# “New Agriculture” & Implications for Information Development and Diffusion: Perspectives from Zambia

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# Zambia's "Farming Ladder" (from Gates Team Interview –GART Research Station meeting with Director

**Farming Ladder**

**-Commercial farmers**

**-Cell phone farmers**

**-Animal traction farmers**

**-Hand hoe farmers**

**Number of Farmers**

**-1500**

**-50,000 - 75,000 ?**

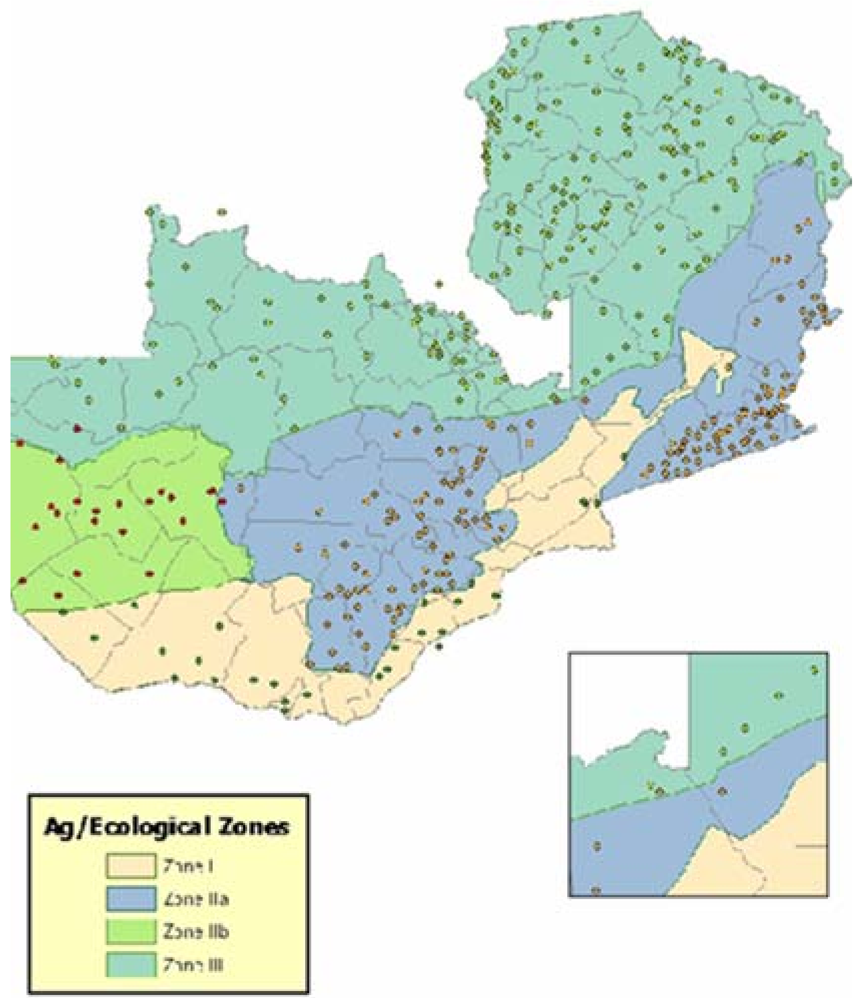
**-335,058**

**-932,087**

# Large Scale Commercial Farmers

-Lobby for interests of agriculture – helps small farmers
-Outgrower schemes – opportunities for smallholders

