

Assessing Smallholder Rice and Vegetable Farmers' Constraints and Needs to Adopt Small-Scale Irrigation in South Tongu District, Ghana

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Abstract : Irrigation access is one of the essential rural development investment options that can significantly improve smallholder farmers' agriculture productivity. Investment in irrigation infrastructural development to supply adequate water could improve food security, growth in income for farmers, poverty alleviation, and improve business and livelihood. This paper assesses smallholder farmers' constraints and the needs to adopt small-scale irrigation for crops production in the South Tongu District of Ghana. The data collection involved database search, questionnaire survey, interview, and field work. The structured questionnaire survey was administered from September to November 2020 among 120 respondents in six purposively sampled irrigation communities in the District. The questions focused on small-scale irrigation development constraints and needs. As a result, we found that the respondents relied mainly on rainfall for agriculture production. They did not have adequate irrigation access. Even though the District is blessed with open arable lands and rich water sources for rice and vegetable production on a massive scale, water sources like the Lower Volta River, Tordzi River, and Avu Lagoon were not close enough to the respondents. The respondents faced inadequate credit support (100%), unreliable rainfall (76%), insufficient water supply (54%), and unreliable water delivery challenges on their farms (53%). Physical constraints for the respondents to adopt irrigation included flood (77%), drought (93%), inadequate irrigation technology (59%), and insufficient technical know-how (65%). Farmers were interested in investing in irrigation infrastructural development to enhance productivity on their farms only if they own the farmlands. External support from donors on irrigation systems did not allow smallholder farmers to control irrigation facilities.

Keywords : constraints, food security, needs, smallholder farmers, small-scale irrigation

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