

Case Study Goals and Methodology

LS12-251. Mapping Sustainable Farm Systems: An Integrated Focus on Upper South New Producers as Catalysts of “Good Stewardship.” (PD: Keiko Tanaka, University of Kentucky)

Through the case study interview and participatory modeling process, we will create a bio-economic interdisciplinary model that addresses both the research questions of our project, and a management issue of concern identified by the case study farmer.

We will implement an iterative, participatory process that engages the farmer in co-creating a multi-dimensional farm model that encompasses biophysical, economic, and social/cultural dimensions of the farm enterprise.

Step 1: Case study selection and preparation

The research team will identify and recruit a beginning farmer from the professional networks of the researchers to participate in a pilot case study participant who the team feels is best positioned to provide a robust case study for testing out the modeling methodology, and provide thoughtful feedback. Areas of consideration in selection may include: years in farming, type and scale of farm enterprise, past experience working with on farm research, geographic location. Race, gender, and socio-economic status are not of specific interest in this study, though in the final case studies we will seek to include a diversity of farmer experience and perspective and so limited resource and minority farmers (including women farmers) may be included in the study.

The pilot participant will be provided with a full description of the case study methodology before agreeing to participate, and asked to identify one management or production issue or question that they would like assistance in addressing. This management or production question will be integrated into and addressed through the modeling process to the best ability of the research team.

Step 2: Preliminary interview and farm walk

A team of two researchers will conduct an on farm visit with the case study participant. The researchers will engage the participant in a semi-structured interview that covers the history of the farm, current management and production, and future plans for management and production. They will also take a farm walk with the participant to note the bio-physical characteristics of the farm enterprise and the farm infrastructure.

The interview will be audio recorded and transcribed using a pseudonym. From the interview the researchers will use modeling software (STELLA) to construct a preliminary model of the farm enterprise based on the responses of the participant.

Step 3: Model check and revision

The research team will conduct a second meeting with the case study participant to present the preliminary farm model, ask for clarification or additional information where needed, and solicit their feedback on the accuracy and general structure of the model.

Step 4: Final model presentation

At the third and final meeting of the research team and case study participant, we will present the final version of the farm model and our response and suggestions for the management or production

question asked by the participant. The participant will receive a PDF version of the model and a summary document for their personal use and records.

Step 5: Generating an anonymous model

A second anonymized model will be generated that has all identifying and/or confidential information removed or altered to pseudonyms. This model will be checked and vetted by the participant. This anonymous model will be shared with the project's advisory board, our fellow research teams at Virginia Tech and University of Tennessee, and may be presented at agricultural and academic conferences or published in extension or academic journals.

Research Questions

- What best management practices are currently being used by beginning farmers towards the goal of more sustainable farm systems management?
- What best management practices are used for goals other than sustainable farm management?
- What are the effects of best management practice implementation on the bio-physical, economic, and social dimensions of the beginning farmer's enterprise?
- What incentivized the adoption of currently implemented best management practices?
- What are the perceived barrier to adoption of additional best management practices?

Semi Structured Interview Protocol

The interview will take place at the participant's farm at the kitchen table or another quiet location of the participant's choosing. The interview will take approximately 2.5 hours, and will be audio recorded with the participant's permission.

Introduction

Thank you for agreeing to participate in this case study. As you know, this will be a multi-step process, and we will ask for your feedback and criticism at every step so that we can ensure that we build an accurate and useful model of your farm enterprise. Our goal is to create a multi-dimensional snapshot of your farm enterprise to help us answer questions about incentives and barriers to adoption of best management practices, and key challenges and opportunities for new farm enterprises. We'll also do our best to provide insight and suggestions into the question you've asked, which is [INSERT THEIR QUESTION HERE]. We cannot guarantee a complete or perfect analysis of the question you've asked, but will make a good faith effort to use the resources at our disposal to provide information and suggestions that will be useful for the management of your farm enterprise.

Today we're just looking to hear the story of your farm from your perspective. We've got a few general questions ready to guide the conversation and make sure we get the basic information we need for our model, but for the most part we're looking for you to tell us what's important and what we should be paying attention to. You are free to not answer any question, and we can stop this interview at any point.

Land use history

- What do you know about the history of this farm?
 - Who owned and/or operated it before you?

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- What did they grow or raise?
- Do you know anything about their management practices?
- Has any past usage or management practices affected what is grown here now?
- Describe the vegetation native to your area (That is, if you let your farm lay fallow for 100 years, what would it look like?)
- How has the farm production or management changed over time? What drove these changes?
- Tell me about how you found and accessed this land;
 - Did you or anyone in your family know the land owners?
 - What's your current ownership/lease arrangement

Current farming systems and management

- Who's in charge here?
 - Who are the key decision makers?
 - Who are other people that have a say in what happens on this farm?
- What do you grow here?
 - What crops do you currently have planted?
 - How do you decide what to grow/raise, and how much of it to grow/raise?
 - How do you decide what lands are best for particular agricultural practices?
 - Do you have any lands on our farm that you would consider not suited for cultivated agriculture?
 - What do you do there?
- What livestock do you have on the farm?
 - If you have livestock, please describe how you balance the crop and livestock production on the farm.
- Can you walk us through your farming system(s) from beginning to end of the production cycle?
 - What particular challenges do you face in regards to:
 - Weeds?
 - How do you manage them?
 - Do you use cultivation for weed management, and if so, how?
 - Insects
 - How do you manage them?
 - What beneficial insects do you see on your farm?
 - Diseases
 - How do you manage them?
 - Any other pests?
 - How do you manage them?
 - Describe your soils on the farm.
 - What is your soil quality, and how do you manage for that (any particular management techniques or systems)?
 - Do you have any issues with productivity related to soil quality?
 - Do you soil test?
 - How do you prepare your soil for planting?
 - What are your water resources?