# Giving Data Voice to Smallholders Empirical Data in Zambia – Nation Wide Random Surveys



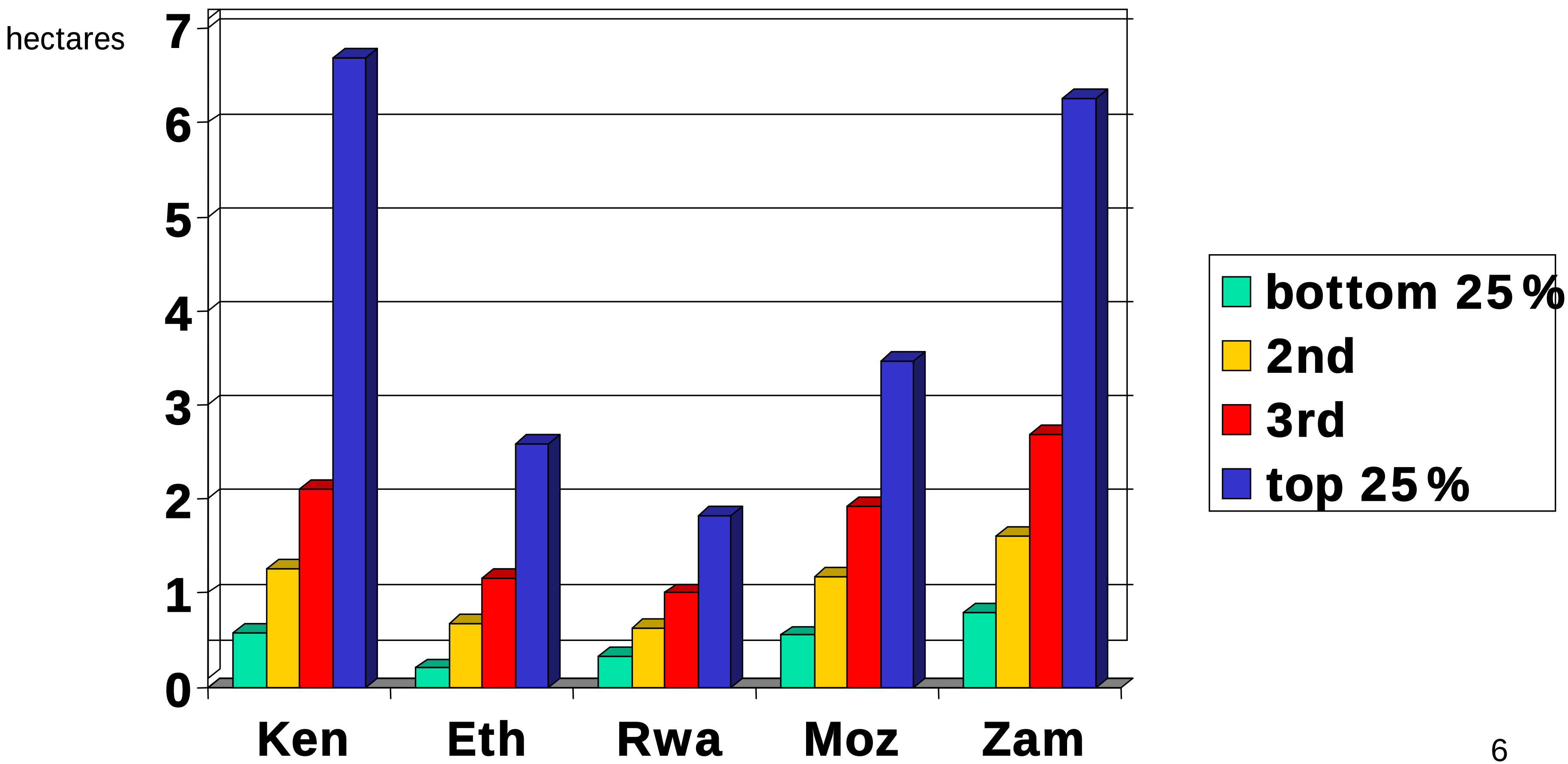

**Map of Central Statistical Office Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001 and 2004 by Zambia's Agro-Ecological Zones**

# Smallholder Heterogeneity - Significantly Different Information Targeting Challenges

- Table 2. Production and Marketing Interactions: Zambian Smallholder Production and Marketing Behavior Patterns

