OPTIMALIZATION OF GALANGA FARMING WITH STRIP INTERCROPPING SYSTEM IN FAJAR ASRI VILLAGE SEPUTIH AGUNG SUBDISTRICT CENTRAL LAMPUNG DISTRICT

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ABSTRACT

This research aimed to determine optimal farm income, land use and labour use that could be reached by farmer that grew galanga with strip intercropping system. This research conducted in Fajar Asri Village, Seputih Agung Subdistrict, Central Lampung District. The sample was taken purposively towards 18 farmers that grew galanga, maize and cassava. Senstivity test was operated to see the senstivity level of each activity and restrictions. Linear Programming model made into two scenarios. Scenario 1 using farm profit as objective function along with land and family labour as restriction, otherwise Scenario 2 using farm income along with land and maximum hired labour that could be hired by farmers. The results showed that optimal farm profit that could be reached in Scenario 1 was Rp7.984.403 with cultivating 0,125 ha galanga, 0,6 ha maize in first season as well as 0,125 ha galanga, and 1,005 ha cassava in second season. Optimal total labour use was 36,18% of family labour capacity. Optimal farm income that could be reached in Scenario 2 was Rp33.760.470 with cultivating 0,87 ha galanga, 0,26 ha maize in first season as well as 0,87 ha galanga,and 0,26 ha cassava in second season. Optimal hired labour use was 39,21% of maximum hired labour that could be hired by farmers in one year. Sensitivity test showed that land and labour restriction were not senstive towards changes that was caused by resource use that was not optimal.

Key words: galanga, Linear Programming, optimalization, sensitivity test, strip intercropping