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Resource Use Efficiency and Competitiveness of Vegetable Farming Systems in Upland Areas of Indonesia

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Abstract

Rapid population growth and increased incomes are raising the demand for vegetables in Indonesia. The problems of low growth in production and high fluctuation in import and export volume and price can be attributed to a multidimensional crisis. In order to overcome these problems, it is first necessary to analyse resource use and competitiveness of Vegetable Farming System (VFS) using accounting standards based-on domestic resource cost and Policy Analysis Matrix (PAM) including private cost ratio (PCR) and domestic resource cost (DRC).

The information and data from the literature were not sufficient to get answers to all the problems. Therefore it was necessary to collect primary data in the investigated regions. This data collection was conducted in three vegetable production centres in upland areas in Pangalengan, Keajajar and Berastagi-Simpang Empat. Then it was applied to a respondent classification based-on type of vegetables in each region. In each village 25 respondents (50 respondents in the two villages) were interviewed. The number of all respondents in all regions was 150 farmers.

Results suggest that VFS in upland areas of Indonesia is the important income activity of the farmers and that they use resources efficiently and are conscious of the competitiveness of the vegetable crops. It could be seen from PCR and DRC values which were below 1. Potato, headed cabbage in Pangalengan and in Keajajar, tomato and carrot are mainly competitive in Berastagi-Simpang Empat. This can be explained as follows: farmers use chemical inputs at a higher rate than its recommendation, cost per unit is high, productivity is low and farmer's accessibility to the market and fluctuating price is limited. Headed cabbage cultivation in Berastagi-Simpang Empat still needs support from the government.

Based on the results, it can be concluded that some of programs are necessary to be created by the government in order to support the development of VFS in upland areas, especially for potato and cabbage based-on the agro ecosystem or infra structural in each region. The results of the research are of general importance for economical evaluation of VFS in upland areas of South-East-Asia.

Keywords: Competitiveness, resource efficiency, vegetable farming system