

Optimization of factors of production in oil palm (smallholders) in the Village Sei Apung, District of Kualuh Hilir , North Labuhanbatu District, North Sumatra Province. Supervised by AGUS SANTOSA and SITI SYAMSIAR. This study aims to analyze the influence of such factors as (1) land area, (2) number of productive plants, (3) NPK fertilizer, (4) ZA, (5) urea, (6) the outpouring of labor time to the production of oil and analyze the use of production factors are optimal. Method of determining the location using purposive. To analyze the influence of the factors of production of palm oil used equation Cobb - Douglas, and to analyze the optimal use of factors of production in palm oil used optimization analysis. Based on the test result of production function, indicating that ZA, urea, and the outpouring of labor time effect on the production of palm oil, while the land area, number of productive plants, and NPK fertilizer did not affect the production of palm oil. The use of factors of production in oil palm at Sei Apung village is not optimal.

Keywords: Palm oil plantations, production, factors of production, optimization.