
 - Feasibility studies, business plans
- Working Capital
 - Processing costs, marketing and advertising, some inventory and salary expenses



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FOOD SUPPLY CHAIN GUARANTEED LOAN PROGRAM

- Loan guarantee funding for applicants that want to start or expand middle of the food supply chain activities
 - aggregation
 - manufacturing
 - processing
 - storage
 - transportation
 - wholesale or distribution of food



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USDA AMS (AGRICULTURAL MARKETING SERVICE) - PROGRAMS



Farmers Market Promotion Program



Local Food Promotion Program



Organic Cost Share Programs



Specialty Crop Block Grant Program

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THE FARMERS MARKET PROMOTION PROGRAM (FMPP)

- Funds projects that develop, coordinate and expand direct producer-to-consumer markets to help increase access to and availability of locally and regionally produced agricultural products by developing, coordinating, expanding, and providing outreach, training, and technical assistance to domestic farmers markets, roadside stands, community-supported agriculture programs, agritourism activities, online sales or other direct producer-to-consumer (including direct producer-to-retail, direct producer-to-restaurant and direct producer-to-institutional marketing) market opportunities
- <https://www.ams.usda.gov/services/grants/fmpp>



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THE LOCAL FOOD PROMOTION PROGRAM (LFPP)

- Funds projects that develop, coordinate and expand local and regional food business enterprises that engage as intermediaries in indirect producer to consumer marketing to help increase access to and availability of locally and regionally produced agricultural products. Grants can be used for the planning stages of establishing or expanding a local and regional food business enterprise or to improve or expand a food business that supports locally and regionally produced agricultural products and food system infrastructure by performing feasibility studies, market research, training and technical assistance for the business enterprise and/or for producers working with the business enterprise.
- <https://www.ams.usda.gov/services/grants/lfpp>



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SPECIALTY CROP BLOCK GRANT PROGRAM (SCBGP)

- The purpose of the Specialty Crop Block Grant Program (SCBGP) is to enhance the competitiveness of specialty crops. Specialty crops are defined as “fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture).”
- Organizations or individuals interested in the SCBGP should contact their state department of agriculture for more information.
- <https://www.ams.usda.gov/services/grants/scbgp>



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SPECIALTY CROP GRANT - UDAF

- Applications open February 2023
- For more info email Calli Nielsen at callinielsen@utah.gov
- Web link: <https://ag.utah.gov/specialty-crop-block-grant-program/>
-



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RESOURCES

- USDA NRCS: <https://www.nrcs.usda.gov>
- USDA FSA: <https://www.fsa.usda.gov>
- USDA RD: <https://www.rd.usda.gov>
- USU Extension Enterprise Budgets: <https://extension.usu.edu/apec/agribusiness-food/enterprise-budgets>
- USU Extension Farm Analysis: <https://farmanalysis.usu.edu/>
- The 5 C's Of Credit: <https://www.forbes.com/advisor/credit-score/5-cs-of-credit/>



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THANK YOU!

QUESTIONS?



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OVERVIEW: NEEDS ASSESSMENTS & EVALUATION

LENDEL K. NARINE, PH.D.



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DISCUSSION POINTS

- Problems and needs
- Needs Assessments
- Impact and outcomes
- Nature of programs
- Activity-level evaluation



