Zambia’s Cassava Value Chain Task Force

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Michigan State University
Food Security Research Project
for the SIDA RRD workshop
May 15-17, 2007
Outline

• Cassava production surge
• Cassava task force
  – Value chain diagnostics
  – Past promotional efforts
  – First-round interventions
  – Market monitoring: spatial dimensions of cassava production and trade
  – Second-round opportunities
Cassava production surge

production (000 tons)


maize
cassava
Causes of the cassava surge

- Successful control of cassava pests
- Removal of maize subsidies
- Introduction of new cassava varieties
Cassava varieties released by RTIP

<table>
<thead>
<tr>
<th>Variety</th>
<th>Date</th>
<th>Yield</th>
<th>Taste</th>
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Regional cassava surge

- Malawi cassava production ('000 tons)
- Zambia cassava production ('000 tons)

Graph showing the increase in cassava production in Malawi and Zambia from 1961 to 2005.
Can production growth continue?

- Yes, farmers can increase output.
- But without growing markets, production growth will stall
Outline

• Cassava production surge
• **Task force genesis**
• Value chain diagnostics
• Past promotional efforts
• First-round interventions
• Market monitoring: spatial dimensions of cassava production and trade
• Second-round opportunities
ACU Task Force

• June 2005: cassava presentation at ACF
• New ACF chairwoman
• Concensus:
  ➢ higher productivity of new varieties → major economic opportunity
  ➢ Continued growth of cassava production required growing markets
• ACF invites stakeholders to help constitute Cassava Utilization Task Force
Task force objectives

• realize commercial potential of cassava
• enhance its contribution to household food security
ACU Task Force members

- Private sector (feed companies, traders, processors)
- NGOs and projects (PAM, SNV, FSRP)
- Public sector (ZABS, ZARI)
- ACF
ACU Task Force principles

• Open membership
• All information → public domain
• Value chain perspective
• Facilitate private sector
• Zero budget
• evolving strategic road map
ACU first-round steps

- Value chain review
- Assessment of past promotional efforts
- Identification of first-round opportunities and constraints
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Zambia’s cassava value chain

Consumption

Processing

Trade

Soaking, drying

Farm production

Channel 1.

Subsistence Production

Vol = 45,000 tons (fresh equivalent)
= 15,000 dry weight

Channel 2.

Subsistence households

Volume = 920,000 tons

Channel 3.

Livestock
Vol = 500 dry

Food processors

Vol = 10,000

Livestock companies & livestock farmers

Channel 4.

Cassava traders, dried chips
Vol = 45,000 tons (fresh equivalent)
= 15,000 dry weight

Channel 5.

Industrial users
Vol = 500 dry

Industrial processors

Industrial uses

Exports
Vol = 4,000 dry

Traders, fresh
vol = 35,000 T

Feed companies & livestock farmers

Vol = 500 dry

Purchases for human consumption

Vol = 10,000

Vol = 10,000

Farmers

Vol = 4,000 dry

Vol = 10,000

Livestock

Subsistence households

Volume = 920,000 tons

Channel 2.

Marketed Fresh Cassava for Human Consumption

Channel 3.

Processed Cassava for Human Consumption

Channel 4.

Livestock Feed

Channel 5.

Industrial Uses
Channel 1. Subsistence
Channel 2. Fresh sales
Chanel 2 Fresh market

- important in the lean season (January – February) peak
- fresh cassava only food harvested early in lean season
Channel 3. Human foods
Channel 4. Feeds
Channel 5. Industrial processing
Outline

• Cassava production surge
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• **Past promotional efforts**
  • First-round interventions
  • Market monitoring: spatial dimensions of cassava production and trade
  • Second-round opportunities
Review of past promotional efforts

• Strategy: Deliver cuttings to vulnerable households (Channel 1)
  – Supply side focus
  – Subsistence focus

• Outcome = failure
  – only 20% plant cuttings
  – only 1% still growing cassava
Past promotional efforts

Channel 1. Subsistence Production

Channel 2. Marketed Fresh Cassava for Human Consumption

Channel 3. Processed Cassava for Human Consumption

Channel 4. Livestock Feed

Channel 5. Industrial Uses

Consumption

Processing

Trade

Soaking, drying

Farm production

Subsistence households

Volume = 920,000 tons

Traders, fresh vol = 35,000 T

Cassava traders, dried chips Vol = 45,000 tons (fresh equivalent) = 15,000 dry weight