- Table 3. Heterogeneity of Target Smallholders: Zambian Smallholder Household Income, Wealth and Demographic Attributes by Land Access and Education

# Not All Smallholders in Zambia Are the Same: Farm Size (cultivated) Distribution



# Illustrations: Key Patterns of Smallholder Maize Production and Marketing )00 & 04 mkt years

- Some 80 % of smallholders produce maize
- Only 25-28 % of smallholders sell any maize
- Sales % of national production range 23/27 %
- Vast majority of maize produced is stored and eaten on the farm – traditional on-farm storage needs help
- Production and sales are highly correlated with area cropped to maize
- 35 % of smallholders are net buyers (grain & meal)
- 37 %  not in the market as seller nor buyers

# Illustrations: Relationships Between Landholding Size, Education &Welfare

(Table 3  bivariate)

- Income-poverty clearly *associated* with small farm size and low education (*can't study causality with this cross-section data*)
- Within each landholding tercile, hh income /value crop sales increases 30-50 % between low and high education terciles
- Income is not so constrained by land in top education terciles due to off farm income.  Conversely, off-farm income is relatively small for low education terciles
- 24 % female headed hhs overall, but female hhs are found disproportionately in bottom education & land terciles

# New Agriculture – Responding to Markets Means We Need Better Information About African Urban Food Demand

- More than 50% of Africa's population will be urban by 2015.
  - 2000: 10 farm households feed 7 non-farm households
  - 2020: 10 farm households feed 16 non-farm households
- Upshot: urban demand for food is rising rapidly

