

Vegetable and Field Crop(s) Strategies in East Africa

UPOV Symposium
“Plant Breeding for the Future”
Geneva - 21st October, 2011

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Introduction

- ❖ The key **economy activity** in the East African Countries is **Farming**
- ❖ **Production** needs to be **doubled** by 2030
- ❖ **Consortium** to ensure participation by **Private sector**
- ❖ **Biotechnological** approach for multiple stress tolerance
- ❖ **Focus** should be on development of eco-friendly, low-carbon adaptation **technologies**

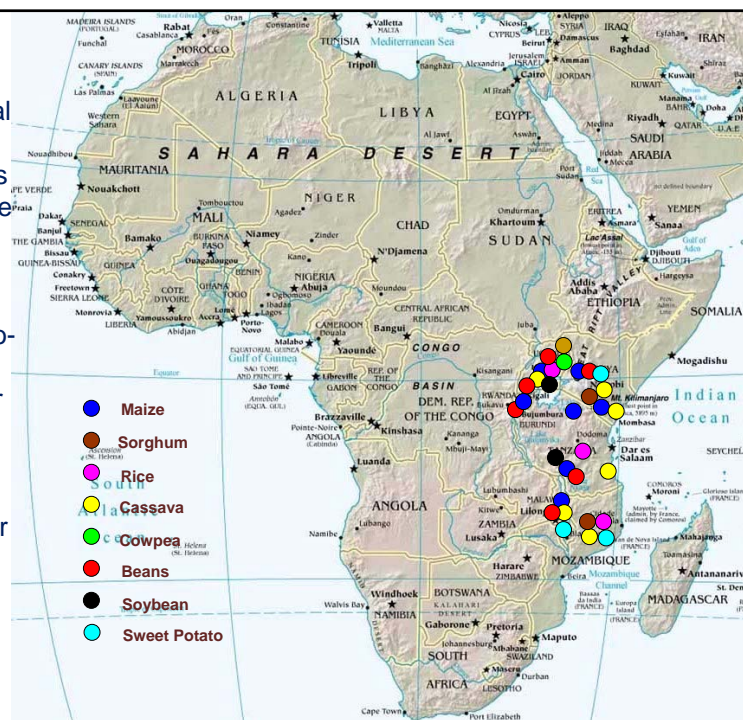


East Africa

Kenya – Colonial land occupation, large scale farms an input intensive system

Tanzania – Socialism and co-operative effort, Govt. support for high input agriculture

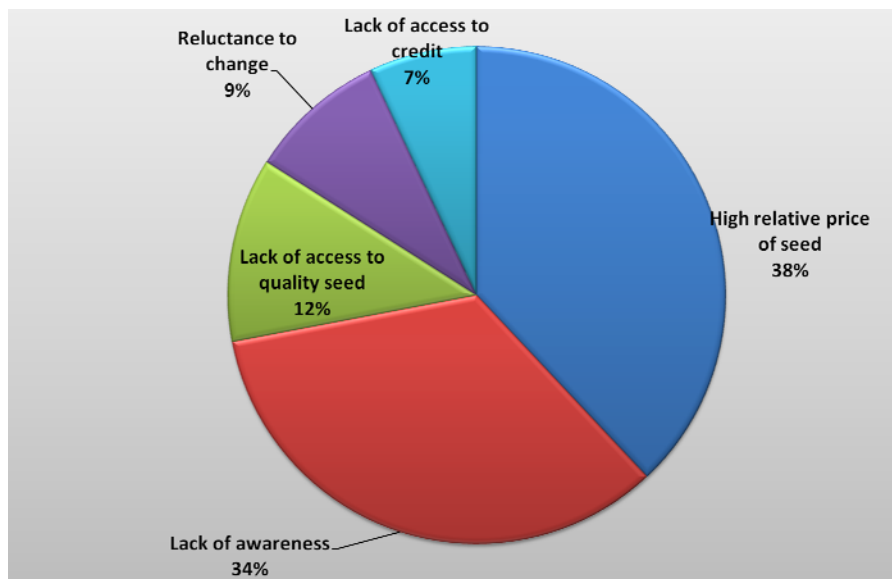
Uganda – A war in Northern region, low input smallholder farming pre-dominates



