

**Study on Utilizing High Quality Organic Fertilizers Combination with Super  
LDD 2 Bio-extract for Oil Palm Production in  
Land Development Zone, Suratthani Province**

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**Abstract**

The study on the utilizing high quality organic fertilizer with super LDD 2 bio-extract for oil palm was conducted in the region land development, Khlongsai sub-district, Thachang district, Suratthani province, during the year 2009-2010. The experimental design was randomized complete block with 3 replications and 7 treatments. The treatments consisted of control, using of high quality organic fertilizer at the rate of 8, 16 and 24 kilograms per plant per year with and without spraying super LDD 2 bio-extract at the rate of 40 litres per rai at each time, diluted 1:200 every 21 days.

The results showed that using high quality organic fertilizer at the rate of 24 kilograms per plant per year with super LDD 2 bio-extract was the best because it increased soil pH (from 4.28 to 4.92), and also high organic matter content was increased from 2.22 percent to 3.08 percent. The available phosphorus was increased from 16.04 milligram per kilogram to 28.11 milligram per kilogram and exchangeable potassium increased from 57 milligram per kilogram to 108 milligram per kilogram. Also it gave the best of oil palm growth with the highest average number and average length of leaf, 236 leaflets per leaf and 324 centimetres, respectively. The highest yields was 5,382.50 kilograms per plant per year. The average weight of oil palm bunch was 23 kilograms and bunches per plant was 10.64. For economical returns, the treatment of using high quality organic fertilizer at the rate of 24 kilograms per plant per year with super LDD 2 bio-extract gave the cost of production and income was 14,423.16 baht per rai per year and 21,744.49 baht per rai per year, respectively. The highest net profit 7,321.34 baht per rai per year.

**Keywords:** organic fertilizer, bio-extract LDD2