

## **An Assessment of Rice Yield Improvement Among Smallholder Rice Farmers in Asunafo North Municipality of Ghana**

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**Abstract :** Ghana's rice production has increased mainly because of increased cultivated areas. On this point, scholars who promoted crop production increase for food security have overlooked the fact that its per-acre yield has not increased. Also, Ghana's domestic rice production has not contributed much to domestic rice consumption especially in major cities where consumers tend to rely on imported rice from Asia. Considering these points, the paper seeks to understand why smallholder rice farmers have not been able to increase per acre rice yield. It also examines smallholder rice farmers' rice yield improvement needs, and the relationship that exist between rice farmers' socioeconomic factors and their yield levels by rice varieties. The study adopted a simple random sampling technique to select 154 rice farmers for a questionnaire survey between October and November 2020. The data was analyzed by performing a correlation analysis, an independent t-test, and Kendall's coefficient of concordance. The results showed that 58.4% of the respondents cultivated popular high-yield varieties like AGRA and Jasmine. The rest used local varieties. Regarding respondents' yield differentials, AGRA and Jasmine had an average yield of 2.6 mt/ha, which is higher than that of local varieties (1.6mt/ha). The study found untimely availability of improved seed varieties and high cost of inputs some of the major reasons affecting yield in the area. For respondents' yield improvement needs, Kendall's coefficient of concordance showed that access to improved varieties, irrigation infrastructure, and row planting were respondents' major technological needs. As to their non-technological needs, the respondents needed timely information about rice production, access to credit support options, and extension services. The correlation analysis revealed that farm size and off-farm income exhibited a positive and negative association towards respondents' yield level, respectively. This paper then discusses recommendations for providing with improved rice production technologies to farmers.

**Keywords :** Ghana, rice, smallholder farmers, yield improvement.

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