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## Using a Social Network Approach to Improve Participatory Research for Conservation Agriculture:

### Initial Findings from the Mt. Elgon Region

Presented by: Jennifer N. Lamb

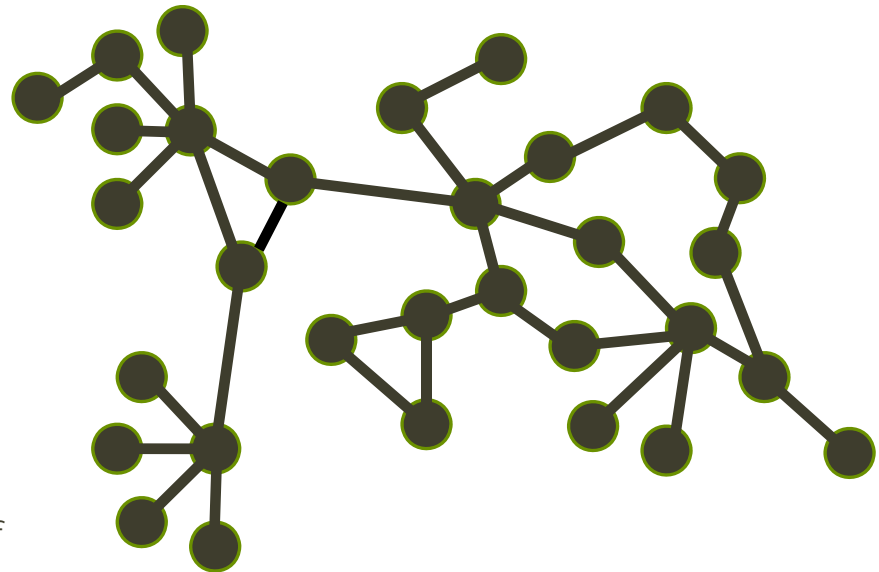


# Changes in Technology Transfer and International Agricultural Research

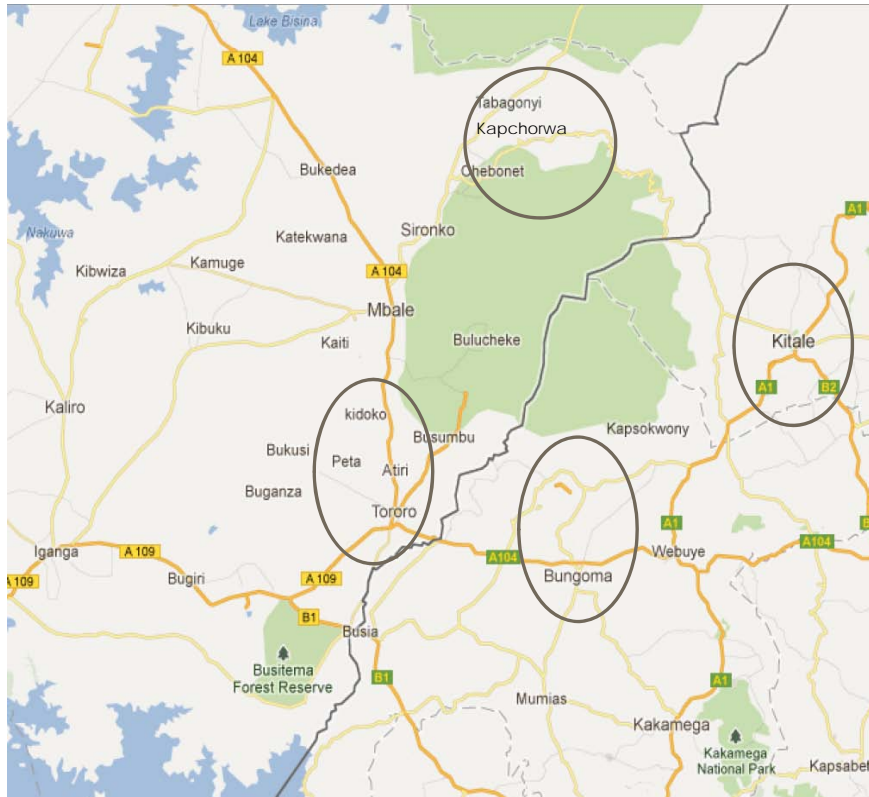
- Participation as the dominant paradigm
- Innovation Systems Perspective
- Increasing complexity of agro-technologies
  - Serving multiple purposes
    - Food security, climate change mitigation
- Progress in Participation
  - Farmer field school engages
  - Yet, focus is still **linear**.
- **Limits capacity for co-innovation**