Challenges

- Lack of market assurance limits expansion of project investments
- Lack of a regulatory system(s) in the United Republic of Tanzania and Uganda
- Limited diversity to other crops such as Rice and Beans to encourage home consumption
- Looming effects of Climate Change
- Government policy and infrastructure to enhance the industry development

Factors affecting seed demand

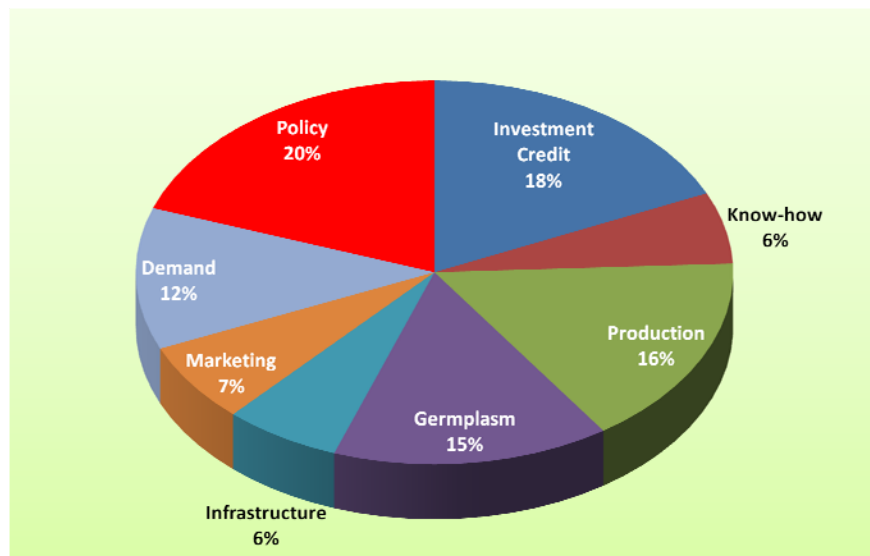


Agriculture Transformation

Increasing value in agriculture through :

- Enhanced collaboration and co-ordination - Research, Education and Extension
- Private-public partnerships in market oriented extension
- Improvement of market access to smallholders
- Transformation of producer organizations
- Strengthening the technical capacity of the cooperative sector

Factors affecting seed supply



Weak Market Implications

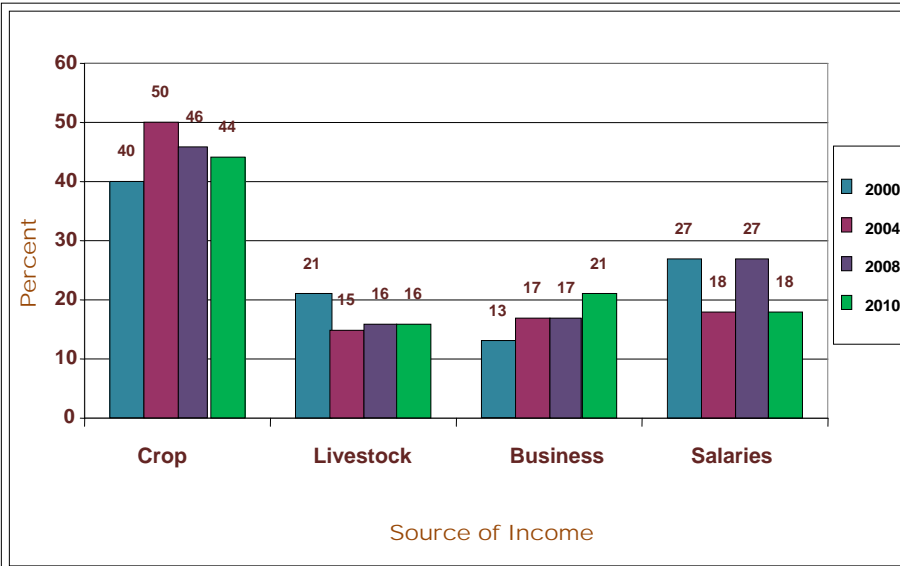
- Market information – limited capacity
- Identification of local level constraints - streamlining
- Grades and standards – need for visual inspection
- Enforcement means – reliance on trust-based networks
- Introduction of trait(s) translates into high costs and delays in acceptance

