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BACKGROUND

The poor, especially women, are more vulnerable to the effects of climate change. Climate change adaptation provides short term benefits and impact before mitigation measures can have an effect (Stern Review, 2006). To enhance adaptive capacities of vulnerable groups, factors influencing the adaptation decision, including gender, have to be identified (Babugura *et al.*, 2010). Economic analyses will help guide prioritization of adaptation options (Bashaasha *et al.*, 2010). For effectiveness, development policy and planning at every level (Stern 2006) should support these options.

OBJECTIVE

This study seeks to understand determinants of climate change adaptation among small-holder farmers in Uganda, particularly the role of gender in adaptation. Gender is hypothesized to be a key factor in the choice of adaptation strategies.

METHODOLOGY

The study site is Gweri subcounty, Soroti district in Eastern Uganda. A multi-stakeholder workshop was held at sub-county level to identify farmer knowledge on climate change including impacts and adaptations. A survey of male and female headed households followed using a structured questionnaire. The variables investigated included farmer perceptions of climate change, household characteristics, adaptation strategies, and secondary data for weather variables.

RESULTS

- Farmers identified adaptation strategies as early planting (B), improved varieties (B), fast maturing crops (W), shifting to swamps (W), irrigation (M) and diversification (M). Major constraints included limited land, limited access to land for women, labor intensive strategies e.g. eucalyptus and paddy rice farming. Women worked in groups;
- Access to credit, total land size and group membership were significant at 5, 10 and 10%; Sex of household head was not significant;
- The significant variables showed increased odds of adapting to climate change (Table not shown). This means that a farmer with access to credit, belonged to a group or had more land was more likely to adapt to climate change; and,
- Male headed households owned more land, had greater access to credit and extension services and belonged to farmer organizations (Table 2). Male headed households had more rights to land than the female.



Figure 1: A typical rural household in Eastern Uganda



Figure 2: A woman tending goats in Soroti district, Eastern Uganda

Table 1: Table showing logit results for significant explanatory variables

Adaptation to climate change	Coeff.	P>z	
Access to credit	0.8938179	0.048**	Forward logit selection
constant	0.4924765	0.026	at 5%
Access to credit	0.8508673	0.064*	Forward logit selection
Total land size	0.1105229	0.086*	at 10%
constant	0.042913	0.897	

Table 2: Comparison of male and female headed households (Frequencies)

	Female headed (%) ^a n=45	Male headed (%) n=90
Land ownership	Own-43.8%; Clan-56.2%	Own-53.8%; Joint- 35.9%; clan-10.3%
Farmer organisation	34.4%	53.8%
Extension services	37.5%	56.4%
Access to credit	28.1%	51.3%
Crops(food and cash)	Cassava-37.5%;Gnuts -31.2%	Cassava-56.4%; Gnuts-25.6%

DISCUSSION

- Adapting to climate change is costly and requires investment (often through credit). Farmers require money or assets (e.g. Land, animals) to access technologies that they need to adapt to climate change. Yet majority of the women do not own land. They acquire user rights through relationships with men (IFPRI, 2001) and this reduces the likelihood of female headed households to access credit;
- Ability to access improved varieties and other inputs eg. Serenut 2 which is drought resistant with short maturity period will foster climate change adaptation. Use of improved varieties was the most popular adaptation strategy next to early planting; and,
- Membership to farmer groups enhanced adaptation ability and emphasizes the importance of using these groups to enhance the adaptive efforts for women headed households.

RECOMMENDATION: Specific interventions are required to improve the status of women headed households to ensure improved access to services such as credit and extension as a means of empowering communities to adapt to climate change and improve food security.