# Using social networks to study co-innovation processes

- Networks in the development context:
  - Adoption studies
  - Natural resource management
- Use networks to explore relationships and idea development
  - Professional structures (Wolf, 2006)
  - Measure
    - Network structure
    - Attitudes and beliefs of network members



# Research Context



Map data © Google 2012

- Partnering with a participatory Conservation Agriculture Project for Smallholders (CAPS) (University of Wyoming, 2010)
- Four locations
  - Kapchorwa/Kween (Uganda)
  - Tororo (Uganda)
  - Trans-Nzoia (Kenya)
  - Bungoma (Kenya)
- Now half way through project
  - Draw on baseline data
  - Feedback workshops with participants



# CAPS as a multi-purpose technology

- Three Principles based in **adaptive** knowledge:
  1. Minimize soil disturbance
  2. Maintain a permanent soil cover
  3. Rotate and mix crops
- Goals:
  - Improve food security through stabilizing yields
  - Reduce erosion
  - Improve fertility
  - Sequester carbon/reduce greenhouse gas emissions

# Key Contributions



Developing partnerships for network field research in 2011

- Project management:
  - Building trust
  - Improving participatory research
- CAPS Technology Development:
  1. Revealing differences between perceived and reported network contacts
  2. Ill-informed perspectives about the beliefs of others
  3. Problems regarding actual agricultural technologies



# Project Management

- Building trust with social science researchers
- Increasing legitimacy of participatory research
  - Farmers and service providers recognized personal role in generating the network
  - Maintaining interest beyond direct participants
    - Engaging local advisory committees



The network workshops brought together many members of the local advisory committees for the first time since the start of the project.

# Revealing differences in perceived and reported network contacts

- Extension not in the top 25% in Uganda for resources
  - Conflicts with resource distribution mandate
- Agrovets as the primary contact
  - Various reactions
  - Priority setting
    - Increasing contacts for Tororo farmers
    - Farmer group leaders desire to expand their reach

**Example:** Most frequently reported resource contacts in Tororo, Uganda

Agent Type:	Number of Reports (Out of 93):	Percentage of Farmers Reporting Contact:
Veterinary Service provider	40	43%
Neighbor/friend	38	41%
Vendor in a agro-vet shop	37	40%
Vendor in weekly market	29	31%
NGO/ Development Agent	18	19%
Family Member	17	18%
Vendor in a shop in urban center	13	14%
Leader of farmer organizations	11	12%
Leader of women's organization	11	12%
Village/Subcounty chief	9	10%
Agricultural/Micro Finance Representative	4	4%
Teacher in village	1	1%
Government Parastatals	1	1%
Agricultural researcher	1	1%
Leader of youth organisation	1	1%
Minister/Priest/Imam in village	0	0%
Government Extension agent	0	0%
Tractor owner/ animal traction provider	0	0%
Local Political leaders	0	0%

Resources include: seed, fertilizer, agrochemicals, plowing services, loans, land, cash, etc.



# Misunderstanding about the perceptions of others

- Farmers often more receptive to CA than believed by the service sector
  - Crop rotation in Tororo
  - Belief that tillage causes land degradation in Kapchorwa
- Relating farmer knowledge and practice
  - Bungoma: practice is knowledge
  - Kitale: evolutionary relationship



In Kapchorwa, Uganda farmers recognize the damage from plowing, but it continues to be the dominant practice.

# Identifying Challenges to CA

- Herbicide use in Tororo
  - Participants concluded need to expand network to involve regulatory authority
- CA as a hand technology



A host farmer in Kitale, Kenya shows the research team a minimum disturbance hoe he designed in his home shop.





## Managing Expectations

- Linear expectation not just from the side of development agents, but farmers too!
  - Expect a finished product
- Changing how we talk about networks for CA
  - A learning process, but the project is catching on.
  - Spontaneous adoption
- Evidence that a network approach can make valuable contributions
  - Project management
  - Technology development





Thank you!  
Comments or Questions?