



Guidelines and Methods for Developing Agricultural Value Chains for Small Agribusiness

October 4, 2017

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Purpose

The presentation is not about how to get rich selling agricultural products. Most people don't get into agriculture because they expect they will make a lot of money. The intended audience are development practitioners working for small local NGO's, INGO's, and farmer organizations who are not familiar with the value chain approach. The intention is that this information will provide an overview of the value chain approach, provide a set of tools that can be used for working with farmer groups (AEDP), and demonstrate a way that I have used value chains in order to develop strategy and evaluation tools for implementing a specialty horticultural crop project.

- ▶ Introduce value chains
 - ▶ Commodity agriculture and Artisanal Agriculture
- ▶ Example of Upland Rice Value Chain: GAP & HACCP
- ▶ One ground up method: Agroenterprise Development Process (AEDP)
- ▶ Utilizing a value chain approach for working with Small Holder Farmers in the U.S.: Specialty Crop Analysis: Sovereign Tribal Nations

Who I am (my lens)



Growing up on the Thai side of the Thai – Cambodian Border I saw first hand the struggles of resource poor Thai farmers struggling to make a living growing feed corn for the commodity market. My family has farmed wheat for three generations in Oklahoma. That experience has Helped me understand the difficulties of producing wheat for the commodity market. The constraints include a selling price relatively unchanged since 1960 but rising fuel and equipment costs. This life experience has caused me to work for solutions that enable farmers to command higher return for their labor.





Working on the Production side



- ▶ Working with farmers in Southeast Asia for 13 years to help farmers increase production has been rewarding and has had good results. At the same time over and over again production was improved but markets were limited and prices were low.
- ▶ How to be more effective in partnering - That experience taught me to work together with farmers to research potential markets together with them. That has brought me to the usefulness of a value chain approach to for empowering small land holding farmers.



Commodity Agriculture vs . Artisanal Agriculture



To succeed in commodity agriculture you focus on quantity, farming more land, and being more efficient. You still must meet basic quality standards but for the most part quality is not rewarded. Larger companies have an advantage because they can vertically integrate and take advantage of economies of scale. As value is added to an agricultural commodity, the value of the product increases but by then it is already out of the hands of the farmers.

Artisanal Agriculture is local and small scale agricultural production that emphasizes quality of the agricultural product over quantity. Much of it is on land area smaller than 5 ha's. Consumers pay more for the product but they are willing to do so because of the relationship, the meaning to them of supporting small holder farmers, and assumption of safer food.



Introduction

- ▶ Development Approaches
- ▶ Business Approaches
- ▶ Increasing integration of the two in development.
 - ▶ USAID Small-holder program in Shan State
 - ▶ USAID (Development Innovation Ventures Program (DIV)
 - ▶ Equipping emerging workforce – US in Africa emphasis

Modernizing Extension Advisory Services Program (MEAS) Representing a Paradigm Shift in Agricultural Advisory Services

Andrea Bohn - MEAS

Bottom-up and Farmer Driven

- Decentralized, participatory
- Farmers in Advisory/Steering Committees or in Governing Boards
- EAS that is responsive to farmer demands/needs

Market Oriented

- Example: Market opportunities for HV crops, livestock and fishery products
- Income generation that benefits staple crops, health, education, and general wellbeing
- Food security through increased availability and accessibility

Tailored to Target Clients

- Examples: Small scale farmers, landless producers, gender equity in services, value chain development
- Improving rural livelihoods (healthy families, healthy communities, healthy environment)

Building Social Capital

- Organizing community, farmer/producer Groups, women groups
- Rural poor represented in advisory committees
- Training extension staff to be facilitators and knowledge brokers

Private Sector

- Promotion of private sector approaches/mechanisms
- Exploration of public-private partnerships

Innovation

- Process /product and technological innovation
- Extension effectively linking research, and producers, to market opportunities



Specialty Rice in Post-Conflict areas of Myanmar: An Examination of Food Safety and Value Chain Development Issues & Value Chain Development using the (AEDP) Agro-Enterprise Development Process

JOSHUA J. RINGER, DR. TIM BOWSER, DR. RODNEY HOLCOMB, DR. NICK BROWN - OKLAHOMA STATE UNIVERSITY



- ▶ Integration of resource poor small holder farmers into world food markets is difficult.
- ▶ A useful method to integrate small holder farmers into world markets is the use of a value chain framework.
- ▶ It is also vital to integrate food safety issues in the development of a specialty rice value chain.

Defining Value Chains

- ▶ “Actors that are connected along a chain producing, transforming, and bringing goods and services to end-consumers through a sequenced set of activities(UNIDO, 2011, pg. 1). ”
- ▶ “the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final customers, and final disposal after use (Hellin & Meijer, 2006, pg. 4) .”

The role of Value Chains in development

- ▶ USAID uses value chains as a basis for development.
- ▶ The argument for value chains in post-conflict areas.



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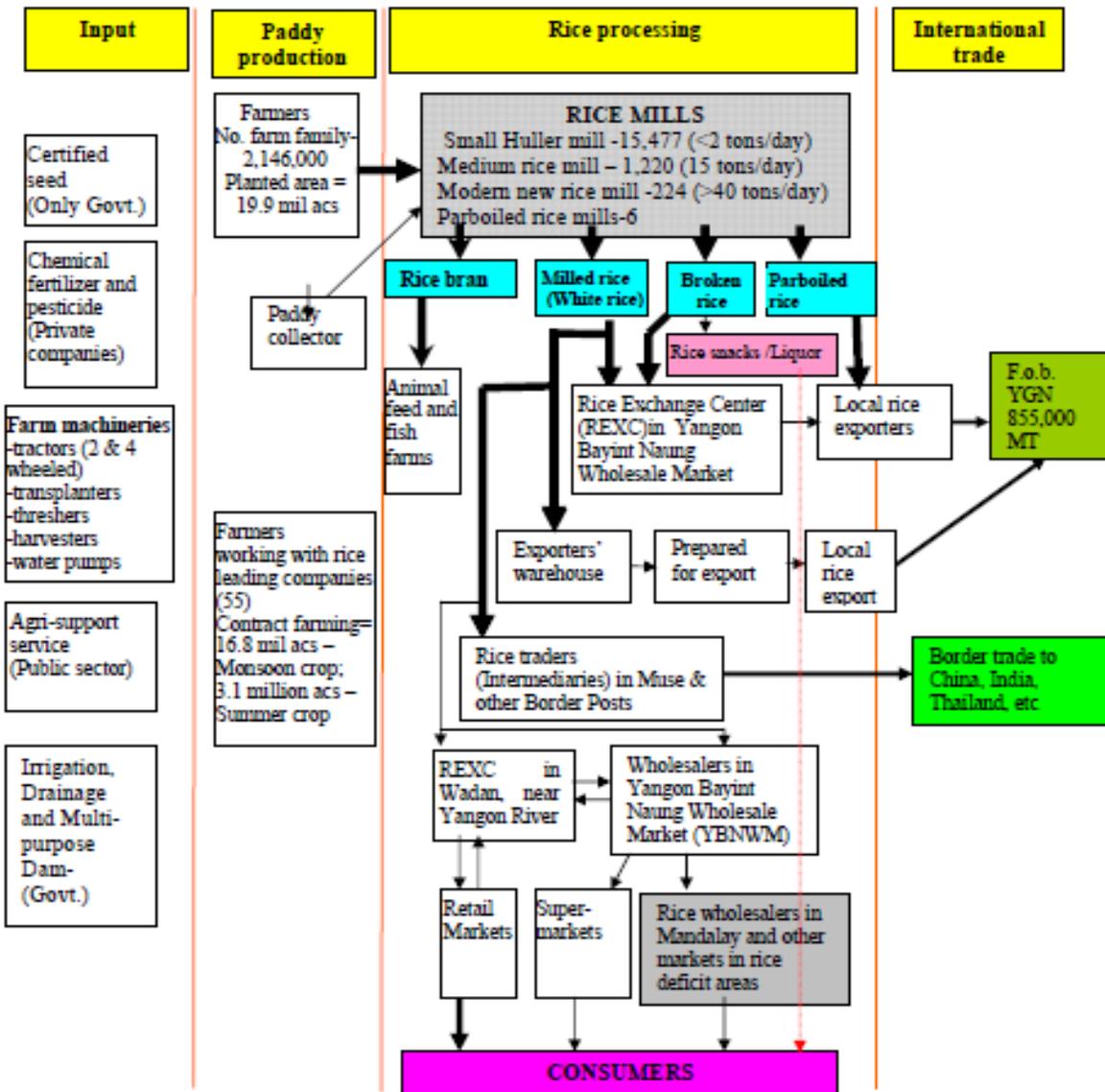
Description of Myanmar Rice Production

