Pathways to Productivity
Center for Strategic and International Studies (CSIS)
Global Food Security Project & Africa Program
Pathways to Productivity:
Main Observations and Recommendations

**Investment in Agricultural Delivery Systems is Essential**
- Basic existing technologies not adopted by a majority of smallholder farmers
- Extension systems are weak and could hinder any potential impact of GM crops
- Seed industries in each of the countries do not meet quantity and quality demands

**GMO Debate**
- Unique debate in the local context of each target country, which has been influenced by governments, philanthropic groups, and NGO efforts
- GM crops are important to solve specific problems
- Bureaucracy matters! Political will and the domestic political structure hugely impact GM regulatory structures research, development, adoption, and commercialization

**Regulatory Capacity**
- Regulatory structures take a long time to develop (~10+ years), so countries need to plan a long lead time if they want to have the capability to use GMOs
Pathways to Productivity: 
Main Observations and Recommendations

Scientific Capacity
• African scientists are deeply engaged in the development of GM crops in their respective countries and have devoted significant resources to developing crops to tackle food security challenges.
• Scientists should communicate with politicians and the public to help address public skepticism of GMOs.

Smallholder Farmers
• GMOs are a largely abstract concept to smallholders as they are not publicly available.
• Lacking strong demand signal for GMOs and other priorities take precedence.
• Farmers need good products and info in order to use GM crops.

Regional and Trade Dynamics
• National policies will likely shape regional regulation of GMOs.
• Commercialization of GMOs by one country will likely accelerate adoption in the region.
• Real fear that commercialization will have negative trade impacts, but there is little evidence of this. Most trade of potential GM crops is intra-regional, not international.
Pathways to Productivity: Forecast for Adoption

The dynamics in each country are distinct, but there are a number of common themes:

- Consumer and farmer demand for GMOs will ultimately be determined by having access to locally relevant crops.
- Adoption will require a long, hard, incremental effort with sustained political will.
- Commercialization of GMOs by one country will likely spread through the region.
Pathways to Productivity: Forecast for Adoption

Kenya
- Leads the region in developing robust regulatory system and building scientific capacity
- Lacks consistent champions within government

Tanzania
- Has a strong, but small, scientific community
- Uphill battle in adopting GMOs, with greater public antipathy toward GMOs and the private sector

Uganda
- Has a steady incremental approach in developing and adopting GMOs
- Uniformly positive message about GMOs from the government, which has lower political barriers than its neighbors
- Opposition is increasing as it nears the passage of biosafety legislation
Pathways to Productivity: Additional Resources

“Pathways to Productivity” Blog: http://food.csis.org

Related publications:

• Trade and Tribulations: An Evaluation of Trade Barriers to the Adoption of Genetically Modified Crops in the East African Community by John Komen and David Wafula (CSIS, May 2013)

• Biosafety of GM Crops in Kenya, Uganda, and Tanzania: An Evolving Landscape of Regulatory Progress and Retreat by Judy Chambers (forthcoming, CSIS, Nov/Dec 2013)

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