"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 ?

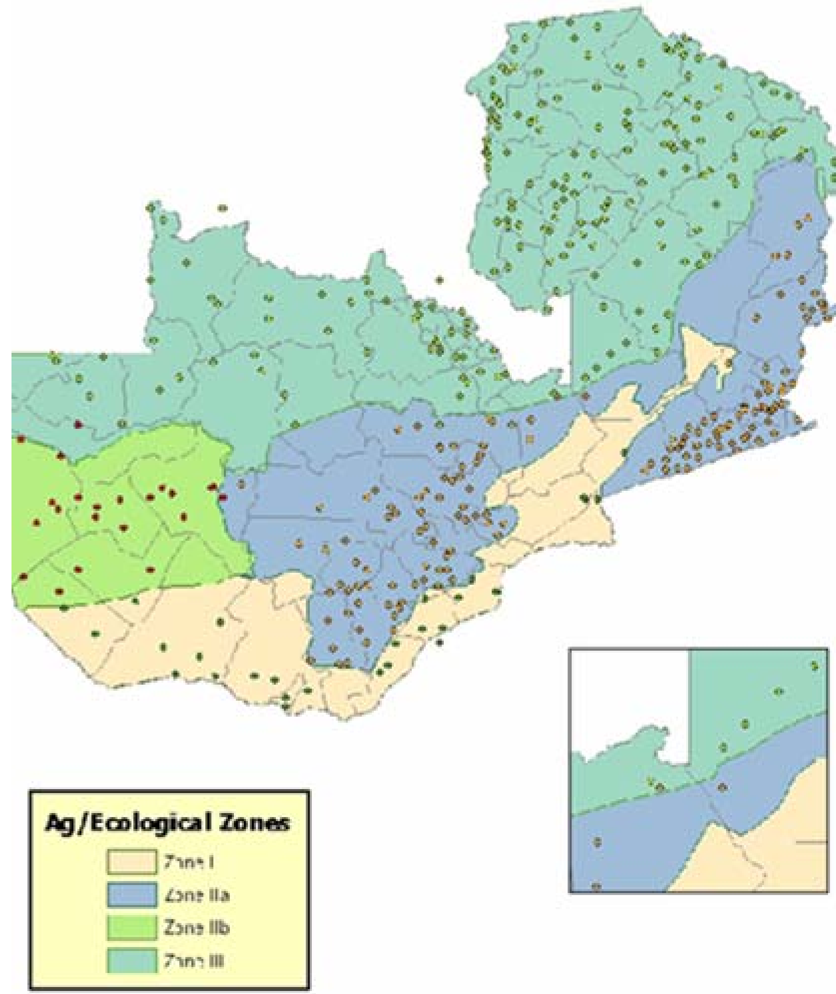
-335,058

-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



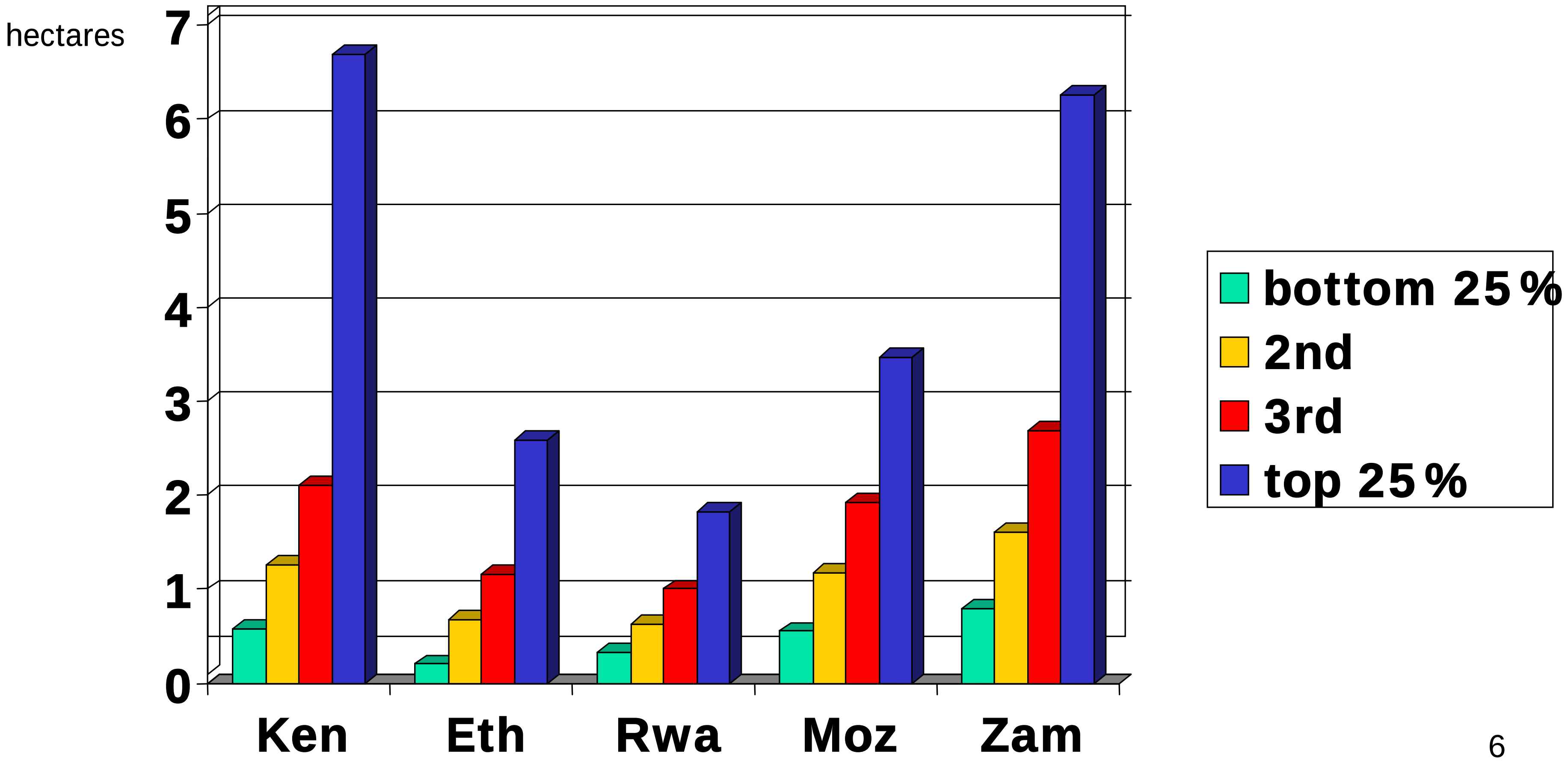
Map of Central Statistical Office Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001 and 2004 by Zambia's Agro-Ecological Zones