# Information to Improve Rural – Urban Linkages: Urban Purchase Location & Units Driven by Urban Income Poverty


# Information to Improve the Traditional Marketing Sector –It Is Close to Poor Consumers?


# Crop Diversification - Role of Maize in Farm Cash Income is Declining (share of gross sales revenue)

# Need to Understand Changing Market Demands

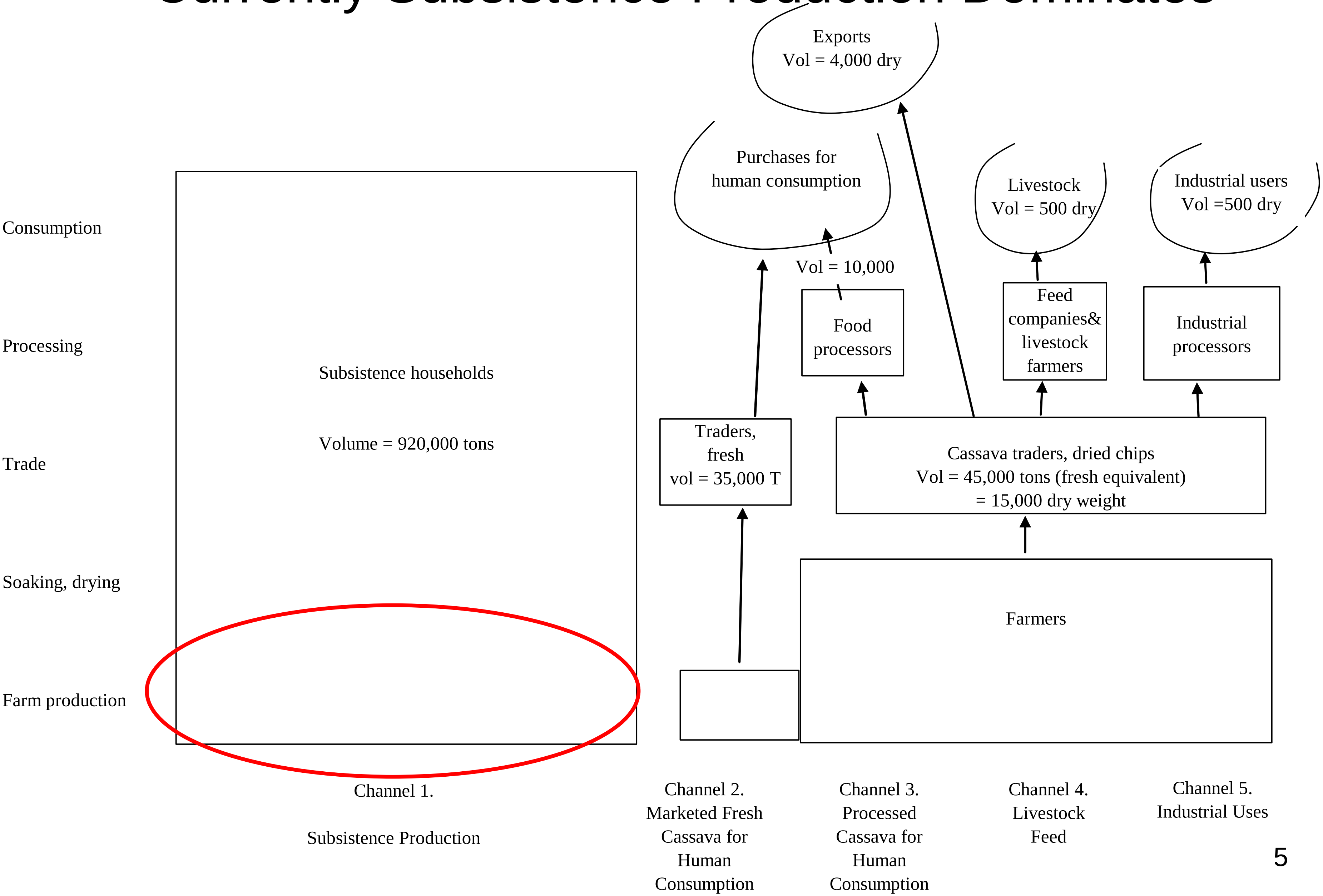
| | Maize | Other grains/ beans/ oilseeds | Non-food cash crops | Fruits - veges | Animal products |
|---|---|---|---|---|---|
| Kenya | 13.3 | 7.9 | 34.0 | 14.7 | 26.7 |
| Malawi | 32.3 | 11.8 | 44.9 | na | na |
| Mozam | 13.8 | 9.3 | 16.9 | 30.4 | 23.4 |
| Zambia | 28.2 | 7.7 | 16.7 | 27.5 | 14.7 |