- ▶ In the past Burma was considered the rice bowl of Asia.
- ▶ Due to conflict & crisis rice production plummeted.
- ▶ Myanmar (Burma) now focused on becoming the rice bowl again.



Wong & Wai (2013) described the Myanmar rice supply chain in the following diagram.

Figure 8: Burma's Rice Supply Chain Map - 2011/2012



Considerations for the World Market

- ▶ U.S. Markets
 - ▶ market for specialty rice in the U.S. is currently growing.
- ▶ Regional Markets
- ▶ China
- ▶ Thailand
- ▶ Local Market
 - ▶ Yangon



Potential for specialty hill rice production and export

- ▶ Thailand specialty rice trends can serve as a guide to potential Myanmar production.
- ▶ Consumer preferences
- ▶ Growing methods and small scale processing equipment

J. Ringer, T. Bowser, R. Holcomb, N. Brown - Oklahoma State University



Study Methods

- ▶ Qualitative survey that asked the question that ascertained the best way in which agribusinesses could partner with farmer interest groups and producer groups.
- ▶ The sample consists of interviews with thirty two farmers and a further eight individuals involved in agricultural development and agribusiness.
- ▶ Sample was gathered using a purposive snowball sample that followed family networks.
- ▶ Survey was one component of a larger research survey that looked at farmer adaptation following armed conflict.
- ▶ Literature Review in order to describe the processes and value chain for specialty rice.



Survey Results – Notable Quotes

Source	Quote
Farmer	“Most people do not understand the use of fertilizers. They plant whatever seed the Chinese trader gives them. We no longer grow our old corn varieties.”
Farmer	“We stopped growing hill rice because we can make more money selling feed corn.”
Non-government Organization worker	“In the town market we only buy from local vegetable sellers because we think too much chemical is used on the vegetables.”
Non-Government Organization Worker	“We are trying to promote using organic fertilizers because we believe it is better and the farmers say their land is being poisoned by Chinese fertilizer.”
Farmer	“If a company offered a good price for my hill rice I would set aside some land and grow more, otherwise I grow only enough for my family.”
Farmer	“When I started using the weeder and new technology from ----- (Local NGO) I began planting upland rice again.”

Survey Results – Common Trends

- ▶ Farmers are concerned about the loss of crop diversity and heirloom varieties. Farmers stated that they would continue to grow heirloom varieties if there was a viable market that provided a higher economic price than hybrid feed corn.
- ▶ Farmers and local consumers are concerned about the food quality and the impact of improper pesticide use.
- ▶ Non-government organizations that are working in agriculture are promoting production practices with farmers that encourage the use of organic fertilizers and pesticides.
- ▶ Farmers will produce upland rice if they have good agronomic practices that preserve yield levels and minimize labor costs associated with weeding.

A Myanmar specialty rice value chain



Discussion of the Food Safety and Value Chain Issues at each stage

- ▶ Growing
- ▶ Processing
- ▶ Packaging
- ▶ Exporting
- ▶ U.S. Import Considerations
- ▶ Marketing
- ▶ Distribution

Growing – Using GAP

- ▶ Good Agricultural Practices (GAP) – defined by Food and Agriculture Organization (FAO) as:
- ▶ “practices that address environmental, economic, and social sustainability for on-farm processes, and result in safe and quality food and non-food products.” (2011, p. 251)
- ▶ Four GAP Principles
 - ▶ Economically and efficiently produce sufficient, safe, and nutritious food,
 - ▶ Sustain and enhance the natural resources base,
 - ▶ Maintain viable farming enterprises and contribute to sustainable livelihoods and
 - ▶ Meet the cultural and social demands of society.” (Burrell, 2011, p. 251).

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Growing – 1st GAP Principle

Economically and
efficiently produce
sufficient, safe, and
nutritious food,

Ensuring Family rice staple
needs



Growing – 2nd GAP Principle

Sustain and enhance the natural resources base.

Education needs to help improve soil fertility.

Use of Farmer Field Schools to facilitate farmer cooperation and collaborative field research and discovery while growing upland rice.



Growing – 3rd GAP Principle

Maintain viable farming enterprises and contribute to sustainable livelihoods.



Growing – 4th GAP Principle

Meet the cultural and social demands of society.

More stringent and descriptive GAP protocols have been developed for specific crops and specific countries. Some of these GAP protocols or rules can be very detailed. Often this means that small holder farmers are not able to comply with the regulations. I believe that development workers and Local NGO's should work with farmers to understand these very specific rules. At times it is necessary to advocate for modifications to the rules just as is done in the U.S.



Processing – Understanding HACCP

- ▶ Hazard Analysis Critical Control Point (HACCP) system
- ▶ The purpose of the HACCP system is to provide a way to look at the food hazards that are in the food value chain and take steps to intensively monitor and evaluate a food companies' ability to keep food safe for human consumption.
- ▶ HACCP is seen as an essential component of global efforts to standardize food safety in the world (Georgekopoulos, 2009).

3 components of HACCP

1. Physical Hazards
2. Chemical Hazards
3. Biological Hazards



Processing – Physical Hazards

- ▶ Physical Hazards – rice threshing, milling, and then polishing
 - ▶ Cleanliness of milling equipment
 - ▶ Banned insects for Rice Export - Kapra Beetle
- ▶ Chemical Hazards –
 - ▶ Improper Pesticide application pre-Harvest
 - ▶ Joint storage of agro-chemicals with milled and stored rice
- ▶ Biological Hazards –
 - ▶ Animal and human feces contamination



J. Ringgold
State University
November 14, 2013
N Brown - Oklahoma

Packaging

The package role is in “containing, preserving, and protecting.” the product Popa & Belc (2007, p.68)

Vacuum sealing in 1 kilogram plastic bags.

Moves packaging closer to farmer producers.

- Lessens HACCP hazards
- avoids non-compliance with U.S. OFAC banned business/individuals List.



Marketing

Specialty Rice Market in the U.S.

Bob's Red Mill Basmati Rice, 365 Everyday Value Wild Rice, Lundberg Family Farms Black Pearl Black Rice, Alter Eco Organic Hom Mali Jasmine Rice, Trader Joe's Organic Basmati Rice, and Lotus Foods Heirloom Bhutan Red Rice (Thornhill, 2013).