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- Where do you get your water?
 - Is there enough?
 - Describe the water quality and quantity on the farm.
 - What do you do to manage for water quality?
 - What kind of equipment do you use?
 - Walk through equipment usage and timing.
 - How much does it cost and how did you learn to use it?
- Please tell me about a time you changed the way you did something or implemented a new management practice on your farm?
 - Walk me through from the beginning, how you learned about the new practice, what influenced your decision to management, and how you went about implementing and evaluating it.

Best Management Practices

- What current practices are you using that might be considered "best management practices"?
- How did you learn the best management practices you're using?
- How long have you been using each practice?
- Have you noticed any changes on the farm as a result of implementing the best management practices?
 - Changes in bio-physical conditions?
 - Changes in economic conditions?
 - Changes in labor?
 - Changes in personal attitude or perspective?
 - Changes in how other farmers view you or your farm enterprise?
- Are there any best management practices that you have heard about that you are considering implementing?
 - How did you hear about them?
 - What interests you in these practices?
 - Do you foresee any challenges in implementing them?

Management and philosophy

- What motivated you to go into farming?
 - Who or what were your major influences?
- Is there anyone you look up to as a 'good farmer'?
 - What about them or their farm do you admire?
- Are there people or experiences that have influenced the way you manage your farm or what you produce?
- There's a lot of talk about 'sustainability' in the world of food and agriculture right now, would you describe what a "sustainable" farm means to you?
 - What are you doing on your farm that you feel contributes to this idea?
 - Are there ways you feel your farm could be more sustainable?
- Where would you like to see your farm enterprise in five years, and what is it going to take to get there?

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- Production
- Markets
- Personal? (Work/life balance?)
- What financial barriers do you foresee for achieving these goals?
- What technical barriers do you foresee for achieving these goals?
- What sort of skills or knowledge will you have to obtain to achieve these goals?
- What people, organizations, or other resources will you rely on to address these barriers and achieve these goals?

Community and consumer

- What is your relationship with the other farmers in the area like?
 - Are there any farmers you talk with regularly?
 - Do you share any resources or labor?
- Do you belong to any farming related organizations?
 - What are the benefits you see from membership in each organization?
 - Social
 - Economic
 - Knowledge/Resource
- What is your relationship like with the people or organizations you sell your products to?
 - Do they ask you about your management practices?
 - Do you feel you have a relationship to the 'end user' of your product?
- How well do you feel current state farm and food policy supports your farm enterprise?
 - Specific policies that are good/bad?
- How well do you feel current national farm and food policy supports your farm enterprise?
 - Specific policies that are good/bad?

Record keeping and planning

- What sort of records do you keep for your production?
 - Production?
 - Fertility?
 - Pest and weed management?
- What sort of financial records do you keep?
 - Who keeps the books?
- Do you have a business plan?
 - How regularly do you up date it?
- Do you have a marketing plan?
 - How regularly do you up date it?

Marketing

- Where do you sell your products to?
 - Can you give us a rough idea of your annual sales in each market?

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- How did you decide to sell your products to those markets?
- How did you find or gain access to the different market outlets?
- About how much time goes into tending to each market outlet?
 - Transportation
 - Administration/logistics
- Are you looking to grow sales of any of your products?
- Are you looking to grow the share of your sales in any specific market outlet?
- How do you decide the price for your products?

Finance

- Where did the money to get this farm started come from?
- Do you have any loans out for the farm?
 - How did you access those loan funds?
 - Personal relationship with loan officer?
 - What documents did you have ready?
 - Were you ever turned down for a loan?
- Do you currently, or have you ever used grants or government programs to finance an improvement to your farm?
 - What programs or grants?
 - How did you access them?
- Do you feel like you have access to enough capital to develop your farm enterprise as you'd like?
 - What would you like to do on the farm that you cannot because of lack of access to capital?
- Does the farm financially support itself?
- Does the farm support your household?
 - How many hours off farm do you work?
 - Would you like to be full time on the farm?
 - Does working off farm affect how you manage your farm, or your choices of what to produce?
 - Does anyone else in your household work off farm?
 - Supplemental income?
 - Health insurance?

Check List For Farm Walk

Land Usage

- Number of Acres
 - Acres in row crops
 - Acres in horticulture
 - Acres in pasture
 - Acres in forage
- Crop/pasture rotation?

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- Condition of land
 - Evidence of erosion
 - Soil type?
 - Slope?
- Beneficial habitat
- Wind Breaks
- Forested land

Water

- Water source on property
 - Well
 - Stream
 - Livestock fencing
 - Riparian boarders
 - Pond
- Irrigation equipment

Infrastructure

- Fencing
- Number of barns
 - Age/Condition
 - Purpose
- Number of other out buildings
 - Age/Condition
 - Purpose

Equipment

- Number of Tractors
 - Make/Model/Year
 - Owned outright, leased, or financed
 - Primary purpose
 - Secondary uses
- Attachments/accessories
 - Make/Model/Year
 - Owned outright, leased, or financed
 - Primary purpose
 - Secondary uses
- Trucks and Trailers
 - Make/Model/Year
 - Owned outright, leased, or financed
 - Primary purpose

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- Secondary uses
- Other equipment
 - Make/Model/Year
 - Owned outright, leased, or financed
 - Primary purpose
 - Secondary uses