Agricultural Value Chains in East Africa: Opportunities for Value Addition and Market Development

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Global Policy Research Institute
Policy Research for a Changing World Conference

April 18, 2012
Outline

- About IFTC
- East Africa Study
- Outcomes
  - Current
  - Potential
- Discussions
IFTC: Who We Are

- Niche: post-harvest
- Food processing-based Center
- Linking farmers to markets
- Mission: Expand markets and reduce food losses for local foods
- Theme areas
  - Value addition
  - Market development/expansion
  - Health & nutrition
  - Food quality & safety
- Targeting developing countries
  - Currently in Africa
  - Asia & Latin America
Agriculture Supply Chain

Production (Farm) → Post-Harvest Handling → Processing → Distribution/Markets (Consumer)

Increasing $$$ Value

More Production = Less Income

Only 5% of all agriculture research dollars go to study of post-harvest issues
Key Post-Harvest Challenges

- Poor integration of commodities into markets
  - Technology
  - Policy
- Post-harvest losses
- Food safety issues
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What / Why

• Provide **food technology innovations** for small- to medium-scale applications

Goals

• Improve food security, nutrition, and economic growth
• Increase availability of nutritious & safe food
• Increase incomes for smallholder farmers
• Make farming a profitable business

How

• Technology development and Innovation
  • Products
  • Processes – mechanization
• Technology adoption and entrepreneurship
  • Use innovative models e.g. “incubation concept”
  • Establish processing units
• Capacity building
  • Higher education
  • Short-term training
  • Service learning for students
The IFTC Model: Linking Farmers to Markets

- Growing businesses
- Increased income
- More jobs
- Better communities

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Food Innovations
Technology Adoption & Entrepreneurship
Education

Production (Farmer)

- Increased markets
- Increased Income
- Improved food security

Small/Medium Entrepreneurs

Markets (Consumer)

- More food choices
- Healthier products
- Lower costs

Strategic Partners

- New market niches
- Ingredient sourcing
Innovations and Technology Adoption: Cereal Processing in West Africa

- High quality processed products
  - Couscous, flour
  - Pre-gelatinized instant porridges
- Bread from non-wheat cereals
Study: Goals

- Explore opportunities for value addition and market development for agricultural commodities
- Identify potential collaborators: local institutions and/or individual researchers

Objectives
- Identify a specific commodity of focus
- Identify potential technology adaptation approaches.
- Develop a full proposal for external funding for post-harvest research
Institutions Visited

- **Kenya**
  - University of Nairobi
  - Moi University- Chepkoilel University College, School of Agriculture
  - Kenya Agricultural Research Institute
  - Kenya Industrial Research Institute
  - CGIAR-ESSP Program on Climate Change, Agriculture & Food Security
  - FINTRAC
  - Alliance for a Green Revolution in Africa (AGRA)
  - Rural Outreach Program

- **Tanzania**
  - AMPATH/FPI
  - MUDIFESOF Women Processors
  - Neema Women Group Support
  - Mace Foods

- **Uganda**
  - Sokoine University of Agriculture
  - Shambani Graduate Enterprises Ltd
  - Alliance for a Green Revolution in Africa (AGRA)
  - Kilimo Trust
  - Sasakawa Africa
  - CIAT Africa
Commodity Value Chains: Food Crops

- **Cereals**
  - Maize, sorghum, millets, rice

- **Roots and Tubers**
  - Sweet potatoes, Irish potatoes, cassava, yam

- **Legumes**
  - Beans, cowpea, soybeans

- **Fruits**
  - Mangoes, passion, avocados, pineapples, bananas, plantain

- **Vegetables**
  - Tomatoes, African leafy vegetables
Commodity Value Chains: Others

- Livestock
  - Cattle and goats - dairy/meat
  - Sheep
  - Poultry
- Aquaculture
- Cash crops
  - Cashew nuts, coffee, tea, pyrethrum
Food Processing in East Africa

Current State

- Household processing
- Pilot testing in institutions
- Small to medium scale processing

Sample Products
Specific Challenges to Food Processing

- Lack of markets for surplus produce
- Poor processing infrastructure
  - Lack of improved technologies
  - Lack of facilities and/or expertise e.g. in sample analysis, shelf life analysis
  - Up-scaling from pilot scale
- Packaging and labeling:
  - Equipment /materials availability and cost
- Quality and safety standards
  - Lack of standards for some products
  - Certification mechanisms
- Limited access to storage technologies
  - e.g. cold storage for fresh produce (refrigerated trucks)
- Energy – need for renewable energy sources
- Transportation
- Lack of credit for entrepreneurs
Processing Equipment - Examples

Dryers – Solar/Electric
Processing Equipment: Examples

Passion Juice

Maize sheller

Cassava processing

Soymilk processing
Study Outcomes

Current

- African Leafy vegetable project: USAID’s HORT-CRSP
  - Processing and storage
- IFTC-Kilimo Trust Partnership in East Africa
  - Technical expertise
  - Consultation on rice and bean markets in the East Africa
    - USAID concept note on beans

Pending

- ICRISAT India
  - US India Endowment
  - Ministry of Food Processing
- Sasakawa Africa:
  - Establish an Incubation Center
- Global Alliance for Improved Nutrition (GAIN)
- Capacity building
  - MS. student at Moi University, Kenya
Summary

- Diverse agricultural value chains
- Food processing industry still in infancy stage
  - Enormous need for value addition and market development
- Potential opportunities
  - Partnership – technical expertise
  - Short-term consultancies
Acknowledgements

- GPRI – research funds
- Team members
  - Suzanne Nielsen
  - Bruce Hamaker
  - Maria Marshall
  - John Lumkes
  - Vahid Motevalli
  - Sharon
  - Steve Weller
- Host institutions and personnel
IFTC *Linking farmers to markets*

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THANK YOU