This rice is sold in plastic packaging that weigh from 14 to 32 ounces. The price on a 1 kilogram basis for this rice ranges \$ 4.40/kg to \$ 15.84/kg

A comparable Myanmar hill rice purchased in Lashio, northern Shan State sells for 46 cents/kg

BEST SPECIALTY RICES

JASMINE

Alter Eco Organic Hom Mali Jasmine Rice
Jasmine rice is named for the flower because of its sweet, subtle smell. This fragrant winner stood out for its soft, moist kernels. Serve with strongly flavored dishes and grilled meat.
TO BUY: \$4.40 for 16 ounces, at supermarkets.



WHITE BASMATI

Trader Joe's Organic Basmati Rice
These pillowy grains, which hail from India, have a floral aroma that wafts through your kitchen as they cook. Traditionally paired with curries, this also complements vegetable stews and steak.
TO BUY: \$4 for 32 ounces, Trader Joe's.



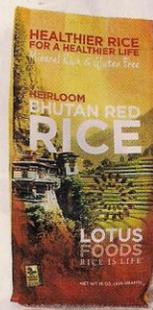
BROWN BASMATI

Bob's Red Mill Long Grain Basmati Brown Rice
Finally, tikka masala meets its whole-grain match: firm enough to stand up to the sauces and flavors of creamy or spicy Indian dishes, but never crunchy or tough, like some brands.
TO BUY: \$4.10 for 27 ounces, at supermarkets.



ARBORIO

365 Everyday Value Arborio White Rice
Frequent stirring can cause some risotto rices to become gummy. These grains maintained their shape and bite after lots of swirling with a wooden spoon.
TO BUY: \$2.80 for 16 ounces, Whole Foods Market.



RED
Lotus Foods Heirloom Bhutan Red Rice
Bowl guests over with this luscious, garnet-colored beauty, which cooks up faster than brown rice does and packs an even bigger nutritional punch.
TO BUY: \$4.40 for 15 ounces, at supermarkets.



BLACK
Lundberg Family Farms Black Pearl Rice
This inky whole grain, once associated with Asian royalty, gets its dramatic color from anthocyanins (compounds thought to prevent disease). Transform it into fried rice or a luxurious pudding.
TO BUY: \$4.50 for 16 ounces, at supermarkets.



WILD
365 Everyday Value Wild Rice
Wild rice is actually a seed, but it's cooked just like rice (and sold in the same supermarket aisle). This pick beat out bland rivals with its rich tint and firm structure, which didn't split after steaming. Toss it into salads for bulk, or add it to rice casseroles for extra flavor and texture.
TO BUY: \$6.30 for 14 ounces, Whole Foods Market.



BLEND
Lundberg Family Farms Wild Blend Rice
Most manufacturers cut costs by adding just a sprinkling of wild rice to white. Not here: This rich mix includes brown, black, and red varieties. It's a quick-cooking whole-grain meal booster—great with fish or stuffed into bell peppers.
TO BUY: \$3.30 for 16 ounces, at supermarkets.



Get the nitty-gritty on different rice varieties at realsimple.com/ricetypes.

Three Important Issues



- ▶ Dealing with Political Barriers
 - ▶ Conflict countries have lingering political barriers in place.
- ▶ Management of Risk
 - ▶ Exporting to more than one market.
 - ▶ Keeping operations smaller and diversified.
 - ▶ Early and consistent implementation of a GAP system
- ▶ Solving Technical Issues
 - ▶ Using a value-chain and food safety approach helps target critical points for educating the workforce, suppliers, and producers.

AEDP – Agro-Enterprise Development Process

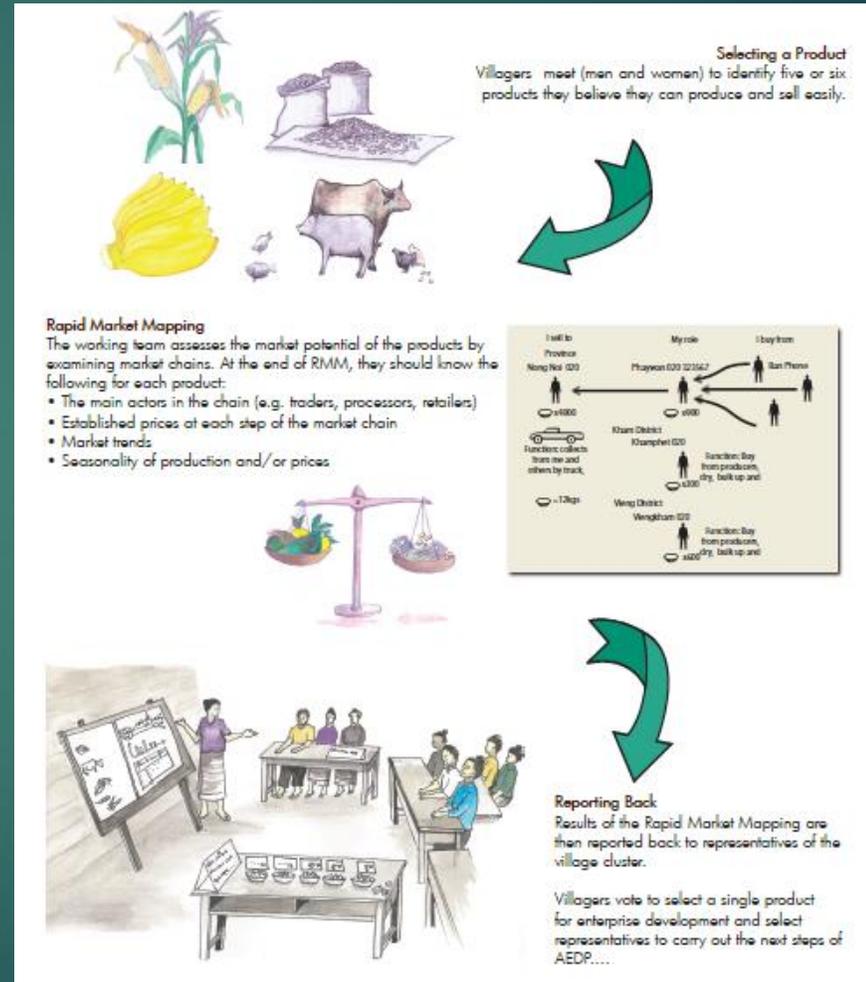
- ▶ The AEDP is a process that assists communities to:
- ▶ Identify products they should focus production on
- ▶ Villagers grow many products, but need to select one or two to expand production of if they are to develop market oriented production. By identifying products they produce well, and comparing these to 'market demand', farmers can expand production and be sure prices will not collapse.
- ▶ Identify constraints in the market chains for selected products
- ▶ There commonly exist constraints in the market chain that prevent farmers from linking to demand and selling products for profit. AEDP will identify these constraints and provide assistance to overcome them.

Connell, J.G. & Pathammavong, O. (2007). Starting and agro-enterprise development process: Field facilitator guide. CIAT Asia.

