

Rewiring Science, Business and Public Goods for Global Food Security

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Margaret A. Gilliam Lecture Series in Global Food Security

McGill University, Montreal

28 March 2012

The goal: food security for all

- Long-term food security unthinkable without sustainability
 - ‘indefinitely meet the requirements for food, feed, and fibre at socially acceptable economic and environmental cost’ (Crosson, 1992)
- Sustainability unthinkable without intensification and productivity growth
- Intensification and productivity growth unthinkable without science and ‘delivery’: inputs, services, access to markets, ‘shared value’
- Science and ‘delivery’ unthinkable without the right mix of public / private action

Science to close yield gaps

- Photosynthetic efficiency
- Zero / minimum tillage
- Precision input application and seeding
- Cell phone / internet decision support tools
- Genotyping of seed collections
- Phenotyping of seed collections
- Creation of improved crop varieties

Source: Lumpkin, CIMMYT

- Three decades of underinvestment in the public sector
- Yield growth on par with population growth
- NARS enduring conflicting demands on budget priorities
- CGIAR semi-re-energized
- Public-private cooperation offers prospect of relief → with ‘catalytic nudge’
- Private sector is product- and delivery-oriented but follows business case

Seed market development in PPP mode

- Delivery of fruits of R&D: our toughest last mile challenge
- Market for potato seed, Kenya:
 - Quality seed, large quantities, > 30K small farmers (2010-2011)
 - Partnership approach: CIP, USAID, KARI, KEPHIS, tissue culture lab, seed producers, ware potato growers
 - Replicated in Tanzania on a purely private sector basis
- Inadequate access to seed due to lack of supply, not demand
- But: as solve seed and input supply, risk grows; hence need for risk management and sharing, access to markets

- Systemic issues in extension:
 - Case for extension
 - Heterogeneity and growing information requirements
 - Overcoming limited coverage (China: 1 extn worker/0.81 village; India 1 extn worker/7 villages)
 - Link with R&D
 - Increasing pluralism and partnership in extension
 - (Residual) role of government going forward
 - Demand driven extension and enhanced financial sustainability
 - Use of IT, mobile apps

Index insurance

Kilimo Salama: Partnership SFSA / UAP Insurance / Safaricom / KMD

Products

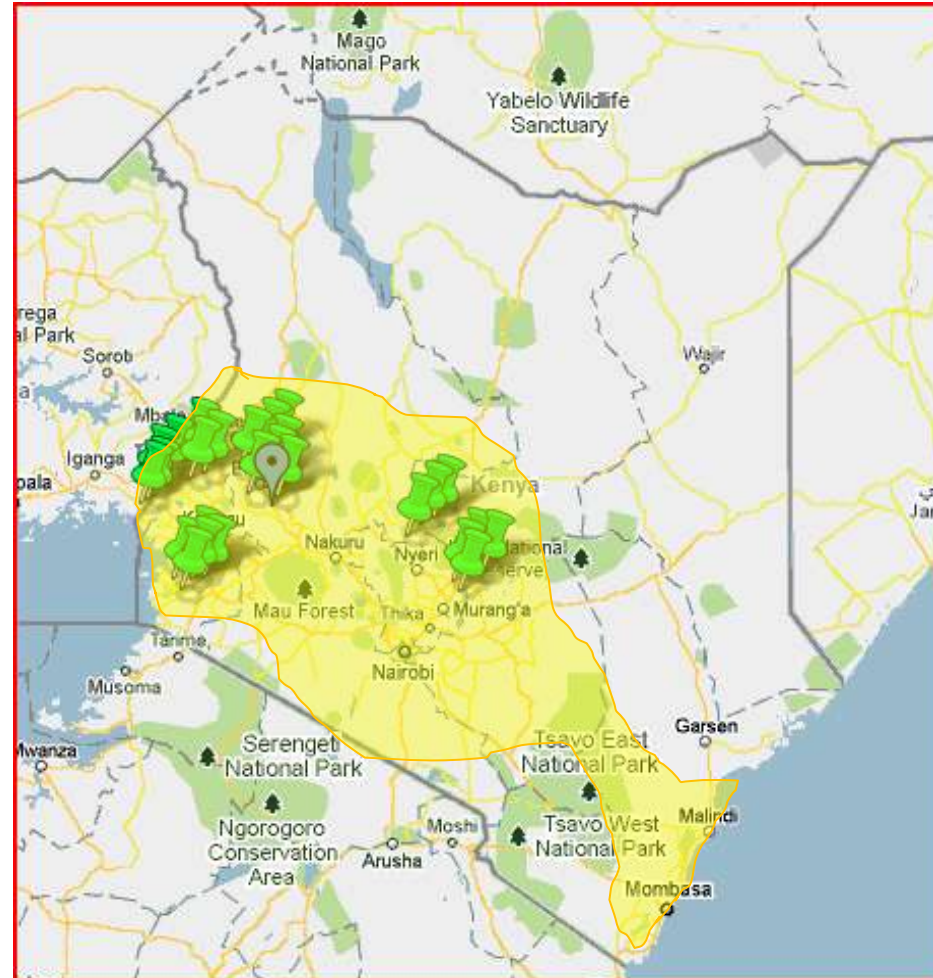
- **Kilimo Salama:**
Covers farm **inputs** (seeds, fertilizer, chemicals)
- **Kilimo Salama PLUS**
Covers expected value of harvest

Crops covered

- Maize, Wheat, Sorghum, Beans, Potatoes, Coffee, Horticulture

Farmers insured

- 2009 200
- 2010 11'000
- 2011 23'000
- 2012 50'000+



Mobile apps



Farmforce	A mobile platform to support the integration of smallholder farmers into formal agro-value chains
Strategic value proposition	Reduce transaction cost for contract farming, compliance with food standards, traceability from the field and improve agronomy at scale → Link more farmers to markets
Current state	Under development and field testing in Kenya and India
Outlook	Platform goes live Q3 2012

Shared value in agribusiness

- Beyond securing a harvest, the farmer's challenge is to sell – for which farming needs to become more competitive
- Small farmers cannot achieve this by themselves; need support (public, private, voluntary)
- Rich landscape of companies co-creating solutions with farmers and each other
- Enabling transition from 'pre-commercial' to commercial status with targeted crop and agronomic solutions, measures to reduce risk, and assured markets
- Needs to be multiplied many times over

Role of PPPs in agriculture

- Fulfill farmers' needs through solutions that neither the public, private nor voluntary sectors can deliver on their own, at least not at scale
- Innovation rationale
 - PPPs unite actors with different perspectives, incentives and skills to solve problems in the pursuit of shared goals
- Efficiency rationale
 - Relevant for the public sector in an era of austerity and on-going need to demonstrate to tax payers the impact of public spending

- ‘Agriculture re-discovered’ goes hand in hand with ‘partnerships and PPPs’
- There is not a public and a private world of agriculture and finite natural resources out there; it is all *one* world, and we need to work together to create the food security outcomes we all seek

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