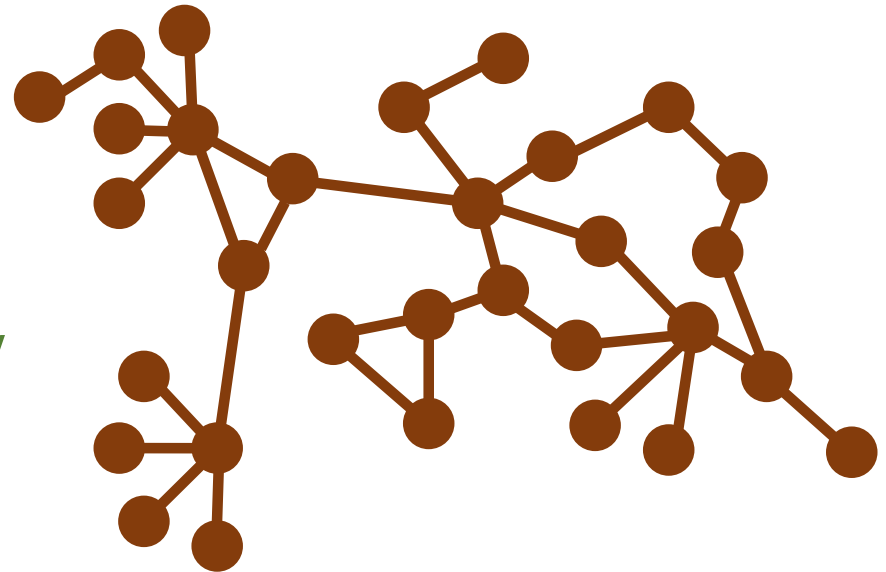


Agricultural Mindsets

across Social Networks in Four African Countries

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Three Agricultural Production Mindsets



- **Conventional Agriculture**
- **Risk-Averse Agriculture**
- **Conservation Agriculture**

Fostering Communicative Competence

- Scientists in the global North and South need to re-think:
 - Our ways of relating to their multiple clienteles.
 - Innovation systems for research and development.
 - Value chains on which resources can be built.
 - Who and how to train innovation brokers.
- Social network analysis contributes to the management of these relationships.
 - Research on farmer networks and perspectives.
 - A participatory tool for building innovation networks.

Formulating the right research questions

- **IF** the knowledge network supporting conservation agricultural systems is critical to technological change in agriculture,
- **THEN** we need to review all the component elements of that system in a new light.

Not as hypotheses in search of the universal variable, but as meaningful components of local knowledge systems

– Knowler and Bradshaw (2007)

Three surveys in four countries



Three collaborative research projects conducted baseline surveys of **small holder farmers** in Kenya, Uganda, Lesotho, and Mali.

A secondary sample to identify members of farmer agricultural production networks was based on a snowball sampling procedure:

farmers identified who they contacted for agricultural inputs, technologies, and information

These (largely) **non-farm agents** were also surveyed and their agricultural production network connections identified



