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Adaptation of Crop Diversification to Climatic Risks and Agro-ecological Zone: Case of Under-resourced Farmers in Eastern Cape, South Africa

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ABSTRACT Crop diversification can reduce the extent of losses from climate change and climate risks. This paper explains the state of crop diversification in the study area and identify significant exploitable benefits from the practise. The study employed survey data from farmers in major agro-ecological zones of the Eastern Cape Province, namely Grassland, Savanna and Karoo. Data on crop enterprises, input and output variables were processed in monetary terms and subjected to gross margin analysis. A correlation analysis was applied to examine the sensitivity of farm inputs, outputs and profitability/loss to different crop mixes and agro-climatic variation. Study findings revealed that crop-based enterprise combinations of farmers vary across agro-ecological zones. Farmers choose crops that reduces the risk of emerging climate related losses, input costs and increase output and/or revenue. The study recommends experimental research that details yield benefits and losses in responses to both biotic, abiotic factors and specific crop combinations.