



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Farmers' Perceptions and Adaptation to Climate Change: A Case Study in Sekyedumase District of Ashanti Region, Ghana

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Abstract

Climate change is expected to have serious environmental, economic, and social impacts on Ghana, particularly on rural farmers whose livelihoods depend largely on rainfall. The extent of these impacts depends largely on awareness and the level of adaptation in response to climate change and variability. This study examines whether farmers in Sekyedumase district of Ashanti region of Ghana perceive climate change and analyses farmers' adaptation responses to climate change and variability. A hundred and eighty farming household were interviewed in February and October 2009. Results showed that about 92 percent of the respondents perceived increases in temperature while 87 percent perceived decrease in precipitation over the years. The major adaptation strategies identified included crop diversification, planting of short season varieties, change in crops species, shift of planting date, reduction in farm size, among others. Results of logit regression analysis indicated that the level of education, gender, age, soil fertility, education, farm size, farming experience, land tenure, access to extension services and credit, all influence farmers perception and adaptation. The main barriers included lack of information on adaptation strategies, poverty, lack of technology and lack of information about weather. It is concluded that the communities have a high awareness of climate issues, but only 44.4 percent of farmers have adjusted their farming practices to reduce the impacts of increasing temperature and 40.6 percent to decreasing precipitation, giving poverty as the main barrier to adaptation. Implications for policymaking will be to make credit facilities more flexible, to invest in education of extension officers and more education on climate change and the possible adaptation strategies.

Keywords: Adaptation, climate change, perception, precipitation, temperature