# Zambia -Highly Productive New Cassava Varieties Increasing Available

# Can Production Growth Continue?

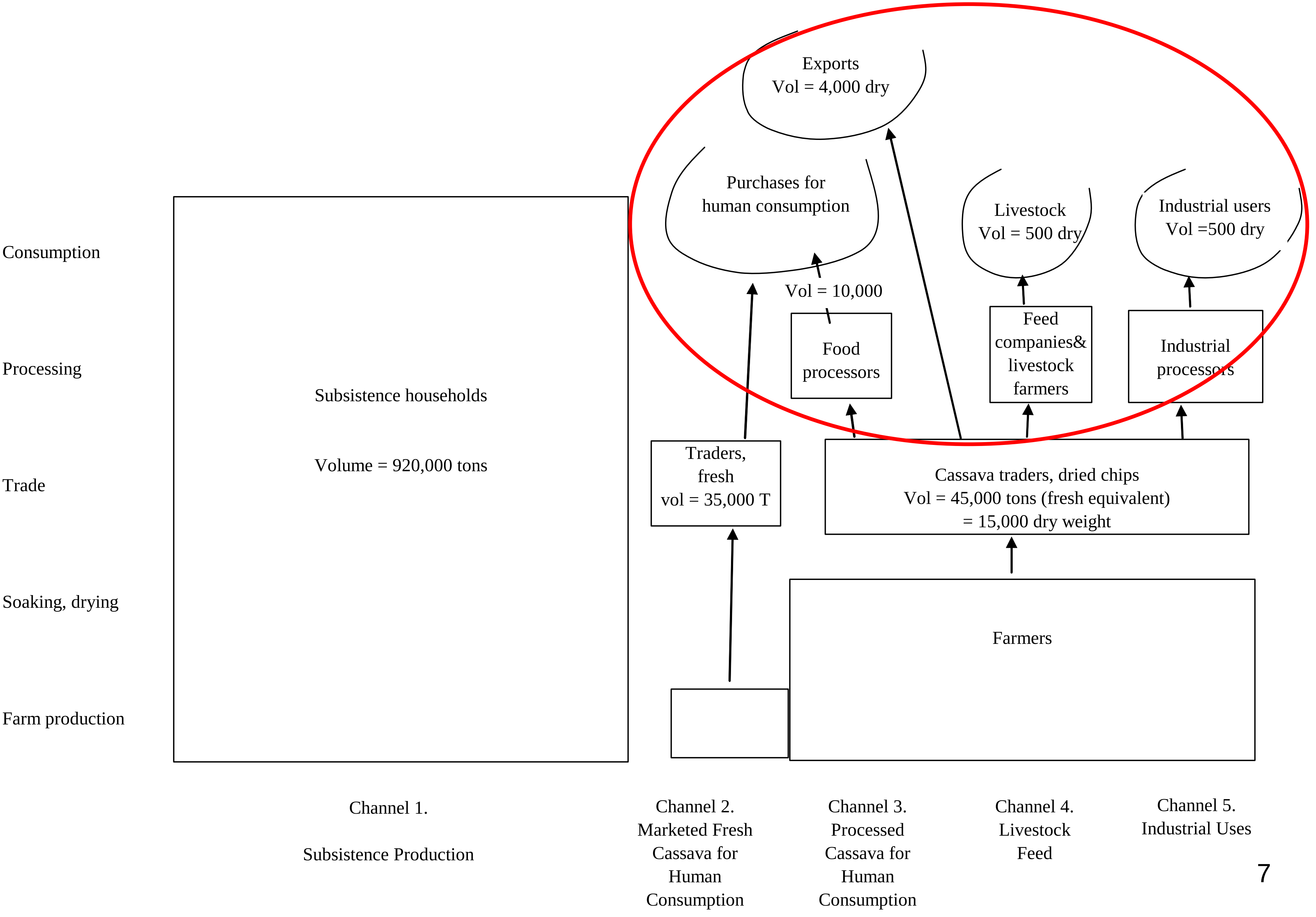
- Yes, farmers can increase output.
- But without growing commercial markets, production growth will stall

# Example- Zambia's Cassava Value Chain: Currently Subsistence Production Dominates



# Channel 1. Subsistence

# Commercial Channels Will Drive Future Growth



# Channel 4. Feeds

(Tiger Animal Feeds has begun buying cassava)