Farm household roles



- **Household, farming or enterprise activity :**
 - ✓ Men – Cash crops, large livestock
 - ✓ Women – Child rearing and household maintenance, food and horticultural crops, small livestock, agro-processing and trading
- **Farming tasks :**
 - ✓ Men – Clear land
 - ✓ Women – Plant, weed, process and store agricultural products
- **Separate fields / plots :**
 - ✓ Men and women each responsible for own inputs and controlled outputs
- **Land rights :**
 - ✓ Men – Ownership
 - ✓ Women – Insecure land tenure, determined by husband or male relatives
- **Input rights :**
 - ✓ Men – Right to resources such as land, labor, technical information and credit
 - ✓ Women – Access to these resources determined by men

Contribution towards Household Income



Development of small holder farmer

High value crops introduction in traditional farming depends :

- ❖ Entrepreneurial grower organizations
- ❖ Government assistance in investment and export promotion
- ❖ Partnerships between producers and private sector traders and processors
- ❖ Insurance to share or minimize climate, production and market risks



Improving smallholder marketing in East Africa

- Putting in place a realistic policy and legal framework
- Free cross border trade to stabilize supply and demand
- Encourage strong private sector participation in the sectors
- Instill a sense of farming as a business among small holder farmers
- Tirelessly work towards reducing transaction and transport costs in EAC

Economic realities

❖ Spending power

- ❖ Subsistence farming
- ❖ Many below poverty threshold
- ❖ Poor yields, acidic soils, drought
- ❖ Poor market access

❖ Other economic factors

- ❖ HIV incidents, death rates
- ❖ Inflation rates
- ❖ Poor infra-structure

Agricultural Productivity

Commodity	EAC productivity	Benchmark (FAO)
Maize (bags/acre)	9	Argentina – 31 South Africa – 13
Tea (kg/acre)	4,507	Malawi – 3,523 India – 2,774
Coffee (processed) (kg/acre)	214	Brazil – 345 Colombia – 436
Sugarcane (tons/acre)	28 – 25	Malawi – 43 Sudan – 42
Dairy (liters/cow per year)	1,371	Argentina – 4,773 South Africa – 3,093

Research 4 Development

- Focus on increasing efficacy in mainstream agriculture
- Science based and stringent regulatory framework
- Invest in agriculture to scale up solutions
- Raise awareness for and give clear guidance on how to manage the agricultural challenges ahead
- Government(s) to create an enabling framework for agriculture investments'

Development drivers

Productivity	Details
Seed Genetics	✓Access and shift to higher yielding seed genetics with greater resistance to disease, virus etc. (native traits)
Fertilizers/Nutrients	✓Broad portfolio of products suitable for various production methods
Seed Enhancement Technologies	✓Better seed treatment technologies options (<i>insect, nematode, and disease control</i>) ✓Better seed coating options
Efficient Farm Operations	✓Use of better and fuel efficient machinery including spraying technology ✓Shift towards contract labor and toward farm management companies
Irrigation and Water	✓Easy access to water and to irrigation ✓New and improved irrigation methods and controlled irrigation systems
Greenhouse Agriculture	✓Shift from open field to protected growing practices including shift to technologically advanced greenhouses

East Africa – Development projects'

- There are various seed projects at regional level to develop the Seed Sector
 - Drought Tolerant Maize for Africa (DTMA)
 - Water Efficient Maize for Africa (WEMA)
 - Insect Resistant Maize for Africa (IRMA)
 - Program for African Seed System (PASS) of the Alliance for a Green Revolution in Africa (AGRA)
 - Vegetable Breeding and Seed System (vBSS) of the World Vegetable Center (AVRDC)

Maize in East Africa ...