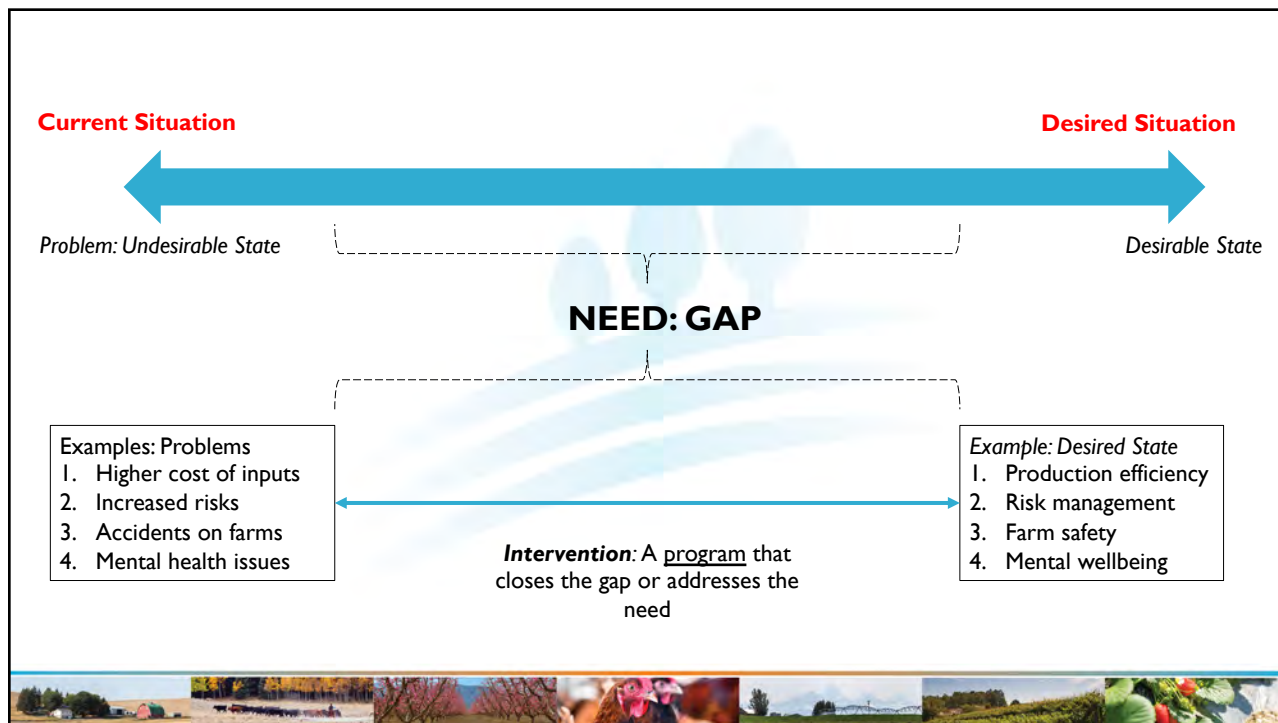
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PROBLEMS AND NEEDS

- Focus of programs: Problems affecting clientele
 - Undesirable situations: Negatively affects productivity, profitability, livelihoods
- A Needs Assessment helps us understand the magnitude of a problem
 - A problem becomes a need when a gap exists and affects a target population
 - A need is contextual and changes between populations



3



4

HOW ARE **NEEDS** CONNECTED TO **IMPACTS**?

- Impact occurs when a program **addresses a need**
 - A program is impactful when it closes a gap
- The *Desired State* is written in a program plan as the **overarching goal** e.g.,
 1. To improve production efficiency and profitability
 2. To decrease agricultural risk through risk management education
 3. To improve on-farm safety
 4. To improve farmers' mental wellbeing




5

NEEDS ASSESSMENT QUESTIONNAIRE


- **Assess gaps**, not preferences or interests
- Majority close-ended items with open-ended response at the end
- Short, preferably 1-2 pages, 5 minutes
- Mixed-mode administration (electronic & hardcopy) to **target** population
- Pay attention to formatting and question structure
 - Response rates drop with...
 - Poor format (e.g., unclear sections, no instructions)
 - Unclear questions (e.g., question stem, response options, grammar)
- **Resources:** Needs Assessment Toolkit, Online course



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Section 1: Utah Dairy Needs Assessment

Utah State University (USU) Extension provides research-based programs and resources with the goal of improving the lives of individuals, families and communities throughout Utah. The Dairy Extension Team seeks to know which topics are most important to the dairy farmers of Utah. The following questions ask about your access to educational resources and programs. Both paper and email surveys are used, so please only complete the survey once (check if it is the "Utah Dairy Needs Assessment"). However, more than one person on the farm may complete the survey. For additional copies of the survey, contact Bruce Richards (bruce.richards@usa.edu). Please complete and return by January 20, 2023.

Question 1. For each item below, please indicate:

1. How important is the topic area to your farm business?
 - a. Select a number from 1 (*Not Important*) to 5 (*Very Important*)
2. How would you rate your level of access to educational resources or programs on the topic?
 - a. Select a number from 1 (*Terrible Access*) to 5 (*Excellent Access*)

