

# GRAIN MOVEMENT IN KENYA AND EAST AFRICAN REGION

NAPPO WORKSHOP ON THE INTERNATIONAL  
MOVEMENT OF GRAIN. VANCOUVER, CANADA  
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# Map of E. Africa and Africa





# Importance of Agriculture in Africa

- In Africa, agriculture provides:
  - 67% of employment
  - 33% gross national income
- Maputo Declaration (2003) on Agriculture and Food Security in Africa
  - Governments agreed to allocate 10% of national budget to agriculture. ( **Kenyan** government is compliant =Ksh 100 Billion 2011/2012)

# KEPHIS as an NPPO and Grain Movement



- Kephis Establishment
- Vision and Mission
- Operations / Activities  
(*Plant variety protection, Quality assurance and Phytosanitary service.*)
- Regional offices and border posts

# Grain Production, Import and Export in Kenya

## Grain Production in different years ( MT)

	2008	2009	2010	2011
Maize	2.9 million	2.5million	1.8million	2.8 million
wheat	288,642	229,200	252,000	225,000
Rice	63,240	37,198	36,000	43,000
Sorghum	54,316	99,000	130,000	130,000

## IMPORT (MT)

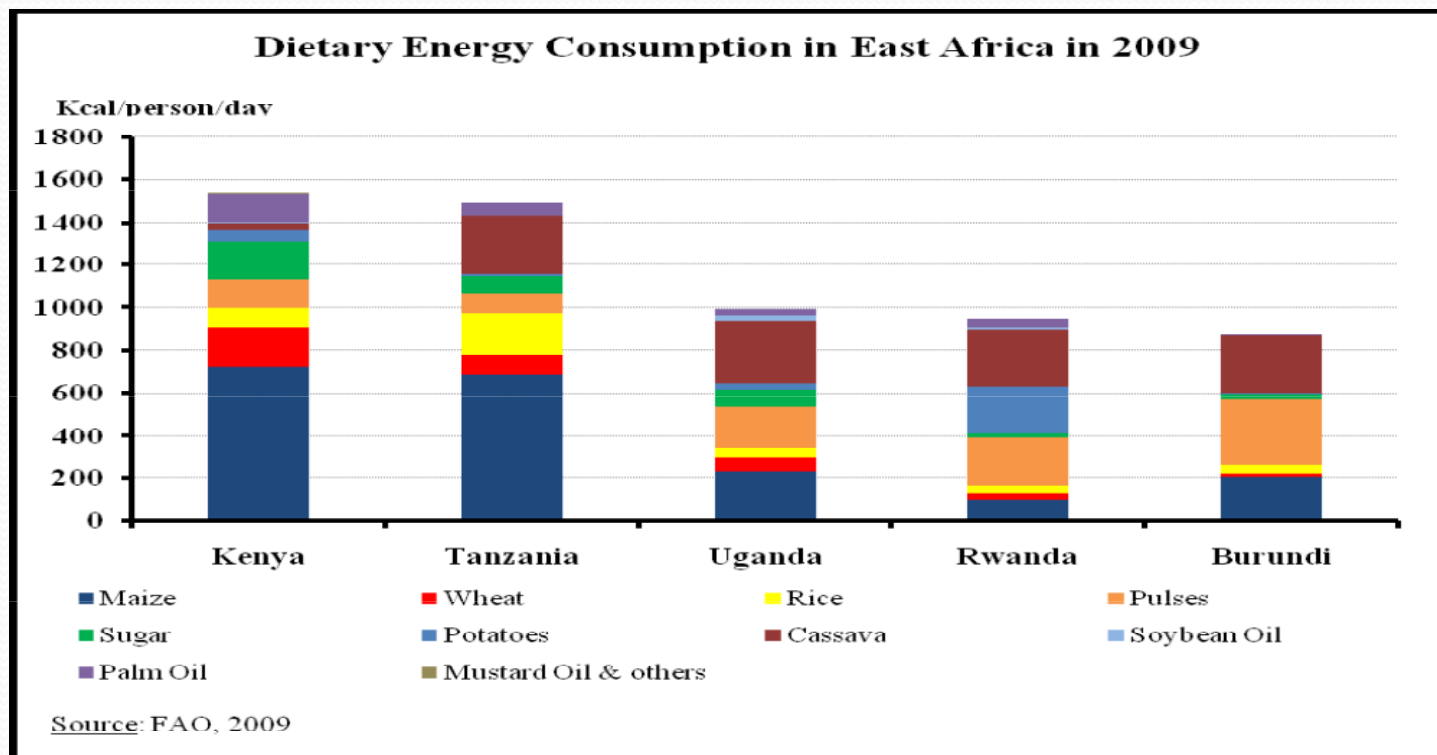
Grain	2008	2009	2010	2011
Maize	243,600	1,512,000	608,000	370,000
Wheat	538,500	600,000	720,000	1.1 m
Rice	270,000	350,000	300,000	300,000
Sorghum	9,000	58,822	5,000	5,000
<b>Total</b>	<b>1,061,100</b>	<b>2,520,822</b>	<b>1,633,000</b>	<b>1,775,000</b>