# Dynamics of Information & Feedback for Value Chain Growth



# Zambia – Field Visit
# WorldAgInfo Information Insights

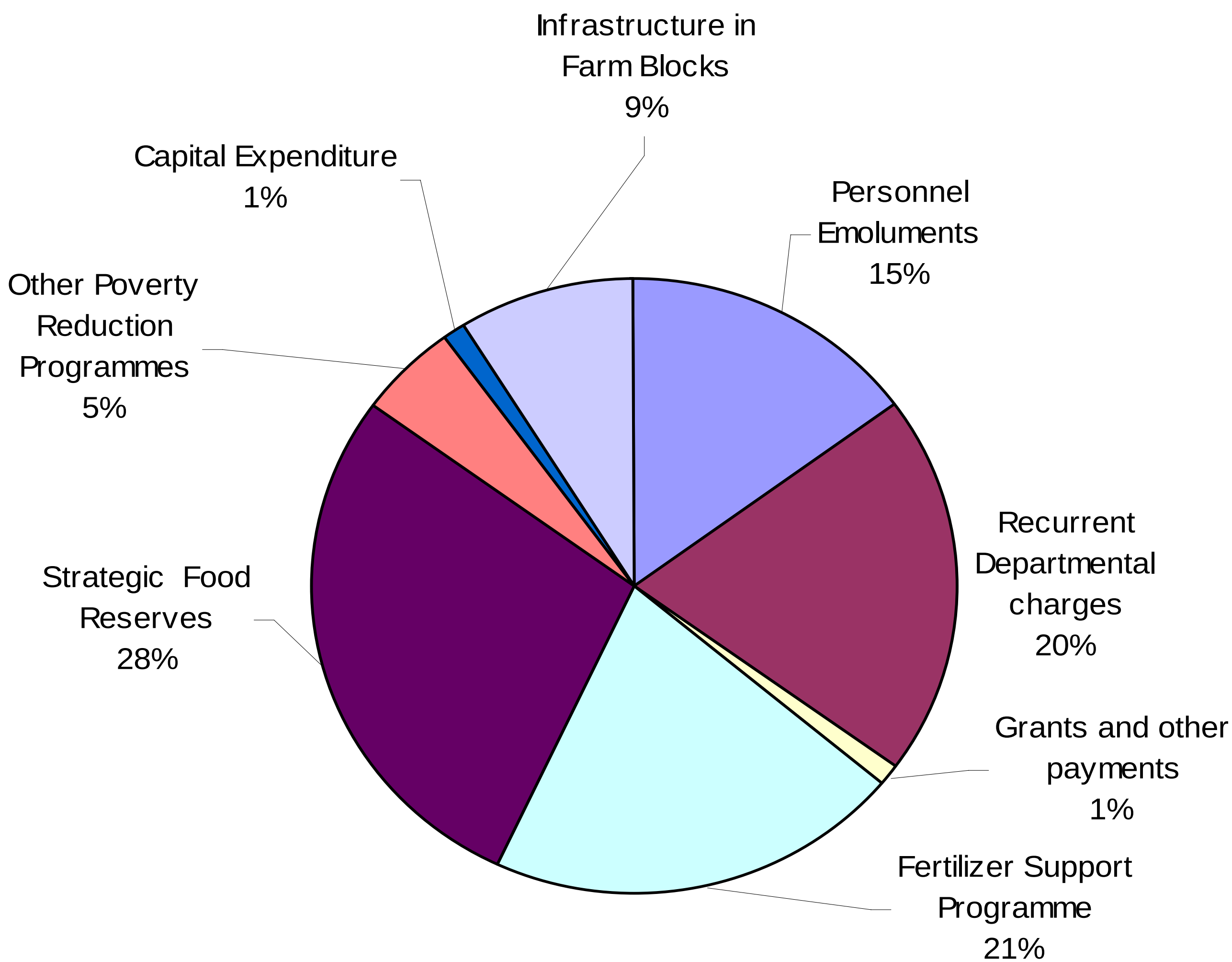
**Household-Level Diversity**

- 10 hhs produced enough for sale
- 20 hhs did not produce enough for consumption needs- had to buy some
- Female hhs expressed unique needs

**Community Expressed Felt Needs**

- Closer access to water
- Better & more roads
- Local access to electricity
- School buildings & teachers
- Extension advice working but weak (conservation farming practices starting to be used)
- Fertilizer –farmers willing to buy but need reliable retail outlets
- Women growing vegetables for urban mkt demand but need irrigation & better market access

# Information for Policy - Public Resource Allocation for the Agricultural Sector Zambia 2007



# New Agriculture - Policy Information Implications

- Many "knowledge gaps" about improving smallholder agriculture are *systemic challenges*
  – Access to roads and water
  – Access to land
  – Access to markets
  – Changing urban consumption patterns
- Overcoming these knowledge gaps to help develop policies and programs that can help smallholder farmers

Zikomo Kwambili,
Natotela sana,
L'i tumezi ahulu,
Twalumba kapati,

**Thank you to Zambian smallholders and to policy makers for the opportunity to obtain/share information and ideas**