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

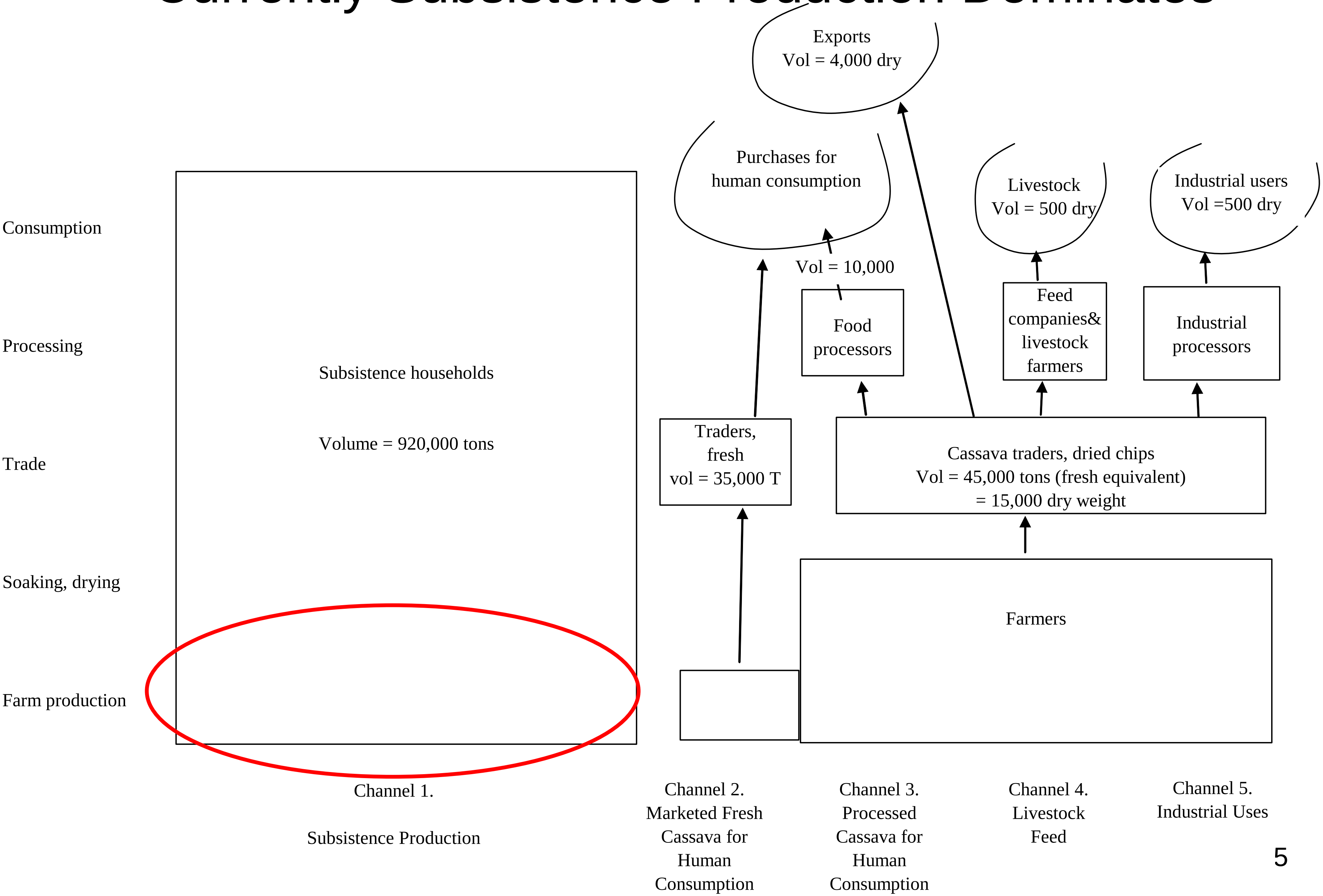
	Maize	Other grains/ beans/ oilseeds	Non-food cash crops	Fruits - veges	Animal products
Kenya	13.3	7.9	34.0	14.7	26.7
Malawi	32.3	11.8	44.9	na	na
Mozam	13.8	9.3	16.9	30.4	23.4
Zambia	28.2	7.7	16.7	27.5	14.7

