

Adaptation to Climate Change by Up Country Vegetable Farmers

P. S. M. K. J. Samarakoon* and R. P. D. Gunathilaka

Department of Export Agriculture, Uva Wellassa University, Badulla, Sri Lanka

In Sri Lanka, climate change impact is the second most gravely affecting reason for food insecurity and agriculture is the most vulnerable sector to climate change. Specifically, vegetables, legumes, coarse grains, and potatoes are likely to be adversely affected. Thus, the need for adaptation is pressing for these seasonal cropping systems given the importance of climate change impacts on livelihoods. For successful adaptation policies and recommendations should be formulated based on a robust analysis of factors influencing farmers' decision to adopt. Based on a cross-sectional survey conducted for upcountry vegetable farmers, the study elucidates farmers' perceptions of climate change, ongoing adaptation measures, factors influencing farmers' decisions to adapt, and constraints. Data were collected from 150 farmers in Nuwaraeliya, Welimada, Badulla, and Bandarawela divisional secretariat areas. Multinomial logit model analyses factors affecting to the adaptation by farmers. Results indicate gender, education level, farming experience, income, willingness to take credit, the extension on the crop, climate change information, farmer to farmer extension, total annual rainfall, and average annual temperature as the significant factors. Further, early or late planting, crop or variety switching and intensive use of inputs are the commonly used current adaptation options. Results explain that farmers lack climate information. Moreover, higher costs to adapt and lack of vigorous seeds impede adaptation. The study suggests educating farmers about potential adaptation options is pivotal. Moreover, policies related to education, adaptation cost, and vegetable seed importation should be amended to promote adaptation. Providing comprehensive climate change information and improved crop extension service are the practices that need governmental support. Furthermore, intensive studies on climate change and networking farmers to initiate an information portal will nurture climate change adaptation.

Keywords: Climate change adaptation, Upcountry vegetable farmers, Multinomial logit model