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Unravelling farmer preferences for contract design attributes in Ghana’s agricultural sector: A discrete choice experiment approach

DOMINIC BOATENG-GYAMBIBY¹, SABINE LIEBENEHM², EMMANUEL ALIRAH WEYORI³

¹ *University of Energy and Natural Resources, Agricultural and Resource Economics, Ghana*

² *University of Saskatchewan , Department of Agricultural and Resource Economics,*

³ *World Food Programme, Vulnerability Assessment and Monitoring,*

Abstract

This study aims at determining the relative importance of attributes of agricultural contract design among farmers in Ghana, exploring the interaction between the socioeconomic, demographic, and institutional characteristics and identifying the factors associated with farmers’ willingness to participate in contract farming involving 279 farmers across four regions in a discrete choice experiment. The study utilises a conditional logit model to analyse farmers’ preferences and the logit model to identify factors influencing contract farming participation. The optimal contract design – yielding maximum utility (0.29) and desirability (0.68) – prioritises written contracts, quality-based payment, full yield sales, seed provision by buyers, and partner reliability, even if the buyer lacks prior trading history. Farm size, access to loans, farm-to-road distance, and farmer group membership predict willingness to participate. The complex interplay between the socioeconomic, demographic characteristics and institutional factors on contract design attributes shows that small farms show neutrality towards input support, while medium-sized farms slightly favour it, and larger farms prioritise partner reliability. The study reveals a “middle-income effect” where middle-income farmers do not have a preference for any contract option, which strongly suggests a distinct risk assessment strategy compared to their low or high-income peers. Farmers without access to extension services prefer seed-only input packages, showing a reliance on contracts to overcome resource and information-related constraints. Lastly, the perceived value of input support also varied with distance to markets, with more remote farmers showing greater reliance on seed support.

Overall, our findings suggest that contracts should be tailored to farm size, gender, income, and location. This alignment would improve agricultural inclusivity, market integration, and sustainability in Ghana.

Keywords: Agricultural contracts, agricultural sector, contract design attributes, discrete choice experiment, farmer preferences, Ghana