AEDP – Agro-Enterprise Development Process

Step One Product Selection

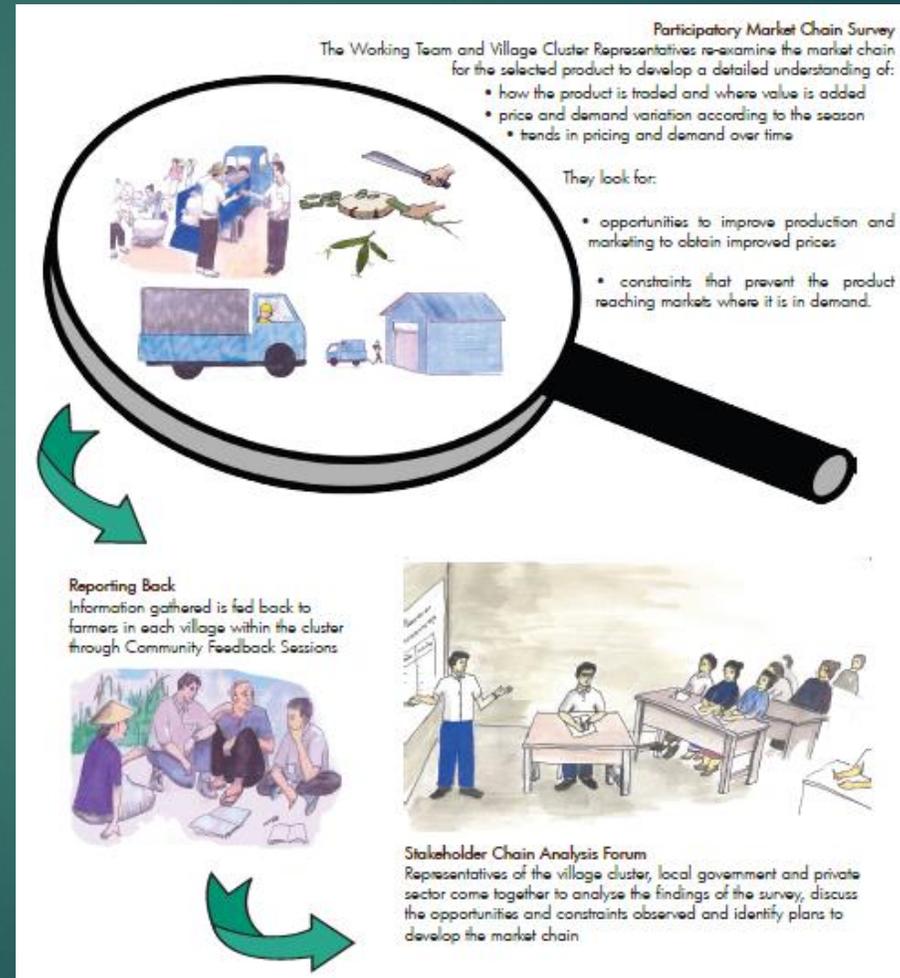
- ▶ Simple tools are used to help villagers assess products they grow, or want to grow in order to identify those which they could produce in larger quantities. Other tools help extension workers to profile the market chains for these products and assess their market demand. This is done first at a village level and then consolidated at a village cluster level.



AEDP – Agro-Enterprise Development Process

Step Two – Participatory Market Chain Survey (PCMS)

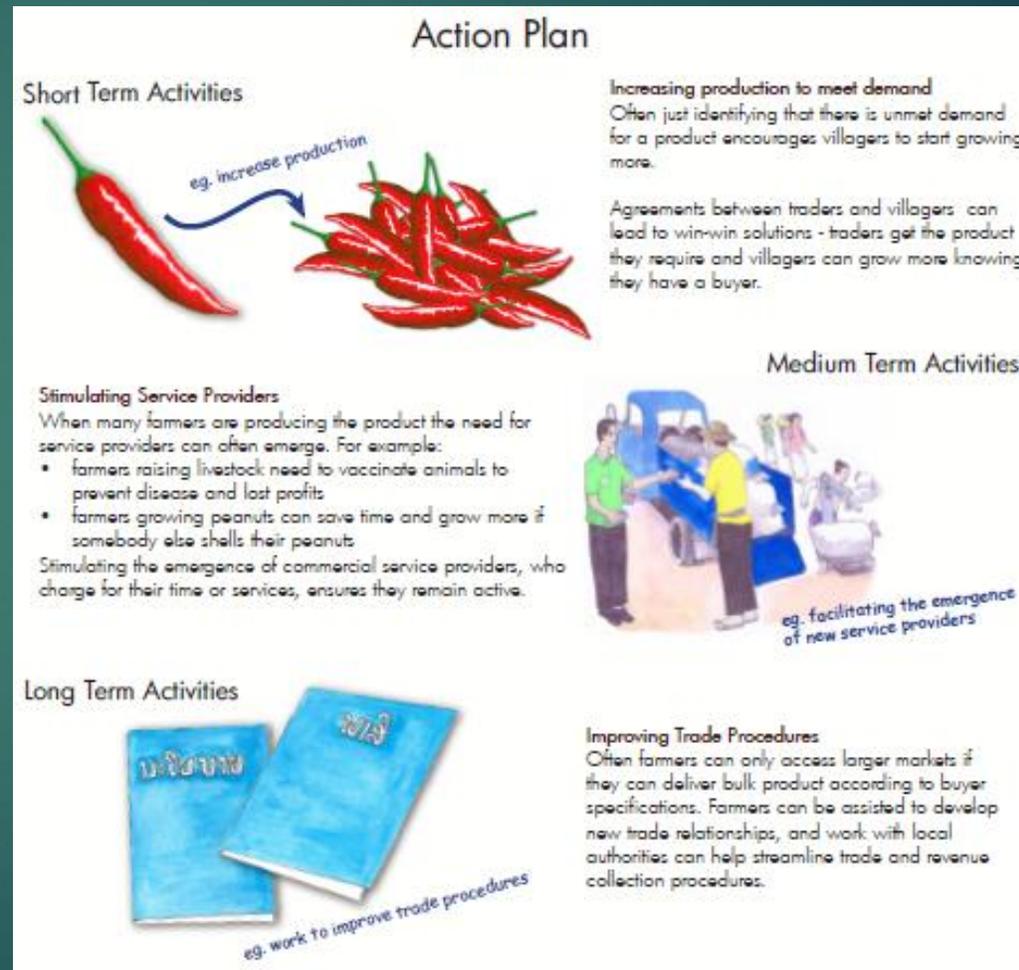
- ▶ The PMCS allows farmer representatives to gather market information themselves. They then report this back to each village, informing other farmers about market operation and the scope to achieve greater benefit from their farming activities.



AEDP – Agro-Enterprise Development Process

Step Three – Planning Action (For a more efficient market chain)

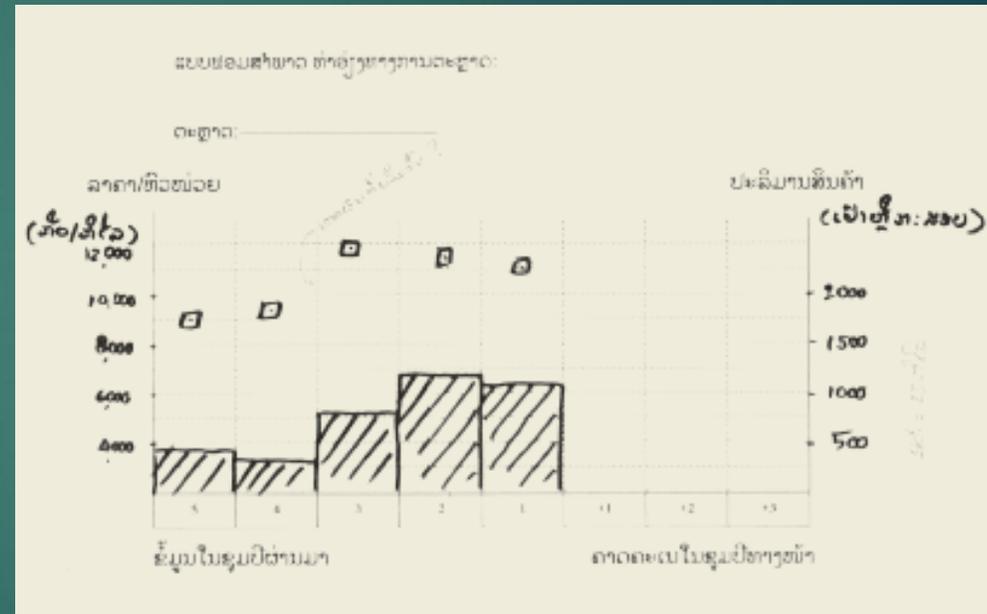
- ▶ Farmers are now in a position to negotiate on a more equal basis with traders and other actors in the chain. Stakeholder Chain Analysis Forums (SCAF) are conducted with actors from different levels in the chain to look for the root causes of constraints in the chain and ways to address these. These meetings generate understanding between actors, identify actions to be taken and often result in provisional agreements between actors being formed. There are no set solutions, but there are guidelines to demonstrate how different issues can be addressed.