Livestock Vol = 500 dry

Industrial users Vol = 500 dry

Exports Vol = 4,000 dry

Purchases for human consumption Vol = 10,000

Food processors

Livestock companies & livestock farmers

Industrial processors

Traders, fresh

Vol = 35,000 T

Purchases for human consumption Vol = 10,000

Subsistence Production

Exports Vol = 4,000 dry

Purchases for human consumption Vol = 10,000

Livestock Vol = 500 dry

Industrial users Vol = 500 dry

Traders, fresh

Vol = 35,000 T

Livestock Vol = 500 dry

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Exports Vol = 4,000 dry

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Livestock Vol = 500 dry

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Task Force Strategic Focus

Consumption
- Subsistence households
  - Volume = 920,000 tons

Processing
- Cassava traders, dried chips
  - Vol = 45,000 tons (fresh equivalent) = 15,000 dry weight

Trade
- Food processors

Vol = 10,000

Soaking, drying

Farm production
- Traders, fresh
  - Vol = 35,000 T
- Cassava traders, dried chips
  - Vol = 45,000 tons (fresh equivalent) = 15,000 dry weight
- Farmers

Channel 1.
Subsistence Production

Channel 2.
Marketed Fresh Cassava for Human Consumption

Channel 3.
Processed Cassava for Human Consumption

Channel 4.
Livestock Feed

Channel 5.
Industrial Uses

Exports
Vol = 4,000 dry

Livestock
Vol = 500 dry

Industrial users
Vol = 500 dry
## Opportunities (‘000 tons fresh)

<table>
<thead>
<tr>
<th>Channel</th>
<th>Current size</th>
<th>Growth potential</th>
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<tr>
<td>Channel 1</td>
<td>920</td>
<td>2% pop growth</td>
</tr>
<tr>
<td>Channel 2</td>
<td>35</td>
<td>+ 50</td>
</tr>
<tr>
<td>Channel 3</td>
<td>42 (14 dry)</td>
<td>Wheat flour 10%  +40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maize flour 10%  +200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Convenience foods +500</td>
</tr>
<tr>
<td>Channel 4</td>
<td>1.5 (0.5 dry)</td>
<td>+ 100</td>
</tr>
<tr>
<td>Channel 5</td>
<td>1.5 (0.5 dry)</td>
<td>Sweetners  +40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethanol +100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other ?</td>
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• Past promotional efforts
• First-round interventions
  • Market monitoring: spatial dimensions of cassava production and trade
  • Second-round opportunities
First-round activities (18 months)

- Ch 4. Feeds (LDT feeding trials)
- Ch 3. Human foods (taste panels, composite flours)
- Ch 2. Industrial sweeteners
- Standards (ZABS, processors, food safety labs)
- Market monitoring (prices, volumes, spatial dispersion)
First round results

• Livestock feeding trials
  – cassava rations → same growth as maize
  – viable if 60% to 70% price of maize
• Major feed company starts buying cassava
• ZABS issues standards for cassava chips and flour
• Composite wheat flour most promising in Channel 3
• Market monitoring results
Outline

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• Past promotional efforts
• First-round interventions
• **Market monitoring: spatial dimensions of cassava production and trade**
• Second-round opportunities
## Characteristics of food staple zones

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Cassava prodn (kg/person)  

Maize  

Cassava commercialization  

Sales/prodn

**Note:** The values in red indicate the highest percentages in their respective categories.
Where is the growth coming from?

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<td><strong>Production growth (early 1990’s to early 2000’s)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>% hh growing</td>
<td>+4%</td>
<td>+30%</td>
<td>+47%</td>
</tr>
<tr>
<td>Qty harvested</td>
<td>+17%</td>
<td>+50%</td>
<td>+17%</td>
</tr>
<tr>
<td><strong>Marketing growth (increase in quantities sold)</strong></td>
<td>+110%</td>
<td>+200%</td>
<td>+222%</td>
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Dried cassava transiting the Chembe border post
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Dried Cassava Trade Flows
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<th>Region</th>
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<tr>
<td>Cassava belt</td>
<td>0.5</td>
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<td>Maize belt</td>
<td>1.2</td>
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• Market monitoring: spatial dimensions of cassava production and trade

• Second-round opportunities
Key market opportunities

• Cassava belt:
  – Export of dried chips
  – Cassava-based convenience foods
  – Large-scale industrial processing (ethanol, sweeteners, starch)

• Maize belt:
  – Fresh sales during lean season
  – Feeds (if cassava price falls < maize)
  – Composite flours (if cassava price < maize)
Key market opportunities

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Task Force 2\textsuperscript{nd} round

• Regional sub-committees (cassava belt and maize belt)
• Cross-country learning
  – food products
  – industrial products
  – technologies