## EXPORT ( MT)

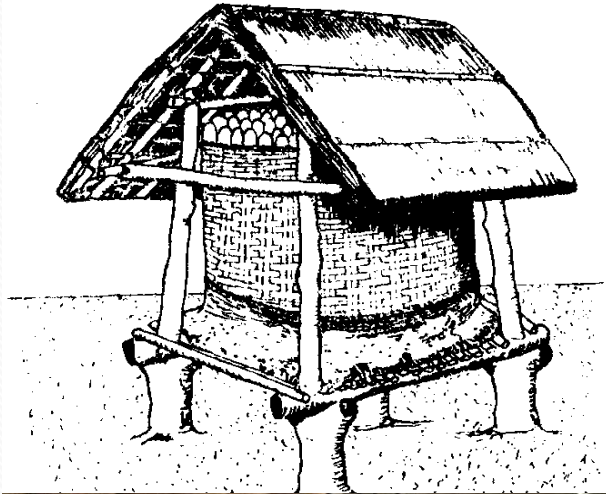
2008	2009	2010	2011
20,940	20,860	22,560	5,000
2,078	9,000	5,000	0
1,214	0	0	0
0	27,000	25,000	25,000
<b>24,232</b>	<b>56,860</b>	<b>52,560</b>	<b>30,000</b>

# Grain in Kenyan diet & Energy Consumption in E. Africa

Grain	Qty consumed. Kg/person/Yr	Daily caloric intake Kcal/person/day	Share of caloric intake %	Total consumption per Yr. (MT)
Maize	88	768	65	3.2 million
Wheat	26	196	17	89,000



# Grain Storage and transportation



- Why storage is crucial in Kenya/ E. Africa
- Appropriate conditions for Grain storage
- Main Grain Storage facilities in Kenya and their capacities (NCPB & GBHL)
- Grain storage structures used in Kenya
- Mode of transport mostly used in Kenya
- Storage and transportation problems encountered.
- Activities involved in storage and transportation facilities.



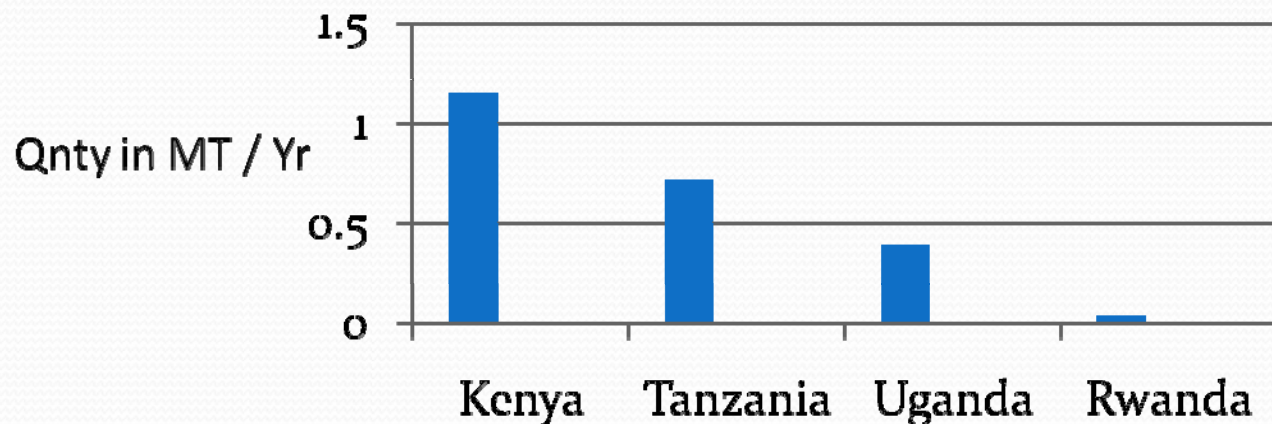
The larger grain borer and the damage  
(*Prostephanus truncatus*)



# Processing and E.A. milling capacities

- Grain should have MC of less than 15% before processing, but rice can be upto 22%.

Raw grain	processing	products	By-products mostly used as animal feed, organic manure, fuel etc
Maize (corn) & Sorghum	Shelling, threshing and milling	Whole grain for food Flour for human food(ugali) Breakfast cereals Beer brewing.	Grits Bran Stalks
Wheat	Dry milling	Wheat flour for human food eg. Bread baking	Bran
Rice	Threshing Abrasive processes	White rice grain for human food	Bran





# Grain product identity and inspection procedures



- Import and Export product identity/ Traceability.
- Inspection procedures, tools & equipment;
  - ✓ Inspection request
  - ✓ Document verification
  - ✓ Payment for inspection fee (export)
  - ✓ Actual inspection
  - ✓ Issuance of Phyto. Cert. (Op)
  - ✓ Entry / advice / Rejection

# Inspection Tools and Equipment

Produce	Tools / equipment	Remarks
Maize/ Corn	-Hand lens	-Always wear safety equipment / protective gears. -Inspection manual and portable moisture meter to be available.
Wheat	-Nobbe Trier /Sleeve / stick Trier	
Rice	-Sample bag	
Sorghum	-Sieve ( 4 cm)	



# Grain sampling and Testing



- Bulk Grain sampling
- Bagged / containerized Grain sampling
- Grain Testing;
  - Moisture content compliance
  - Aflatoxin
  - GMO presence



# THANK YOU



*For more information*

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