AEDP – Agro-Enterprise Development Process

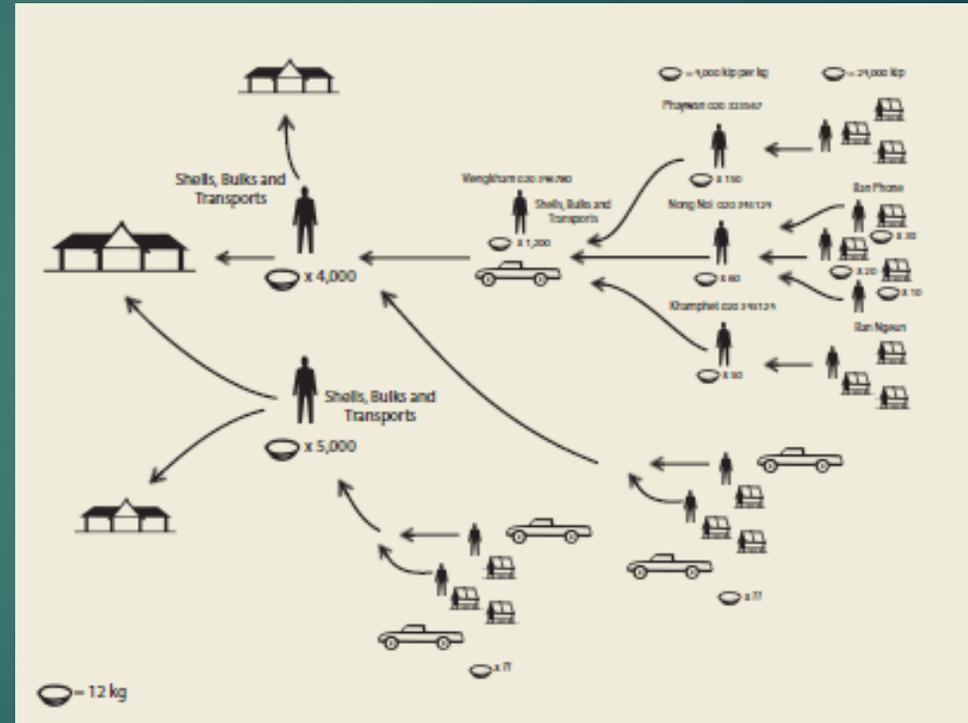
10 Participatory Tools

- Tool 1: Rapid Village Assessment
- Tool 2: Agro-Enterprise Development Process Chart
- Tool 3: Example Market Chain
- Tool 4: Product Screening Cards
- Tool 5: Market Chain Mapping
- Tool 6: Product Seasonality
- Tool 7: Market Trends
- Tool 8: Purchase Conditions
- Tool 9: Opportunities & Constraints
- Tool 10: SWOT Analysis



AEDP – Agro-Enterprise Development Process Practice Activity

- ▶ Tool 5: Market Chain Mapping
- ▶ What
- ▶ Using this tool, working teams map actors along the chain, their functions and the ways they are linked.
- ▶ Why
- ▶ Understanding the market chain is essential to identify issues and opportunities for any product. Mapping also enables planning of the PMCS.
- ▶ How
- ▶ Actors at each level are identified, starting from the production end and interviewed progressively.
- ▶ When
- ▶ After actors at all levels have been interviewed, the links from each level can be joined together to give a picture of the whole market chain.



Value Chains & AEDP Reflection for Practitioners

- ▶ How can these two methods/ process' fit in your toolbox?
- ▶ What new knowledge needs to be gained?
- ▶ What new skills needs to be mastered?
- ▶ What attitude does the practitioner need to have to be effective?



Principles for Value Chains

(Lundy, et al, 2012)

Overview of the New Business Model principles



1. Chain-wide collaboration



2. Effective market linkages



3. Fair and transparent governance



4. Equitable access to services



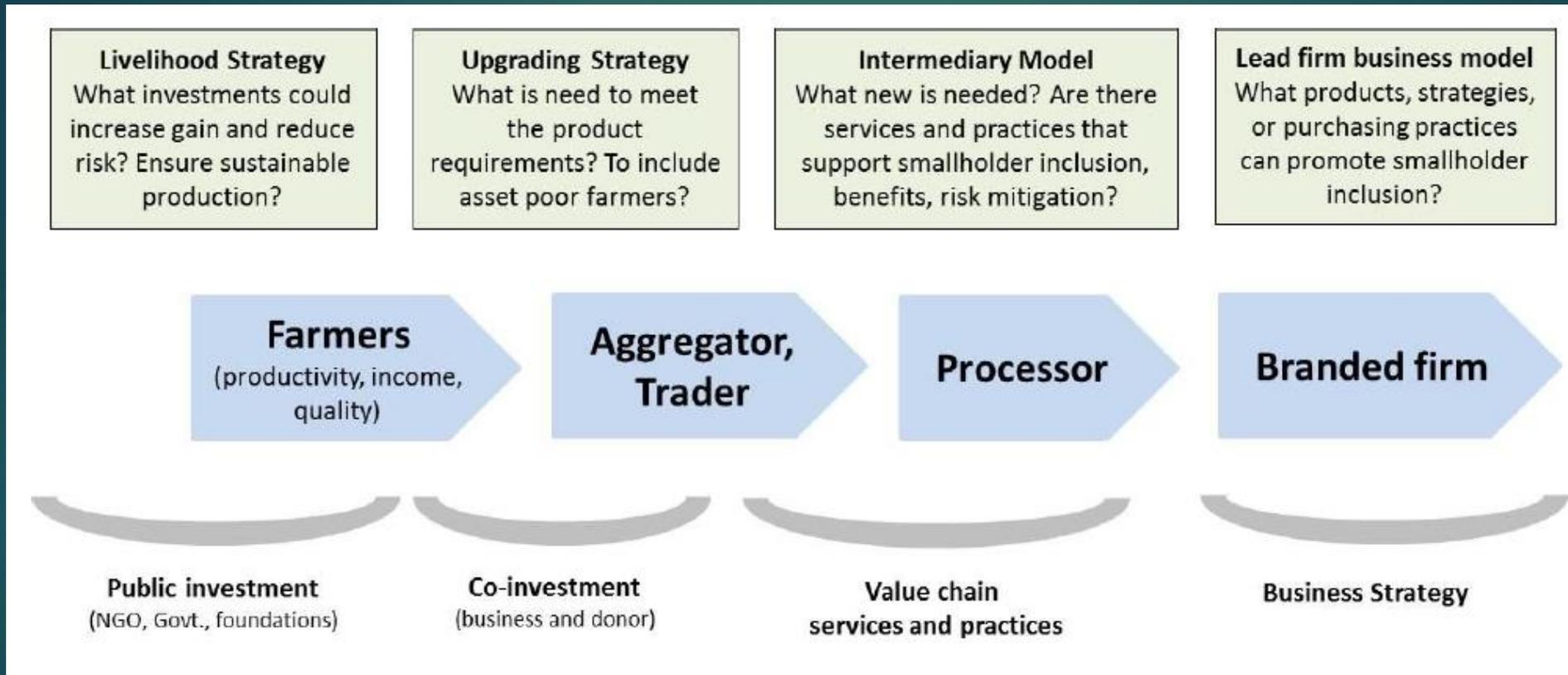
5. Inclusive innovation



6. Measurement of outcomes

Ferris, S., Robbins, P., Best, R., Seville, D., Buxton, A., Shriver, J., and Wei, E. (2014). Linking Smallholder Farmers to Markets and the implications for extension and advisory services. MEAS Discussion Paper 4.