Zambia -Highly Productive New Cassava Varieties Increasing Available

Can Production Growth Continue?

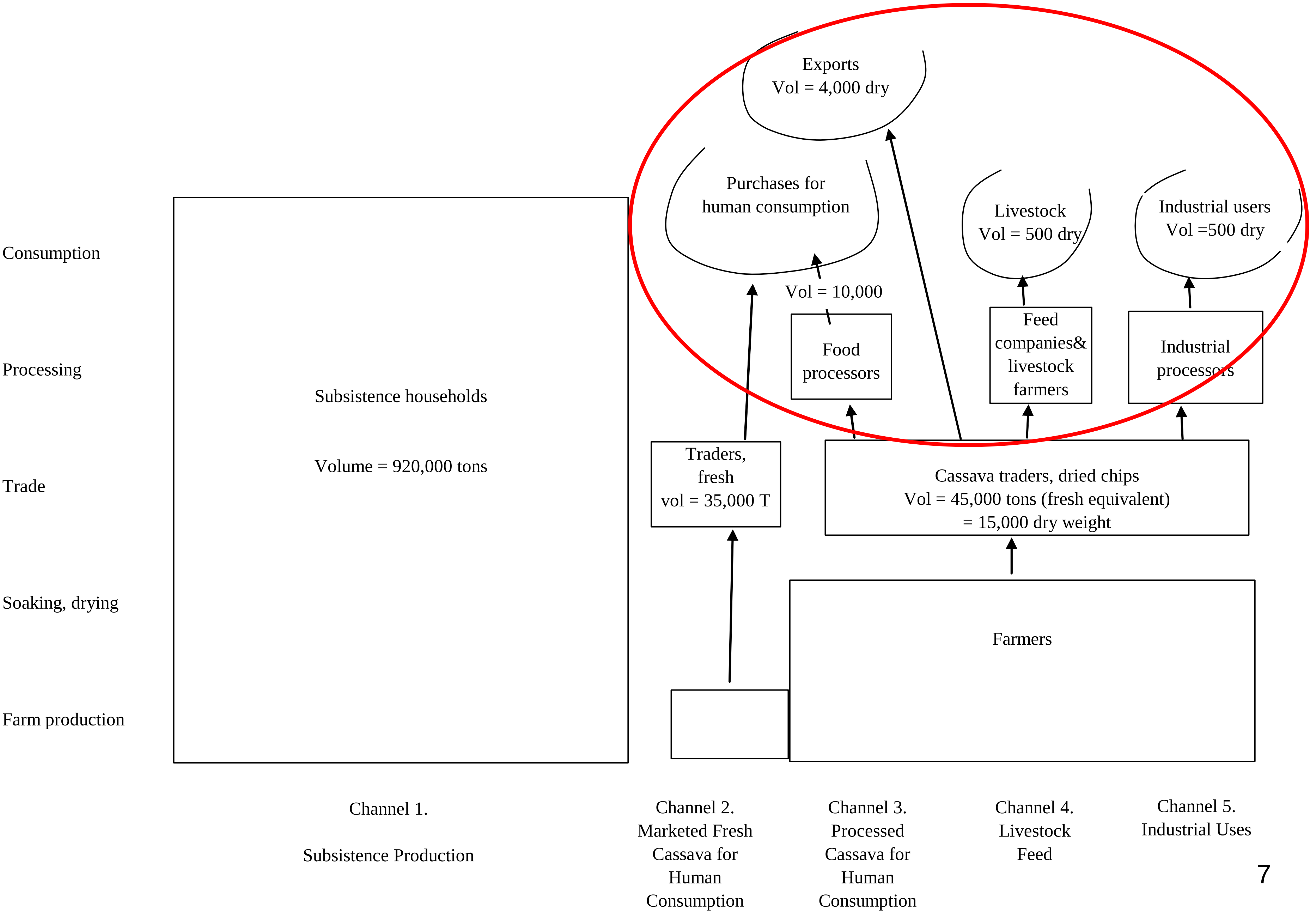
- Yes, farmers can increase output.
- But without growing commercial markets, production growth will stall

