Pulse Value Chain Initiative-Zambia: Some Preliminary Results and Observations

Vincent Amanor-Boadu, Kara Ross, Tim Dalton & Allen Featherstone
Department of Agric Economics, Kansas State University

Gelson Tembo, Mukwiti Mwiinga, Priscilla Hamukwala & Benedette Chima
Dept. of Agric Economics, University of Zambia
Outline

- What we set out to do
- Where we are
- Some preliminary results
- Opportunities going forward
What We Set Out To Do

- Develop an understanding of the profile of the Zambian beans and cowpea producer
- Determine the effect of producer characteristics on choice of market channel used
- Identify perceived policy gaps to enhance value chain performance
- Engage chain participants in governance experiments
Where We Are

- The Bain of a PSU-III Project
  - Started late
  - Scrambled to set up and get going
  - But we are making progress
- Recruited and supported six undergraduate students in their final year, three MS students and three MAB students
  - The UG and MS students studied (study) at UNZA
  - The MAB students are pursuing K-State’s award-winning Master of Agribusiness program
Where We Are

- Conducted two capacity building education programs
  - Involving business owners in the Zambian agri-food system and the pulse trade system (processors, retailers, restaurants, etc.)
  - Lessons learned: Participants expressed significant value about the knowledge gained about business economics, management and strategy that is applicable to their operations
Where We Are

- We need to express a public “Thank You” to USAID’s Michael McCord (Zambia Mission) and Linda Walker (DC)
  - For helping our MAB students secure their visas within virtually two weeks!!

- Primary data just completed
  - Currently cleaning them up
  - However, extracted some preliminary perspectives to indicate where we are going
Our Respondents: Focusing on Beans, Cowpeas & Maize

Working at the individual entrepreneur (decision-maker) level to discover how we can implement management initiatives that increase incomes, reduce poverty and contribute to food and nutrition security.
Household Head Gender and Age (N = 1,002)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>48.85</td>
<td>14.17</td>
</tr>
<tr>
<td>Male</td>
<td>40.94</td>
<td>14.67</td>
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</tbody>
</table>

Male 87%

Female 13%
Household Head Marital Status
(N = 1,002)

- Married: 88%
- Widowed: 7%
- Divorced: 2%
- Separated: 1%
- Never Married: 2%
- Married: 88%
Household Head Primary Occupation (N = 1,002)

- 90% FARMING
- 3% WAGE EMPLOYMENT
- 4% SELF EMPLOYED
- 2% UNPAID FAMILY WORKER
- 1% OTHER

Department of Agricultural Economics
Household Head Education
(N = 1,002)

- No School: 9%
- Post-Secondary: 2%
- Secondary: 27%
- Primary: 62%
Average Household Income by Gender of Household Head

- Female: ZMK1.76M
- Male: ZMK3.51M

Source: Department of Agricultural Economics, Kansas State University
Distribution of Growers by Gender and Crop

- **Female**
  - Cowpea: 60%
  - Maize: 58%
  - Beans: 95%

- **Male**
  - Cowpea: 55%
  - Maize: 98%
  - Beans: 65%
Average Crop Field Size by Gender

- **Female**
  - Cowpea: 0.33
  - Maize: 1.21
  - Beans: 0.34

- **Male**
  - Cowpea: 1.85
  - Maize: 1.39
  - Beans: 0.39
Household Average Crop Production by Household Head Gender

- No significant difference between male and female for cowpea & maize but significant difference exists for beans (p < 0.03)
Household Average Land Productivity by Household Head Gender

- **Cowpea**
- **Beans**
- **Maize**

### Female
- **Cowpea Yield (kg/Ha)**: 258
- **Beans Yield (kg/Ha)**: 1,785
- **Maize Yield (kg/Ha)**: 330

### Male
- **Cowpea Yield (kg/Ha)**: 274
- **Beans Yield (kg/Ha)**: 1,699
- **Maize Yield (kg/Ha)**: 119

*Source: Department of Agricultural Economics, Kansas State University*
Where We Are Going

- The market channels used by producers are important indicators of ability to reduce transaction cost and increase competitive position
- We will explore the impact of producer characteristics on market channel choice/options
- We are going to measure the total value created from participation in each channel
- And identify the producer characteristics that influence the value created
- We also assess the influence of characteristics on perceptions about government policies and support
Where We Are Going

- One of the recurring unsolicited information producers told us was that they *never hear from us again after* they have responded our questions.

- This is why our Phase II is so important.
  - We have also already engaged four traders to facilitate their procurement for the coming season from about 400 of the growers we interviewed.
  - Our objective is to implement strategies that reduce price variability throughout the year and improve total value created in the chain.
  - This experiment aims to identify and address information, skills, knowledge and capacity gaps to construct functioning supply chains that increase participant net incomes and reduce consumer price risks and product availability.
Where We Are Going

- The critical barriers identified in structured conversations with traders include procurement costs and storage solutions
  - Transaction costs
  - Infrastructure gaps
  - Opportunism and moral hazard risks
Where We Are Going

- Hence our confidence that using lessons from our pilot supply chain initiatives to determine low-risk, high value scale-up implementation strategies would be sustainable impact
  - Provides a credible alternative to public policy interventions, e.g., maize procurement
  - Position farmers to make market-driven decisions
  - Brings other players – government, NGOs, private enterprise – to the table to enhance sector performance
Where We Are Going

- Technology diffusion becomes easy in such structured systems because they are driven by demand instead of pushed by upstream players
  - Create chain-relevant production systems (from seed and production technologies to handling and processing)
  - Diversify opportunities for producers, increasing income enhancement potential, reducing risks
  - Drive value creation and support sustainability – voluntary participation, reductions in transaction costs

- This approach, we believe, helps us rethink how we do things
Final Words

- The important thing driving our activities is this. That we position ourselves to abandon what we believe ourselves and our producers, traders and users to be for what we can all become.

- Now, a brief promo for our MAB program from our Zambian students.

- **Pulse Value Chain Project Impact**