

# Adoption Data from Markets: An Introduction

**Presentation**

**By**

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# Background

In many parts of Sub-Saharan Africa,

- ❖ Over 75% of the people are resource poor farmers who directly depend on agriculture for their livelihood
- ❖ Agriculture is also a major source of income and employment in these areas, accounting for 34% of the GDP (Jack 2011)
- ❖ Poverty alleviation is therefore directly linked to diffusion of the improved technologies.
- ❖ Yet, adoption of improved technologies has remained low in SSA compared to SE Asia.
- ❖ By 2002, the adoption of modern maize varieties in SSA was about 17% compared to 90% in SE Asia; and 57% in Latin America and the Caribbean (Gollin et al; 2005)

# Introduction- What (1)

- ❖ IFPRI in partnership with ASARECA are implementing a project activity which involves Geospatial mapping of selected agricultural technologies
- ❖ This activity involves use of innovative methods to track adoption and diffusion of agricultural technologies and to, explore scalable options for monitoring farmer's use of agricultural technologies
- ❖ Utilizes innovative methodologies that involve utilization of spatially-explicit agricultural modelling, GIS/remote sensing datasets, and cost-effective ICT-based survey techniques

# Introduction- What (1)

- ❖ **ASARECA in partnership with IFPRI are implementing a project activity (Geospatial mapping) to track adoption and diffusion of selected agricultural technologies**
- ❖ **This activity involves use of innovative methods to track adoption and diffusion of agricultural technologies and to, explore scalable options for monitoring farmer's use of agricultural technologies**
- ❖ **Utilizes innovative methodologies that involve utilization of spatially-explicit agricultural modelling, GIS/remote sensing datasets, and cost-effective ICT-based survey techniques**

# Introduction- What (2)

- ❖ This innovative method is being used to measure adoption and diffusion of 2 proven technologies generated from ASARECA supported projects
- ❖ These technologies include: Quality Protein Maize (QPM) in Tanzania; and DRC; and Climbing Beans in Rwanda. The key output from this activity is geospatial assessment of the technology adoption and diffusion.
- ❖ Geospatial mapping of ASARECA agricultural technologies is linked to activities on Geospatial Diffusion of Agricultural Technologies in IFPRI under EPTD and under the SDA Theme funded through the CGIAR Research Program on Policies, Institutions, and Markets (PIM).

# Introduction- What (3)

## Climbing Beans



## Quality Protein Maize (QPM)





# Other Technologies Generated from ASARECA Projects (1)



Striga resistant Sorghum



Bush Beans



Afforestation with multi-purpose trees



Trenches to control runoff

# Introduction- Why (1)

- **There is little evidence that documents the extent of technology adoption and diffusion over time and space with other approaches. This approach aims at addressing this gap.**
- **Also many adoptions studies are limited in scope and inherently resource-demanding to scale.**
- **This innovative method also seeks to explore cost effective scalable options for monitoring farmers' use of agricultural technologies.**

# Introduction- Why (2)

## Why Informal Markets?

- For a majority of smallholder farmers in the ECA sub region, the most accessible markets are informal markets (roadside, open areas, trading centres located in rural areas, village assembly points etc).
- These informal markets play a critical role in adoption of agricultural technologies. Through informal markets, poor rural farmers can access agro-inputs including credit.
- Limited availability and access to inputs (Taffes *et al*, 2013; ATA, 2014) or lack of a functional seed distribution system is partly responsible for low adoption of agricultural technologies.

# Introduction- Why (3)

## Why Informal Markets?

- **Agro-dealers in informal markets play an important role in the input distribution chain, ensuring that farmers are able to access vital inputs they need during the production process. Agro-dealers also often provide information required for the production of the technology.**
- **Some agro-dealers in informal markets offer low interest loans for inputs (seed, fertilizers, pesticides); thereby promoting adoption of certain agricultural technologies.**

# Introduction- How (1)

- We use innovative approaches to measure spatial and temporal adoption and diffusion of the agricultural technologies in selected input/output markets in Eastern and Central Africa
- We employ Geospatial mapping tools together with tech tracker survey application
- GIS tools and survey application/qnn uploaded in low cost ICT tools (smart phone)



# Introduction- How (2)

- Diffusion surveys involved household and key informant interviews
- Diffusion surveys conducted in both intervention and non intervention communities within districts where technologies were promoted
- Sampling strategy: We employ purposive random sampling frame to select households
- Between 80-100 KIs and 300-600 hhds interviewed in each country



# Introduction- How (3)

## Informal market survey data

- Data mainly from Key Informant interviews with Agro dealers/stockists.
- Key informants were drawn from respondents highly knowledgeable in the technology promoted



# Training was critical for successful implementation







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