Facilitated Chain Support



Ferris, S., Robbins, P., Best, R., Seville, D., Buxton, A., Shriver, J., and Wei, E. (2014). Linking Smallholder Farmers to Markets and the implications for extension and advisory services. MEAS Discussion Paper 4.

Ideas for utilizing value chain tools

Native American Artisanal Food Products being sold at a conference in Minnesota, U.S.A.

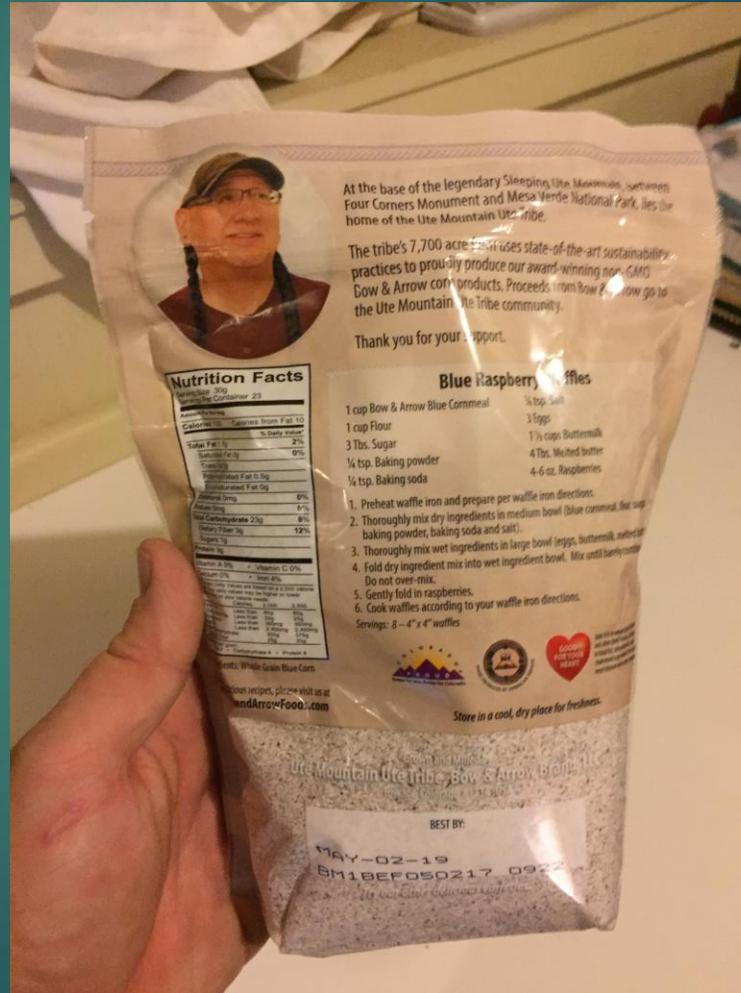
1. Put ourselves in the mindset as change agents
2. Diagramming a combination of social / economic/ and political systems
3. Identifying leverage / critical points
4. Rank the leverage/critical points from highest value to lesser value
5. Listing out important questions to ask.



Sovereign Tribal Native American

Foods

This is an example of traditional crops being grown and marketed in an artisanal agriculture manner. The emphasis is on quality with an expectation of high sales price. Notice the story on the bag that connects producer to consumer.



Sovereign Tribal Native American Foods

This is an example of traditional crops being grown and marketed in an artisanal agriculture manner. The emphasis is on quality with an expectation of high profit. This product is turkey and buffalo with Cranberries which are all traditional Native American animals and plant.



Sovereign Tribal Native American Foods

This is an example of traditional crops being grown and marketed in an artisanal agriculture manner. The emphasis is on quality with an expectation of high profit. This product is wild rice. Note the high price!



Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains: Conceptual Model

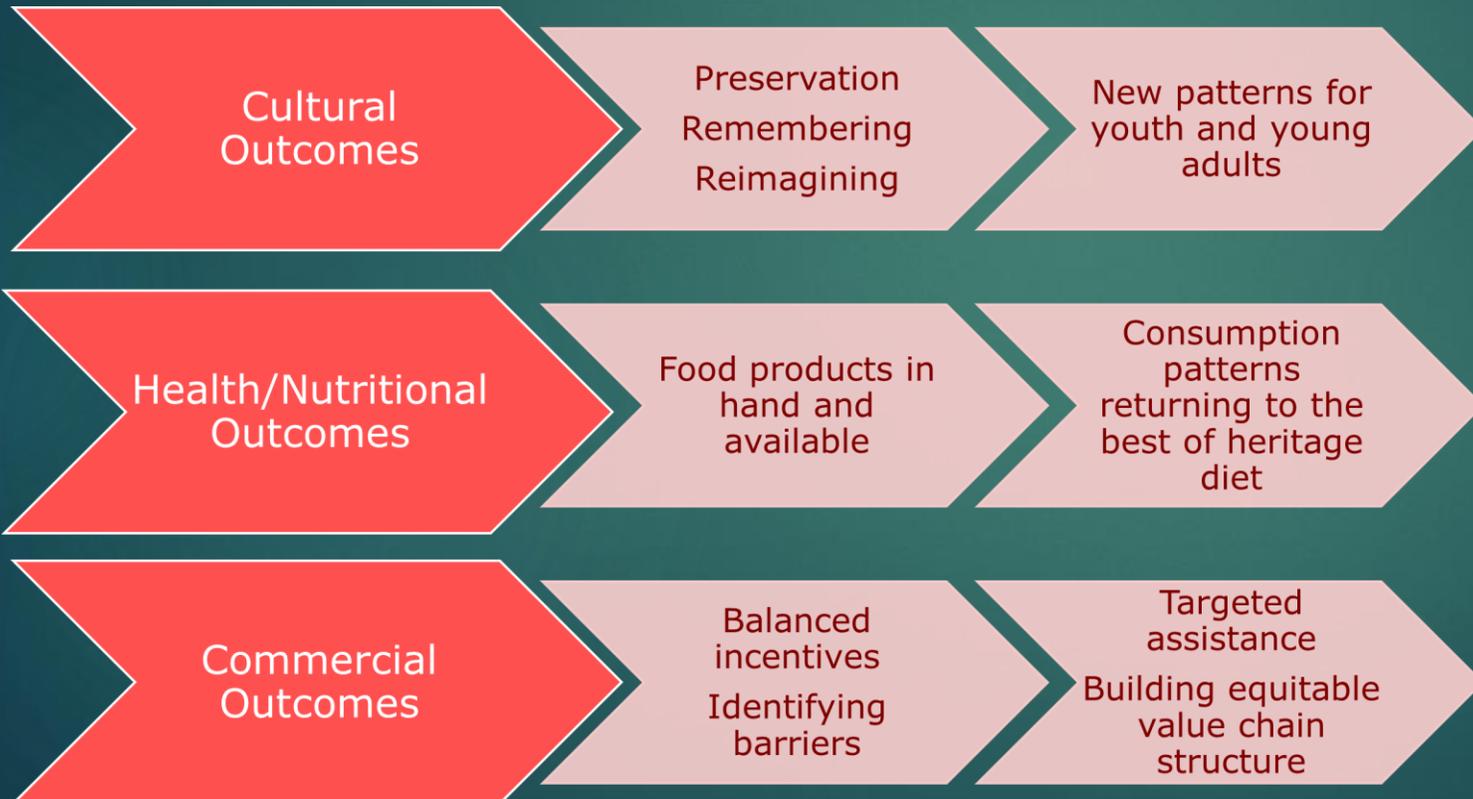
Joshua Ringer, Justin Quetone Moss, Lynn Brandenberger, Jim Shrefler, Dave Shideler, Elizabeth Payne: Oklahoma State University, Kent Sanmann: Cherokee Nation Member