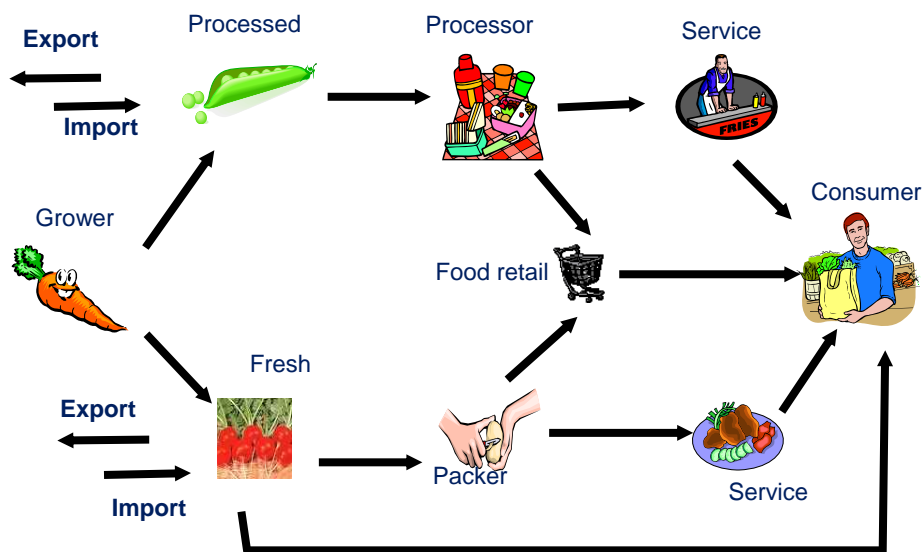
- Maize is of fundamental importance in Africa as a staple food
- Accounts for ~ 60% of the expenditure of low-income households
- Intra-regional trade and exporting of this commodity
- Reliance on monopolistic approach resulting in crop failures
- This has made East Africa a net importer of Maize...

Expansion of Veges



- ❖ The Vegetable crop(s) in EAC countries are produced under open field conditions
- ❖ Biotic and abiotic product differentiation
- ❖ Demand driven and export oriented strategies
- ❖ Favorable institutional and regulatory environment
- ❖ Skilled management along the entire supply chain

Vegetable chain example



Success factors

- Africa can achieve a market-led agricultural transformation

Incentives	Infra-structure	Institutions
Macro-economy	Transportation links	Grades and Standards
Investment climate	Telecom / ICT	Market intelligence
Licensing regulations	Post harvest mgt / QC	Trade financing
Sectoral policies	Storage capacity	Industry groups
High Income tax and Multiple levies	Business mgt / Training	Contract enforcement / Dispute settlement
Food Aid distortions	Market oriented Agricultural extension	Commodity exchange / Auctions
		Regulatory framework
		Legal reforms
		Producer groups
		Warehouse receipts

Crop strategies for East Africa

- Urbanization and transformations of markets
- Growing influence and leverage of the private sector
- Rising energy and commodity prices
- Continued domestic and international price distortion(s)
- Under-investment in technology and infrastructure

Harnessing agriculture in transformation

Genetic improvement and achievement of better crop :

- Addressing the potential for agricultural growth
 - Development of strategies for yield improvement
- Capacity building on modern technologies
 - Promoting activities to diversify farming
- Infra-structure investment – new technologies
 - Training / education and skill development

Understanding Value Chain economics

- Tapping into domestic food / niche markets – exports
- Migrants remittances to productive use – rural areas
- Building public-private partnerships in agri-business
- New generation of rural development programs
- Guidance in technical assistance issues

Policies

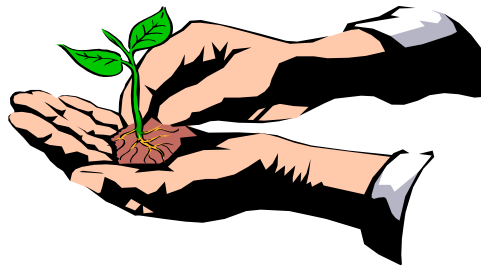
- Adequate seed supplies of adapted varieties in Crop(s)
- Increase vegetable production, marketing and consumption
- Improvement of scientific skills
- Funding for infra-structure development
- Transactional and Value pricing

Way forward

- Achieving food security is a key policy challenge
- Identify challenges faced by smallholders
- Increase production and productivity of farming
- Improve access to knowledge and newer technologies
- Link small holders to markets
- Increase opportunities through sustainable innovations

Conclusion

- EAC has set-up a network to increase credit to agriculture
- Smallholders access to markets on the input and output side
- Diversification of economic activity at household / community level
- Crop improvement as per market need in Field and Vegetable crops'
- Securing the resource base for production under assured irrigation and pest regulation
- Development of partnerships to build supply chains for high value products for export and domestic market
- Mitigation and adoption to Climatic change



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