

# Farmers' perception and adaptation to climate change: a case study of Sekyedumase district in Ghana

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## Abstract

Climate change is projected 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. This study examines the perception of farmers in Sekyedumase district of Ashanti region of Ghana on climate change and analyzes farmers' adaptation responses to climate change. A hundred and eighty farming households were interviewed in February and October 2009. Results showed that about 92% of the respondents perceived increases in temperature, while 87% perceived decrease in precipitation over the years. The major adaptation strategies identified included crop diversification, planting of short season varieties, change in crops species, and a shift in planting date, among others. Results of logit regression analysis indicated that the access to extension services, credit, soil fertility, and land tenure are the four most important factors that influence farmers' perception and adaptation. The main barriers included lack of information on adaptation strategies, poverty, and lack of information about weather. Even though the communities are highly aware of climate issues, only 44.4% of farmers have adjusted their farming practices to reduce the impacts of increasing temperature and 40.6% to decreasing precipitation, giving lack of funds as the main barrier to implementing adaptation measure. Implications for policymaking will be to make credit facilities more flexible, to invest in training more extension officers and more education on climate change and adaptation strategies.

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# Author information

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## Authors and Affiliations

Center for Development Research (ZEF), University of Bonn, Walter-Flex-Str. 3, 53113, Bonn, Germany

B. Y. Fosu-Mensah & P. L. G. Vlek

College of Agriculture and Consumer Sciences, Institute of Agricultural Research, Kpong Research Centre, University of Ghana, P.O. Box LG 68, Legon, Accra, Ghana

D. S. MacCarthy

## Corresponding author

Correspondence to [B. Y. Fosu-Mensah](#).

## Additional information

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