Topic	Importance of topic: Not important (1) – Extremely Important (5)	Access to information: Terrible (1) – Excellent (5)	
Labor	1 2 3 4 5	1 2 3 4 5	
Labor training	1 2 3 4 5	1 2 3 4 5	
Labor communication	1 2 3 4 5	1 2 3 4 5	
Labor recruiting	1 2 3 4 5	1 2 3 4 5	
Implementing new technology	1 2 3 4 5	1 2 3 4 5	
Improving farm safety	1 2 3 4 5	1 2 3 4 5	
Improving mental health	1 2 3 4 5	1 2 3 4 5	
Water	1 2 3 4 5	1 2 3 4 5	
Reducing farm water use	1 2 3 4 5	1 2 3 4 5	
Improving public perception of water use	1 2 3 4 5	1 2 3 4 5	
Wastewater use and management	1 2 3 4 5	1 2 3 4 5	
Health and Nutrition	1 2 3 4 5	1 2 3 4 5	
Reducing feed costs	1 2 3 4 5	1 2 3 4 5	
Managing transition cows	1 2 3 4 5	1 2 3 4 5	
Managing mastitis/milk quality	1 2 3 4 5	1 2 3 4 5	
Managing metabolic disorders	1 2 3 4 5	1 2 3 4 5	

03.1 This section asks about your access to training and education on agricultural issues. Please think about each issue in the list below, and rate each issue on the following:

1. How **important** is the issue to your agricultural operation?
2. How much **access** do you have to training and education on the issue?


	Rate the importance of the issue to your operations			Rate your level of access to training on this issue		
	Not Important	Somewhat Important	Very Important	None at all	Some Access	Easy Access
Agricultural Water Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural Water Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Farm Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural Risk Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drought Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pesticide Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fertilizer Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Bruce Richards' Dairy Needs Assessment


Reganne Briggs' General AG Needs Assessment for Rich County

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QUESTIONS?




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LINKING *IMPACTS* TO *OUTCOMES*

- **Impacts:** Long-term, broad, need-driven
 - Difficult to measure
 - Issues with external validity

- **Outcomes:** Short and medium-term program effects
 - S.M.A.R.T.
 - Directly connected to the need (or *desired impact*)



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RELATIONSHIPS: WORKING BACKWARDS

Short-Term (Objectives)	← Medium-Term (Purpose)	← Long-Term (Impact/Goals)
[Specific to Problem] <ul style="list-style-type: none"> • Knowledge • Skills • Self-efficacy • Confidence • Attitudes • Motivation • Intentions 	Adopt efficient production practices	Production efficiency
	Implement risk management plan	Risk Management
	Implement farm safety protocols	Farm Safety
	Practice mental wellbeing routines	Farmers' Mental Wellbeing



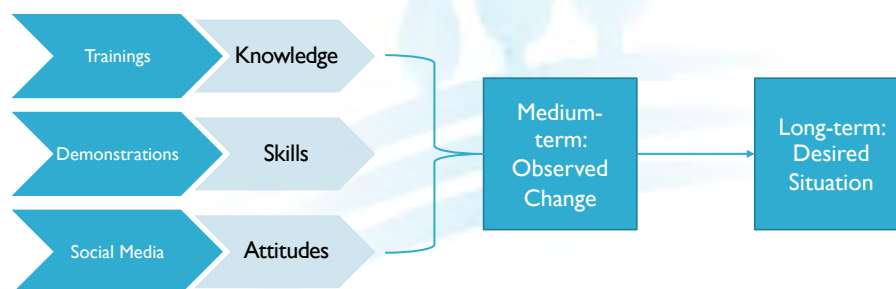
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NATURE OF EXTENSION PROGRAMS

- **Program:** A combination of activities targeting outcomes to address a need
 - Trainings and lectures
 - Demonstrations
 - Social media
 - One-on-One consultations
- **Dosage** – The intensity of activities, frequency of occurrence, level of interaction
- Dosage affects outcomes:
 - Activities lead to specific outcomes; one activity is unlikely to affect *all* outcomes

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COMBINATION OF ACTIVITIES → OUTCOMES



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ACTIVITY-LEVEL EVALUATION

- All activities taken together (i.e., the program) targets short, medium, and long-term outcomes
 - *Program Impact, Program Evaluation*
- Outcomes vary by program activity; evaluation protocols vary by activity, e.g.,
 - Trainings: Pre-post design focusing on knowledge outcomes
 - Social media: Cross-sectional design focusing on reactions
 - Demonstrations: Observations or surveys focusing on skills
 - Consultations: Qualitative interviews, potential to have long-term program effects



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RESOURCES

- USU Extension Program Evaluation:
<https://extension.usu.edu/employee/program-evaluation/>
- Univ. of Wisconsin Program Development and Evaluation:
<https://fyi.extension.wisc.edu/programdevelopment/evaluating-programs/>
- Univ. of Florida Extension Program Evaluation:
https://edis.ifas.ufl.edu/entity/topic/program_evaluation



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THANK YOU

QUESTIONS?