Project background

The Oklahoma State University Sovereign Tribal Nations Food Systems Initiative is an effort to provide integrated research and extension services in developing resilient indigenous food systems. This program has developed methods and conceptual models for indigenous specialty crop value chains in a way that strengthens Native American small holder producers so they are better able to resist economic and climatic shocks to their crop value chain. This initiative is still ongoing with more opportunity to improve the models and evaluation methodology.

Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains: Conceptual Model

Joshua Ringer, Justin Quetone Moss, Lynn Brandenberger, Jim Shrefler, Dave Shideler, Elizabeth Payne: Oklahoma State University, Kent Sanmann: Cherokee Nation Member

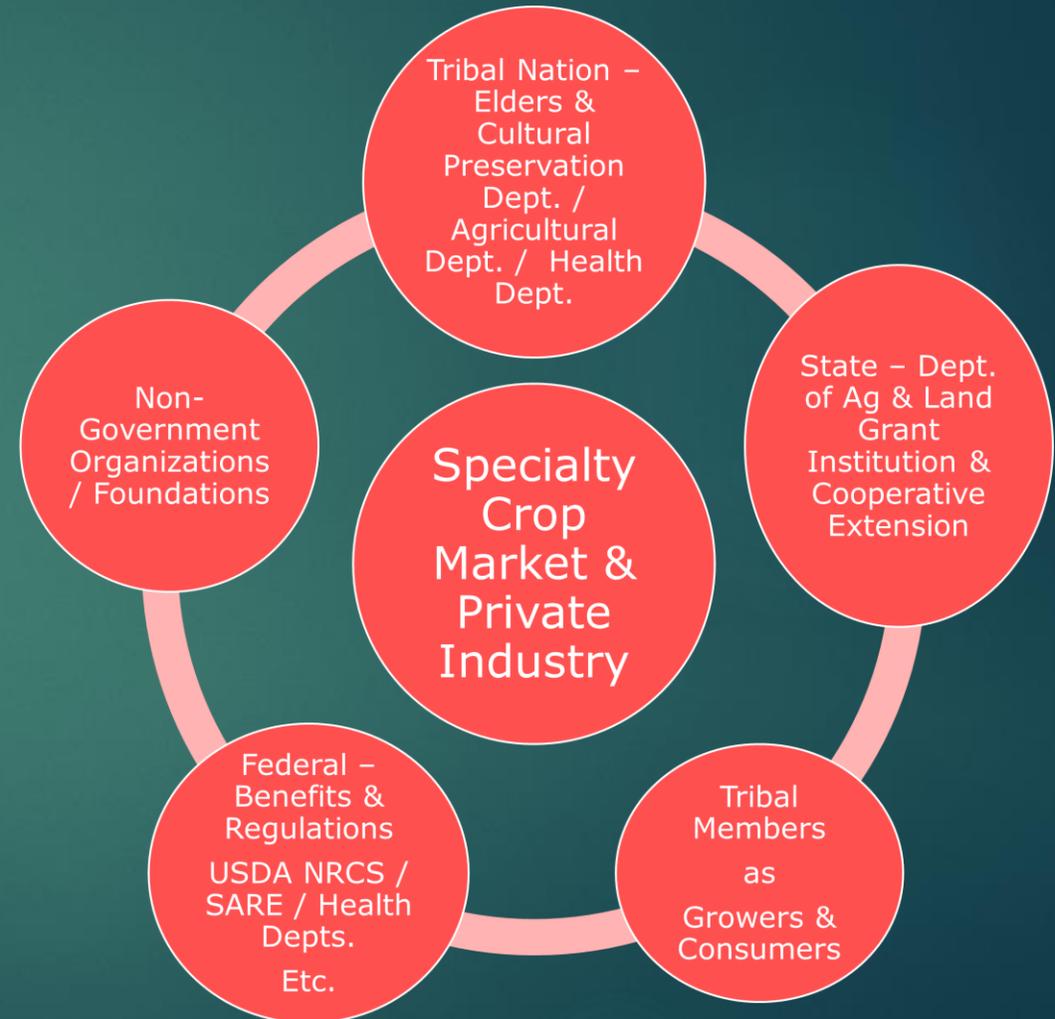


Conceptualizing Tribal Heritage crops are a unique resource that must be carefully managed by the tribal nation and tribal members in order to realize tribal sovereignty. The conceptual model reflects that decisions of how these crops are utilized must be a conscious decision. Health and nutrition outcomes should be also tied into growing and marketing traditional crops. Commercial utilization of the crop, with appropriate safeguards, can be a mechanism for achieving both cultural and Health / Nutrition outcomes. Without increasing tribal member growers, the specialty crop value chain does not become more resilient and more inclusive.

Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains: Value Chain Ecosystem

Sovereign Tribal Nation Specialty Crop Value Chain Ecosystem

Awareness of the production and market ecosystem is vital for developing a valid conceptual model and understanding the landscape for building up macro and micro level capacity. The ecosystem helps reveal the roles of each entity. The tensions between each component should be revealed in order to breakthrough barriers and resolve inconsistencies between program offerings. Land grant university researchers and extension educators can provide assistance to fill gaps between different gov't. and non-government entities. Tribal government agricultural outreach staff can emphasize a coordinating / moderating role.



Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains

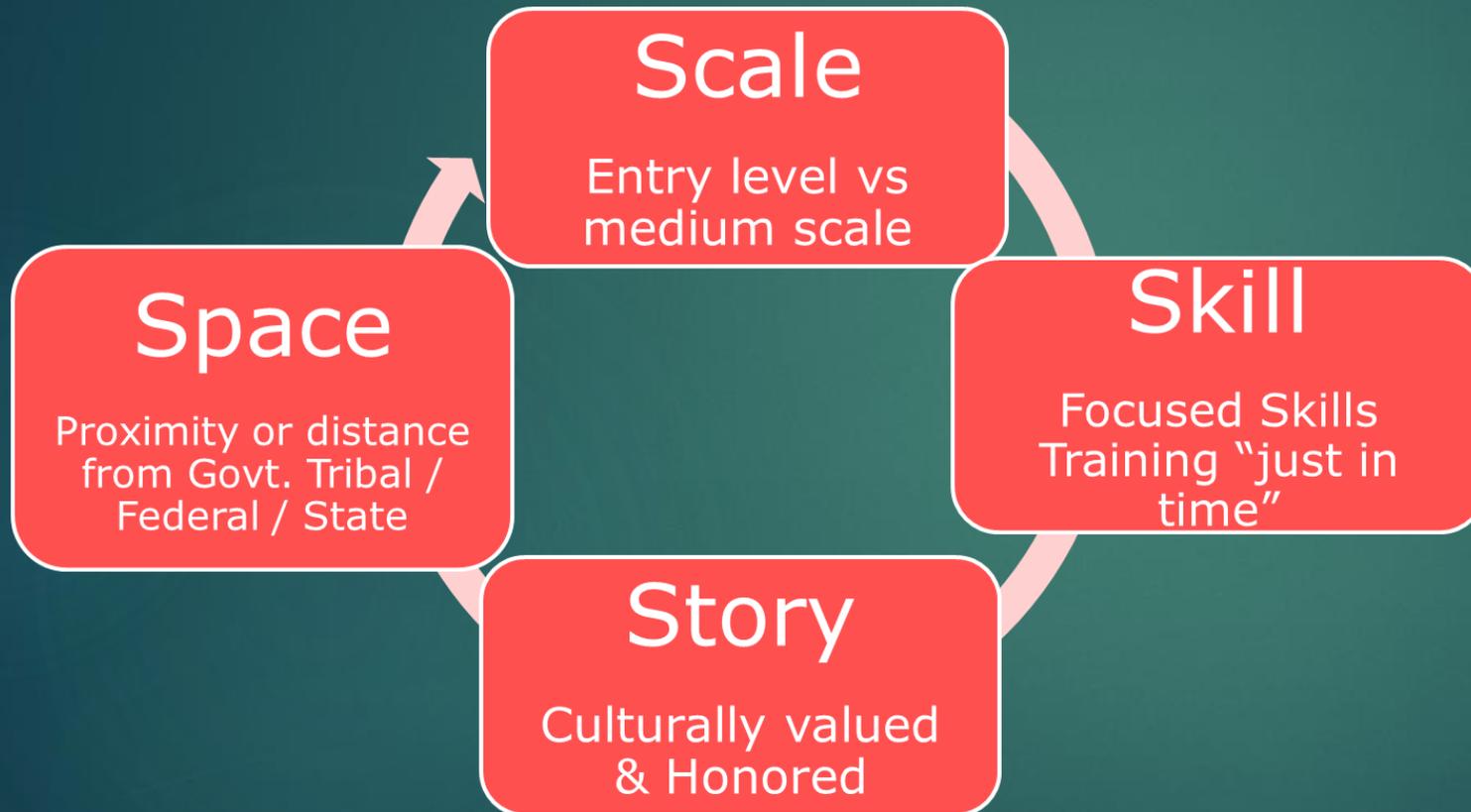
Building – Macro Level



Building – Macro Level

Tribal Nation leadership and members decide how tribal heritage crops are utilized. This usually includes ceremonial use, nutritional or medicinal use, and/or commercial production for internal tribal use and for external marketing sales. Researchers and Cooperative Extension educators can provide valuable training resources and facilitate coordination for growers that is also applicable for non tribal specialty crop growers. Development evaluation practices should be utilized to assist tribal leaders and agricultural/nutritional outreach personnel in identifying and alleviating production choke points.

Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains: Building – Micro level

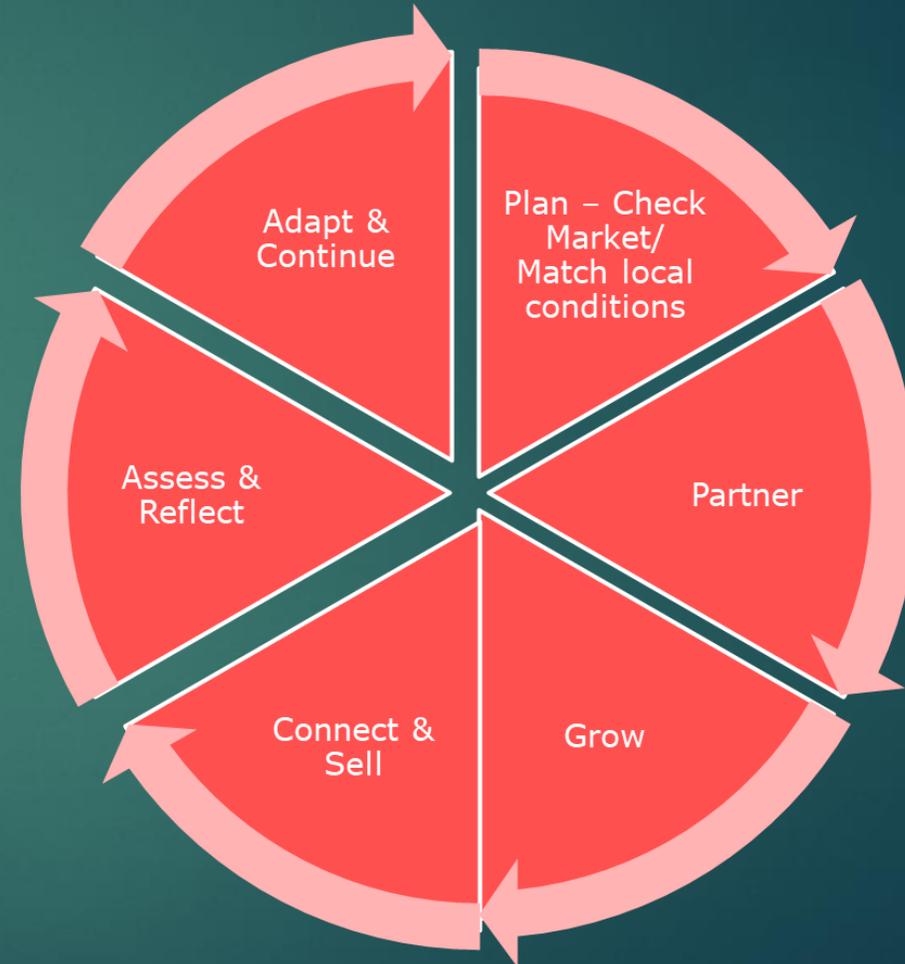


Building – Micro Level
Two micro level structures help identify producer needs and the production cycle. Producer needs and production cycle should be tested with producers because these will guide educational programming and evaluation.

Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains: Building - Micro Level

Building – Micro Level

Two micro level structures help identify producer needs and the production cycle. Producer needs and production cycle should be tested with producers because these will guide educational programming and evaluation.



Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains

Evaluating

This research and extension methodology includes use of development evaluation methods from the beginning of partner projects so that adaptations and improvements can be made to the value chains together with smallholder producers and tribal agriculture departments. Societal constraints to increased Native American involvement in small holder agricultural production of indigenous specialty crops is identified through an ongoing mixed method process. The evaluation discussions should pay attention to the structures built at the macro and micro level. These structures should be adapted to continue to make the models more robust.

Conceptualizing, Building, and Evaluating more Resilient and Inclusive Sovereign Tribal Nation Specialty Crop Value Chains

Recommendations

- ▶ It is Important to identify the conceptual model to guide research, and development activities
- ▶ Evaluate and iterate the model at the macro and micro level to reflect changing Tribal Nation, producer and market realities
- ▶ Utilize the models in discussions with project participants so there is a shared language for evaluation.

Conclusion

- ▶ Value chain information
- ▶ Commodity agriculture and Artisanal Agriculture
- ▶ Upland Rice Value Chain: GAP & HACCP
- ▶ One ground up method: Agroenterprise Development Process (AEDP)
- ▶ Specialty Crop Analysis: Sovereign Tribal Nations
- ▶ I can be contacted to provide assistance in working with you to build, analyze, and evaluate small holder farmer value chains.
- ▶ References are available if you request them.

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