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

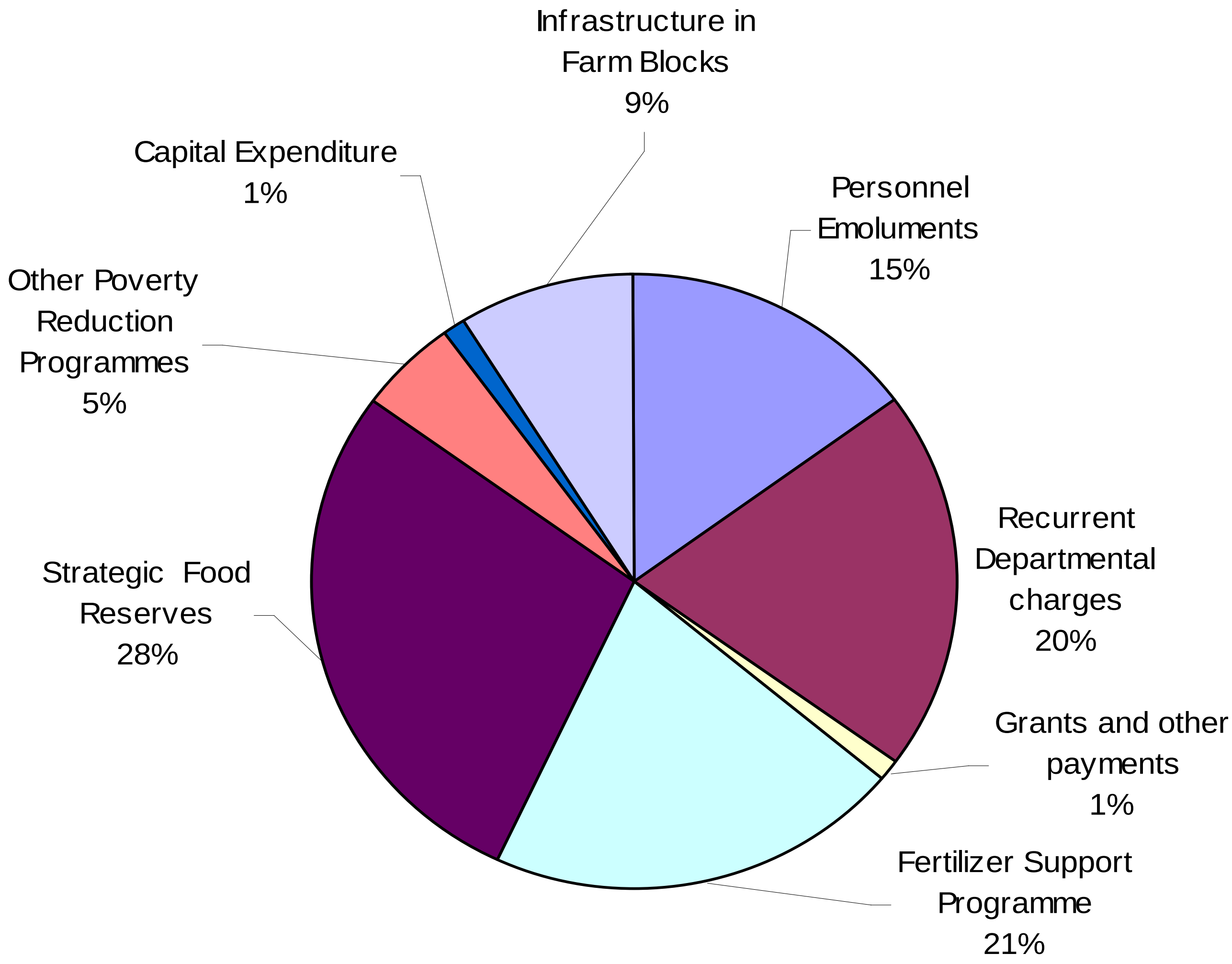
Household-Level Diversity

- 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