

Chapter 7

Suitability of Peat Swamp Areas for Commercial Production of Sago Palms: The Sarawak Experience

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Abstract Realizing the potentials of sago as a new commodity to contribute to the Sarawak economy, the government initiated the development of sago plantations to address the shortage of raw materials in order to support the sago industry in its starch export and downstream activities. Initially the development of sago plantations was on peat, based on findings that sago can tolerate wet conditions including peat swamps. Furthermore Sarawak has the largest peat soil area in Malaysia of about 1.5 million hectares. For over the period of 15 years, it was observed that only 4% show good growth performance and these palms are mainly on shallow peat areas (<1.5 m), while those on very deep peat areas (>2.5 m) showed poor growth performance at the trunking phase as characterized by small crowns, low leaf count, stunted growth, and low succession suckers.

The Crop Research and Application Unit (CRAUN) conducted detailed studies of sago growth performance on peat to find solutions to the problems mentioned above. The study covers land preparation, prospection and selection of quality planting material, nursery management, nutritional and soil studies, cultural practices, and weed and pest control.

Based on the agronomic and cultural practices done by CRAUN for the past 10 years, it was observed that the performance of sago on peat areas (>2.5 m) for the first 4 years did show good growth and were on par with those palms grown on mineral soil. However, upon reaching trunking phase (4 years onward), the growth performance began to deteriorate, exhibiting distinct elemental deficiency symptoms, low leaf count, tapering trunk, and low yield.

Cost comparison on the development of sago on alluvial and peat shows a significant difference between the two soil types whereby the latter incurred high development cost and low revenue and thus contributed to the low internal rate of return (IRR). Therefore it is not economic and feasible to cultivate sago on peat. Recommendations for any new sago expansion program should focus on mineral or shallow peat soil.

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