

## Intercropping Sugarcane and Soybean in Lowland and Upland to Support Self Sufficiency of Soybean in Indonesia

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**Abstract :** The purpose of this study is to obtain information on technical and social-economic feasibility of sugarcane-soybean. To achieve these objectives, soybeans intercropping study was conducted in sugar cane crops. This assessment was conducted in two locations with different agroecosystem, ie lowland of low plain in Mojokerto, East Java, with altitude of 50m above sea level and upland of medium plain in Malang, East Java with altitude of 500 m above the sea level. The design used was Split plot, with the main plots, is the soybean varieties, consisting of: (a) Anjasmoro, (b) Argomulyo, and (c) Dena-1, while the subplot is bio-fertilizer, consisting of : (1) Agrimeth, (2) Agrisoy, and (3) Biovarm. The variables observed were growth, yield and yield components and economic analysis. The yield of soybean in lowland reached 0.74 t/ha of seeds with farm profit of Indonesian Rupiah 359.200. This result is relatively low due to the delay of soybean cultivation from sugar cane soup time so that sugar cane cover soybean cultivation, while in upland obtained 0.92t/ha seeds with farm profit of Indonesian Rupiah 2,015,000. Therefore, it is suggested that soybeans are planted immediately after ratoon cane so that soybean growth can be optimal before the growth of sugarcane cover the soil surface. The yield of sugar cane in the lowland reached 124.5 tons with a profit of Indonesian Rupiah. 21,200,000,- while in upland obtained by sugarcane yield equal to 78,5 ton with profit equal to Indonesian Rupiah 8,900,000,-.

**Keywords :** intercropping, sugar cane, soybean, profit, farming

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