

# EGERTON UNIVERSITY



## TEGEMEO INSTITUTE OF AGRICULTURAL POLICY AND DEVELOPMENT

Tetezi Towers, 4th Floor  
George Padmore Rd,  
Off Marcus Garvey Rd  
P O Box 20498 Code 00200  
NAIROBI, KENYA  
Tel: 254 (020) 2347297/3504316  
Cell: +254 720 895454/706 895454/  
734 658 222

## Press Release:

### Title

**Cost of Maize & Rice Production in Small & Large scale Systems, 2015**

### Authors

Githuku James, Senior Research Associate, Tegemeo Institute

### Introduction

Maize is the key staple food for the Kenyan population providing about 65% of staple calorie intake. Majority of the population both rural and urban populations and across income groups consider maize and maize meal as important items in their household food basket. Kenya produces enough maize to feed the population based on estimated per capita consumption but when other uses like seed, feed and manufacturing are considered the supply falls slightly short of demand. This shortfall is usually supplied by imports from both the East African Community and COMESA. In times of severe deficit the country waives import duty to allow maize from the ROW. Several sources indicate that rice is becoming an important staple. This is attributed to changing lifestyles and growth of the middle income population. The national rice development strategy had projected that by 2016/17 the demand for rice will be about 350,000 MT. Available sources including government records show that demand has overshoot that projection by almost 50 percent to 550,000 MT.

The cost of production of maize and rice production has direct implications on national supply, access for consumption and household incomes. Additionally being members of both EAC and COMESA free trade area (FTA) requires that our farmers produce efficiently to be competitive regionally. It is in this context that Tegemeo Institute carries out annual cost of production assessments to continuously monitor trends and driving factors so as to inform policy on necessary interventions to reduce the cost of production.

### Key messages

Key messages from the 2015 cropping year assessment are listed below for maize small and large scale and rice small scale.

#### **Maize small scale**

- ❖ Cost of production varies across regions
- ❖ Major cost components: harvesting, land preparation and fertilizer costs contributed more than 50% of production cost
- ❖ Labor cost as a proportion of total cost was high averaging 30 percent
- ❖ Small scale farmers mainly used commercial fertilizer and received a positive margin of about 12 percent
- ❖ Benefits from fertilizer subsidy were minimal (KES 205/bag)
- ❖ Maize production in small scale systems was not viable where land was hired (maize farming as a business??)
- ❖ Lower maize yield in some areas (Transmara, Kimilili and Likuyani) due to weather related causes (drought, rains at harvest)

#### **Maize large scale**

- ❖ Lower cost/bag compared to small scale farmers (economies of scale)

- ❖ Large scale farmers received higher yields and price relative to small scale farmers.
- ❖ They sold to millers and NCPB
- ❖ Major cost components: fertilizer, land preparation and weeding
- ❖ Used more planting fertilizer
- ❖ Post-harvest costs were substantial due to drying labor
- ❖ Maize production in largescale systems gave positive margins even where commercial fertilizer was used and land were hired
- ❖ Larger cost saving from fertilizer subsidy compared to small scale farmers (KES 165/bag)

#### **Rice small scale**

- ❖ Most farmers produced rice on an acre of land
- ❖ Rice production is a profitable enterprise even where land is hired
- ❖ High costs were caused by management practices. This can be improved through extension and training
- ❖ Small scale farmers consume a small proportion of harvested rice
- ❖ Although rice is increasingly being consumed nationally
- ❖ Labor related costs are the major component in the cost of rice production, especially in bird scaring
- ❖ Rice was sold as paddy even where there are facilities for value addition

#### **Policy recommendations**

Based on these findings we recommend the following policy considerations

- ❖ Rethink about design of fertilizer subsidy program
- ❖ Benefits are very small for small scale farmers compared to costs of waiting and queuing
- ❖ Often fertilizer arrives late & late planting may compromise yields
- ❖ What are the benefits compared to fiscal budget outlay?
- ❖ Pay attention to complementary inputs to improve fertilizer use efficiency e.g. Soil testing and farm management practices
- ❖ Harmonization of National and county fertilizer subsidy programs
- ❖ County governments to endeavour to provide fertilizer based on soil testing programs that they are supporting
- ❖ Major cost shares are land preparation, weeding, post harvesting, Labour related costs
- ❖ Small scale farmers should be facilitated to access appropriate technologies
- ❖ County government procured machinery is not being utilized
- ❖ Give incentives to private sector to invest in the sector and encourage PPP in use of mechanization in agriculture
- ❖ Research institutions including universities should be encouraged through policy to innovate technology that is appropriate for the small holder farmers
- ❖ Extension is important in improving yields in terms of training on proper agronomic practices but there is a disconnect between county legislature and agricultural experts on the need to allocate funds to agriculture
- ❖ Opportunity exists to promote rice production given increasing demand
- ❖ Hence need to bring down costs of production □ Bird scaring: collaborate with MoALF on spraying bird nests
- ❖ Use nets to prevent bird damage
- ❖ Extension/training on management practices---more funding?
- ❖ Need to encourage value addition among growers instead of selling rice as paddy.

*For further assistance, more information or if you would like to conduct interviews with any of the authors, presenters or Tegemeo Institute staff, please contact: Judy Kimani, 0720 96 33 48, [jkimani@tegemeo.org](mailto:jkimani@tegemeo.org). [www.tegemeo.org](http://www.tegemeo.org)*