Abstract

This study examines the crop diversification levels and determinants of crop diversification and assesses food security status of the farm' households in Natmauk Township, Magway region, Myanmar. The study was carried out in March 2015 and data were collected by using structured questionnaires. A total of 80 farm households were randomly selected from four villages in Natmauk Township. The study uses Simpson's index of diversification (SID) to measure the extent of crop diversification among the farmers in the study area while censored Tobit regression model was used to determine the factors affecting crop diversification. The study revealed that mean computed crop diversification index was 0.54. Approximately 35 % of households moderately diversified their crops while 22.5 % were adopting low diversification. High crop diversification indexes were found among 32.5 % of the sampled farm households. About 5 % of households practiced very low crop diversification while the same proportion diversified their crops very highly in their farms. The study further revealed that farming experience, education level of household heads, farm size, access to irrigation and access to credit positively and significantly affected crop diversification while age of household heads, non-farm/off-farm income and distance to market negatively and significantly affected crop diversification among the farmers in the study area. Majority of the households reported that market purchase is the main source of foods for them. Based on the HFIAS[1] categories, 31.25 % of the households were food secure while 35 % mildly food insecure, 25 % moderately food insecure and 8.75 % were severely food insecure in the study area. According to correlation analysis, it was observed that HFIAS score is negatively correlated with HDDS[2] and crop diversification. Correlation was significant at 0.01 level and the strength of the correlation is strong. The findings clearly indicate that better food security is associated with crop diversification in the study area. Therefore, the study recommended that the farmers should be encouraged to improve the right selection and cultivation of different crop types on their farms, which will eventually lead to increase in crop outputs and otherwise, improve food security.

Key words: Crop diversification, Simpson's index of diversification, Tobit regression, and Food security

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[1] Household Food Insecurity Access Scale

[2] Household Dietary Diversity Score