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Family labour and farm practices among cocoa producing farmers in the coastal region of Ecuador

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Abstract

Family farming systems (FFSs) are fundamental for promoting food security and sustainable development. In Ecuador they contribute by 60 % of food production and play an important role in generating exportable products such as cocoa. However, very little is still known about performance and sustainability of coastal region FFSs, as well as their influence on the local agricultural landscape and provision of ecosystem services. Therefore, the study aimed to characterise FFSs within the agricultural association “15 de septiembre” located in the Vinces canton of Los Rios province, Ecuador’s coastal region. A questionnaire was conducted among all 161 members of the association. Subsequently, data were classified based on cocoa-producing households with a majority labour force from family members, resulting in a subset of 100 questionnaires. Cash crop diversity in each farm was assessed using the Shannon diversity index. Using data analytics and exploratory analysis, the variable cocoa variety was employed as study factor, categorised into three groups: CCN-51, national, and a combination of both varieties. Relationships between variables were explored through scatter plots, and correlations were tested for statistical significance at a 5 % level. Approximately 60 % of the farms cultivated CCN-51, 25 % cultivated national, and the rest (15 %) cultivated both varieties. Farmers cultivating CCN-51 and both cocoa varieties exhibited the highest diversity in cash crops compared to those with only national. Additionally, those with both cocoa varieties and only national tended to use more organic fertilisers, whereas farmers cultivating CCN-51 tended to apply more chemical fertilizers. The external labor force is similar in the three groups; however, those with both cocoa varieties tended to hire less. Also, in the three groups, there are at least three family members working in cocoa activities. The findings show variations in farming practices and labour dynamics among FFSs with different cocoa varieties in the coastal region of Ecuador despite the non-correlation between the studied variables. These preliminary results will be contrasted with the farmers’ perceptions of the benefits of cash crop diversification. Also, by using remote sensing techniques and the ECOSER protocol the provision of ecosystem services among the farms will be estimated.

Keywords: ECOSER, family farming, food security