Improving Climate Change Adaptation Practices: Lessons from Smallholder Commercialisation in Ghana.

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Introduction

Adaptation improvement is key to improving resilience of smallholders in developing countries and the idea and practice of smallholder commercialization embodies many of the features of improved farmer's adaptability described in various climate adaptation literature (Shiferaw et al 2009; Kenny, 2010)

The idea of smallholder commercialization, represent a market-oriented approach that simultaneously support farmer livelihood development and make serious contribution to cost-effective deployment of resources for agricultural production (Assuming-Brempong, 2010; Chamberlin,2006). .Although the concept of smallholder commercialization faces a number of criticism from various quarters (Havnevik et al, 2007; McMicheal, 2009), it may hold potential for promoting adaptation improvement and livelihood security. ..

Therefore as part of approaches aimed at contributing to practical adaptation initiatives and improving the livelihood of smallholders, this study explores the case of smallholder pineapple farmers in Akuapim South Municipality in the Eastern Region of Ghana. This is to illustrate and identify key lessons to incorporate in ongoing effort to improve smallholder climate adaptability.

Methodology

This research forms part of a broader project aimed at understanding and characterizing practical smallholder adaptation in the face of climate change and climate variability.

The study relied on a case study approach to explore interesting and problematic aspect of climate vulnerability and adaptation on smallholder commercialization in the context of smallholder pineapple farming in the Akuapim South Municipality, Ghana.

Study Area

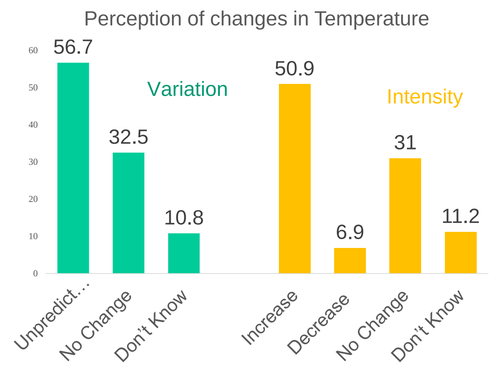
Map of Akuapim South Municipality, Ghana (*Courtesy GIS)*

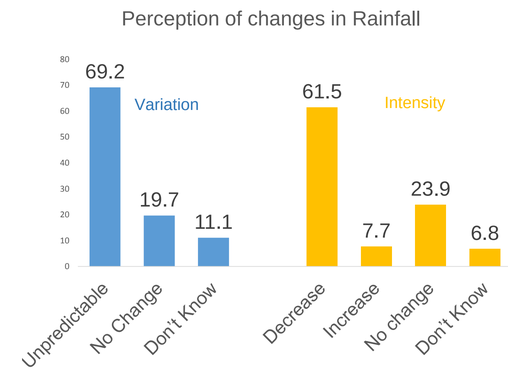
The importance of focusing on smallholder pineapple farmers in Akuapim South was to understand the good things already been done of relevance to adaptation and provide leadership to smallholder farming communities, considering their own vulnerability to the impact of climate and non-climatic factors.

Data

The data for the study comprised farm household surveys, focus group and key informant interviews, to provide useful insights and experiences on climate vulnerability and adaptation of smallholder farmers engaged in commercialization. The collected data was analyzed with SPSS computer program. Also to assess factors that influence choice of adaptation a multinomial logit was used to model adaptation behaviours of farmers.

Results



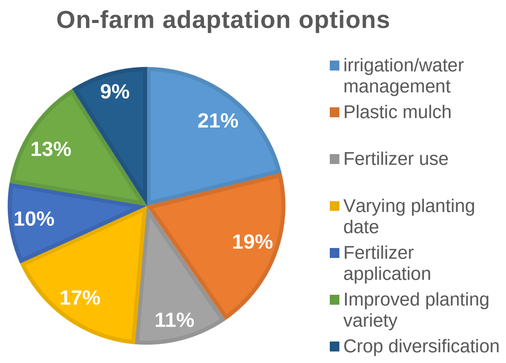


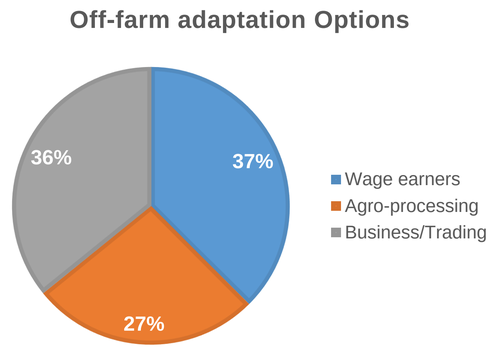
Choice of Adaptation Response

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	5.602145	7.122410	0.786552	0.4315
Member of association	0.733139	0.795539	0.921563	0.3568
Marital status	0.486758	0.271636	1.791952	0.0731*
Gender	-0.235179	0.627548	-0.374759	0.7078
Age	-0.271338	0.291589	-0.930547	0.3521
Rainfall amount	0.571170	0.574098	0.994901	0.3198
Temperature intensity	0.571940	0.278756	2.051755	0.0402**
Land acquisition	0.424822	0.285015	1.490527	0.1361
Farm size	-0.042925	0.063140	-0.679843	0.4966
Education squared	0.254235	0.140637	1.807745	0.0706*
Education	-0.469267	0.744370	-1.973838	0.0484**
Household size	0.009165	0.126100	0.072680	0.9421
Extension Services	0.454265	0.278445	1.707719	0.0761*
Farming experience	-0.008244	0.037311	-0.220961	0.8251
Age squared	0.002951	0.003064	0.963135	0.3355

R-squared = 0.208335
Log likelihood = -58.08040
S.E. of regression = 0.430219
Prob(LR statistic) = 0.003896
Total observations = 116

Note
- = 10%
** = 5%





Conclusions

Overall there is evidence of high adaptive capacity among smallholder commercial farmers to the impact of climate change. The key is to harness what these farmers are doing well and make it visible to other farmers to 9earn from these practices.

Acknowledgement

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