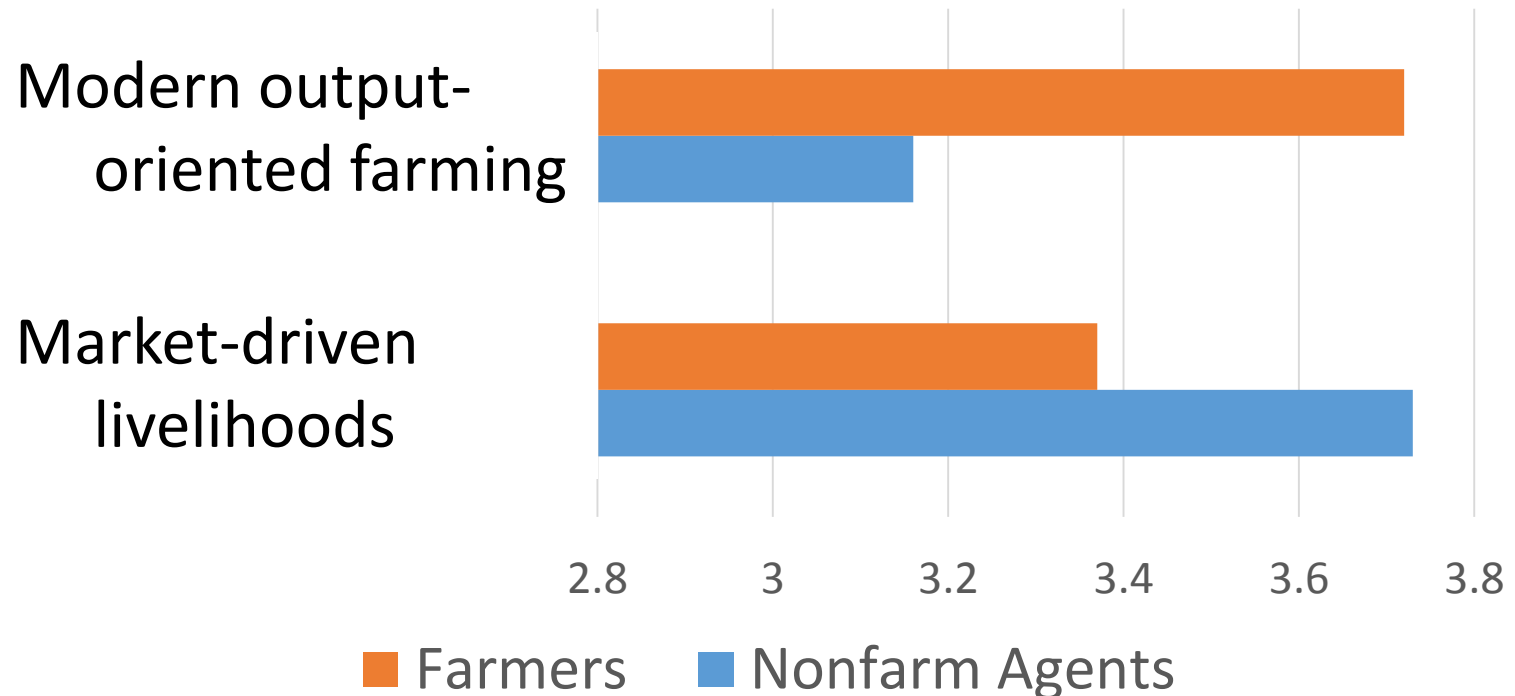
Mali – Seno Plain
Farmers = 238
NonFarm Agents = 36

Kenya/Uganda-Mt Elgon
Farmers = 161 (Kenya)
191 (Uganda)
NonFarm Agents = 40/34

Lesotho – Botha Bothe
Farmers = 415
NonFarm Agents = 38

Agricultural Production Mindset Factors

(all data sets combined)



N = 1157

** Difference in score significant at the .001 level.

* Difference in score significant at the .01 level.

Comparing mindset scores for Malian (Dogon) farmers and service sector/community agents

	Koro Farmers	Bankass Farmers	Service sector/ community agents
Output-oriented farming**	3.9123 ^a	4.0945 ^a	2.6319 ^b
Market-driven livelihoods**	1.5128 ^a	1.4274 ^a	1.8241 ^b
N	114	119	36

	Farmers w/o contact	Farmers with contact	Service sector/ Community agents
Output-oriented farming**	3.99 ^a	4.17 ^a	2.6319 ^b
Market-driven livelihoods**	1.47 ^a	1.51 ^{ab}	1.8241 ^b
N	208/209	25	36

Notes: Different letters within the same row are statistically different.
 Rows marked by ** signify that ANOVA scores are significantly different at the .01 level.
 Higher composite scores signify greater levels of agreement with the technological frame concept indicated by the factor.

Comparing Influential non-farm actors across communities

Rank	Koporo Pen	Score	Oro	Score	Diallasagou	Score	Lagassagou	Score
1	Village Chief	16.8	Village Chief	8.5	Extension Agent	6.6	Village Chief	5.5
2	Farmer's Organization Leader	14.2	Woman's Organization Leader	.5	Village Chief	4.8	Woman's Organization Leader	4.0
Rank	Tororo	Score	Kapchorwa	Score	Bungoma	Score	Trans Nzoia	Score
1	Farm Organization Leader	20.4	Local Agrovvet	28.3	Farm Organization Leader	26.9	Ministry of Agriculture (Extension)	20.9
2	Government Parastatal	19.9	Women's Group Leader	16.9	Chief	24.4	Microfinance Institutions	20.1
Rank	Ha Sefako Agents			Score	Ha Tabolane Agents		Score	
1	Tractor owner			85.1	Teacher		88.5	
2	Counselor			26.0	Counselor		27.8	

