

Witoon Jaipong 2008: Study on Planting Methods and Spacing on Growth and Yield of Physic nut (*Jatropha curcas* L.). Master of Science (Agriculture), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Sombat Chinawong, Ph.D. 123 pages.

Study on planting methods and spacing on growth and yield of Physic nut (*Jatropha curcas* L.). This study has 2 experiments, i.e. studies on different methods of planting and studies on different spacing of planting were carried out during August 2005–September 2006. First experiment was consisted of 4 methods, i.e. direct seeding (DS), direct planting of cutting (DC), transplanting of seedling (TS), and transplanting of cutting (TC) the experiment were carried out at research field of Agronomy department Kasetsart University at Kamphaengsaen campus Nakhon Pathom province. Second experiment was study on different spacing of planting, i.e. 1×1 m (1,600 plants/rai), 1×2 m (800 plants/rai), 2×2 m (400 plants/rai) 2×3 m (267 plants/rai), and 3×3 m (178 plants/rai) which were conducted in Completely Randomized Design (CRD) in 3 locations in Kasetsart University at Kamphaengsaen campus Nakhon Pathom, H.M. private development project at Chachoeng Sao, and The Chaipatthana foundation at Phetchaburi provinces. The result of the study on different methods of planting showed that planting with direct planting of cutting had higher yield per plant of 838.21 g/plant and yield per rai of 335.28 kg/rai than other methods while planting by transplanting of seedling had highest dry weight was 9.29 kg/plant or 3,716.00 kg/rai. The result of planting with different spacing in 3 locations, Nakhon Pathom, Chachoeng Sao, and Phetchaburi provinces, showed that planting with 3×3 m have highest yield in all locations which were 491.03, 240.01, and 99.92 g/plant respectively but the yield per area was best with the planting with 1×1 m spacing at Nakhon Pathom and Phetchaburi provinces of 209.84 and 91.87 kg/rai respectively, while the location in Chachoeng Sao province, the spacing of 1×2 m gave the highest yield of 122.20 kg/rai. The dry weight of plant with 1×1 m spacing were highest among other spacing with was 10,976.00 kg/rai in Nakhon Pathom province, 6,496.00 kg/rai in Chachoeng Sao province and 5,360.00 kg/rai in Phetchaburi province.

Student's signature

Thesis Advisor's signature

____ / ____ / ____