Tillage Causes Erosion

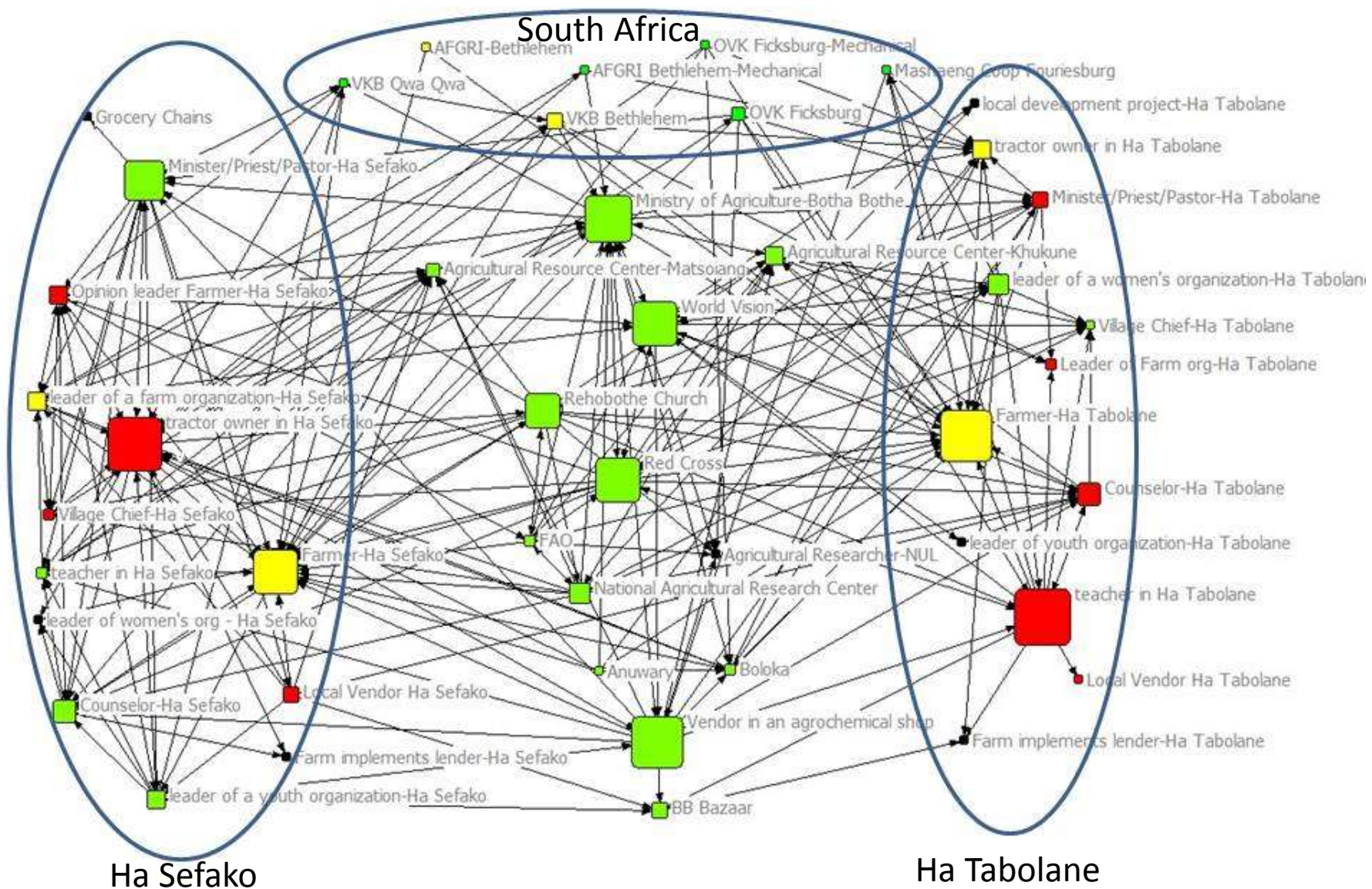
 Agree

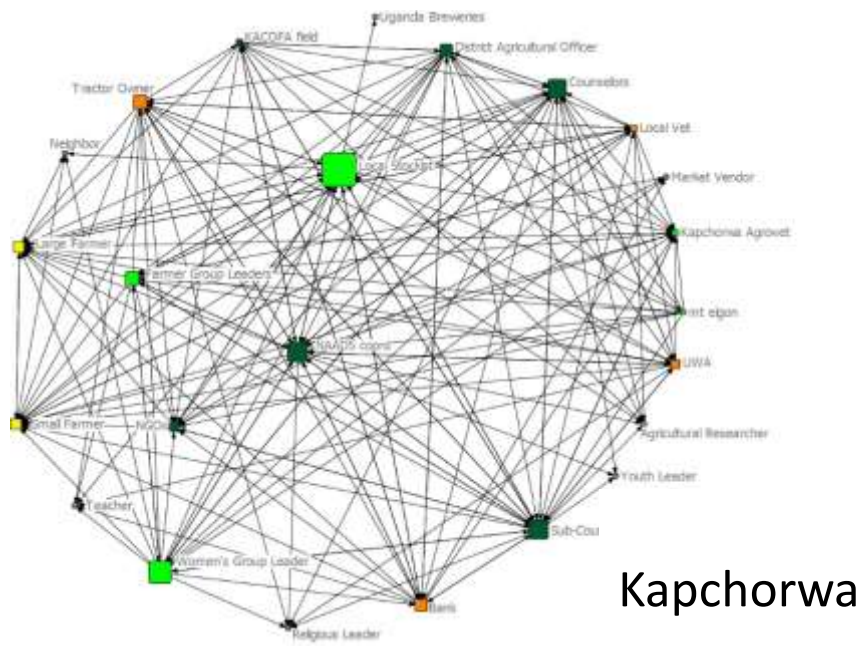
 Neutral/Undecided

 Disagree

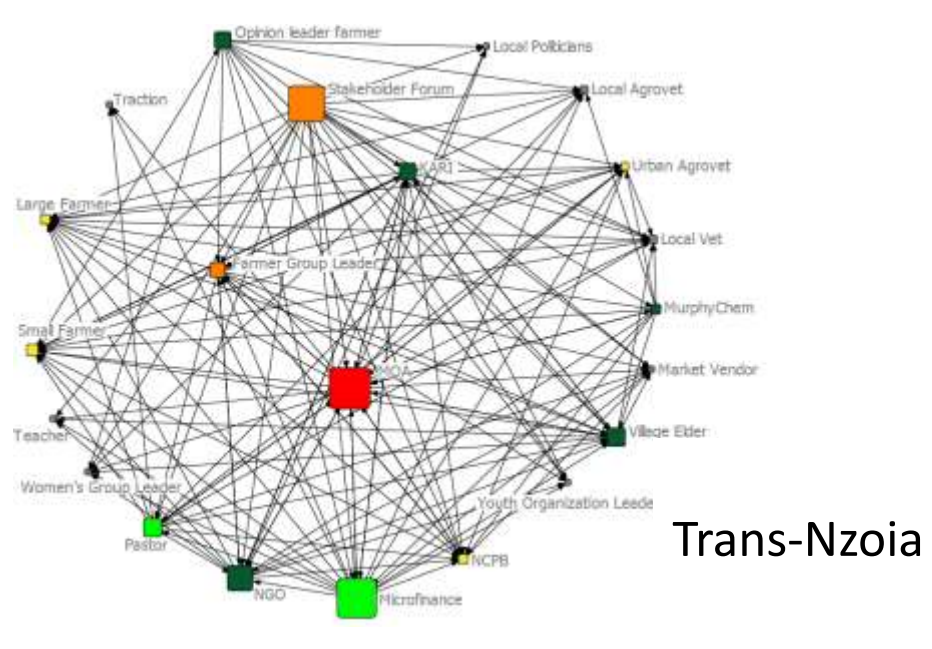
 Not interviewed

Botha Bothe Agricultural Production Networks

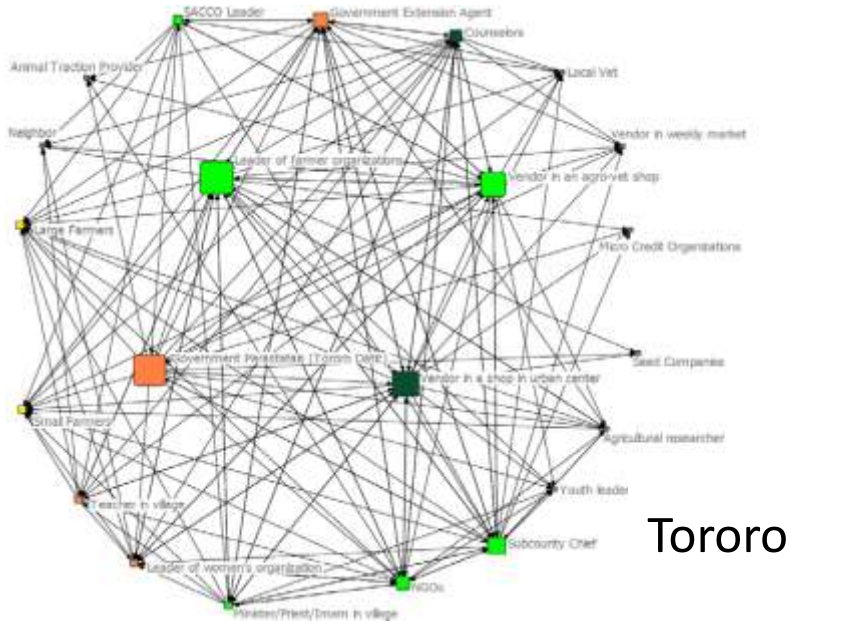




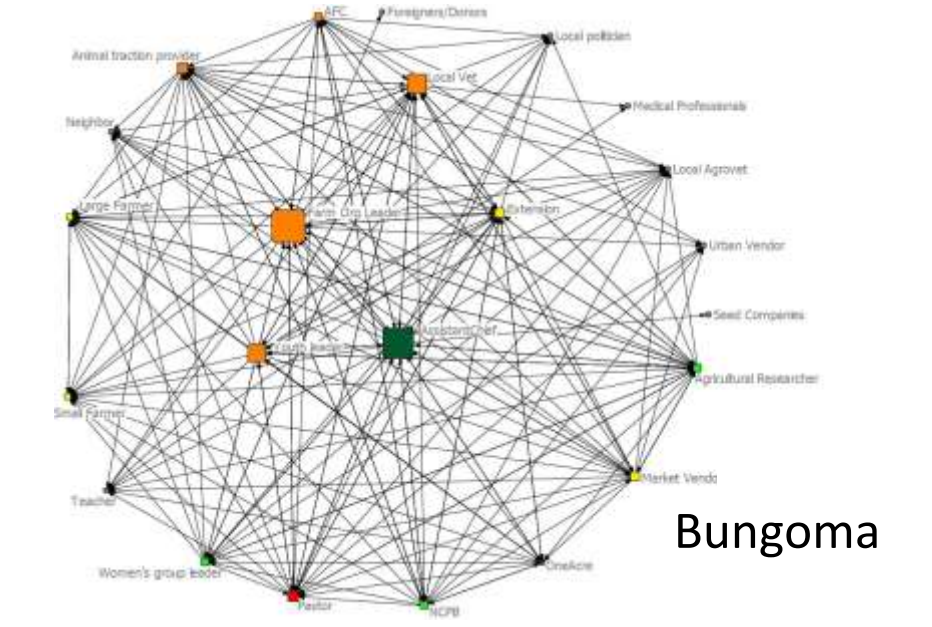
Kapchorwa



Trans-Nzoia



Tororo



Bungoma

Uganda

Kenya

Summary

Non-farm agents (extension, NGO, and local leaders) are not on the same page as farmers. Mutual understanding that builds trust is often lacking.

However, the potential exists for building relationships. The connections are there, waiting to be developed.

Context matters:

- Agro-ecological farming conditions
- Socio-cultural factors (including ethnicity and gender)
- History of agricultural and economic development

Conclusion

“Long-term investment is required in collaborations that bring together researchers with farmers, farmer organizations, extension agents, non-governmental organizations, community groups, public administrators, and private sector providers of CA-related products and services.”

Nebraska Declaration on Conservation Agriculture
15-16 October 2012, Lincoln, Nebraska

Outreach and extension personnel must become **brokers** for innovation networks at the local level.

<http://www.oired.vt.edu/sanremcrsp/professionals/research-themes/working-papers/phase4/>



Thank you!