

Challenges in Enhancing Sustainable Sago Palm Cultivation in the Mukah Division of Sarawak, Malaysia

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Abstract

Sago (*Metroxylon sagu* Rottb.) has the potential to be an important commodity export for the state of Sarawak, Malaysia provided it can be cultivated sustainably by the sago farmers and in a large sago estate plantation. Its ability to accumulate large amount of starch in its trunk lead its to be regarded as the “starch crop of the 21st century”. The study’s goal is to investigate the many challenges faced by sago farmers in Sarawak’s Mukah Division in cultivating sustainable sago palms. It uses a sustainable agriculture framework to describe the issues and challenges in improving sago cultivation. This study employed in-depth interview with all stakeholders and observation as data collection. Results revealed that the pertinent issues and challenges for the sago farmers in sustainable agriculture includes integrating scientific methods with indigenous knowledge of sago cultivation, finding sago variety that produce high yield of sago starch, long maturity period of sago, the declining size of land to cultivate sago, competition from palm oil cultivation, and the absent of the sago board. Of a great concern is the reluctant of younger generation to enter the labour force in the sago industry.

Index Terms—Sustainable agriculture, sago palm cultivation, sago farmers, sago starch.

Introduction

Sago palm thrives in the swampy peatland especially in Sarawak, Malaysia; Moluccan Islands and Irian Jaya, Indonesia; Sepik, Papua New

Guinea and Mindanao, Philippines. Malaysia is the third largest country planted with sago in terms of hectares (59 thousand hectares) behind Indonesia (2.94 million hectares) and Papua New Guinea (1.02 million hectares) (Ahmad, 2014). Meanwhile, Mukah Division in Sarawak is the largest sago producing area in Malaysia with 42,310 hectares of land cultivated with sago and 70 percent are toiled by the small-scale sago farmers.

Sago starch has been traded in the Southeast Asia region for more than 700 years and at least 400 years in Sarawak Malaysia (Sim, 1985). According to Bujang (2015) on per acre basis, sago is known to be the world's highest starch producer at 25 t/ha/year. Sago produces high-yield dry starch approximately 150-300 kg per plant (Wahed et al. 2022). Sago can be compared to other foods as being 4 times as high as rice, 5 times as high as corn and wheat, and over 17 times as high as tapioca in terms of starch that it produced (Ishizaki, 1997). Sago starch is used largely in the food industries, household applications and has the potential for the development of single cell protein, lactic acid and biofuels (bioethanol and biodiesel).

In comparison to other producing areas in the Southeast Asia region, Sarawak is at the forefront of producing quality sago starch and commercializing it for industrial use (Lauvfa and Kavanamur, 2008). Sarawak is also the largest producer of sago flour in the world with 37,884 metric tons of sago starch valued at RM78.29 million in 2020 (Ling Hui, 2022). Hence there is a need to expand the cultivation of sago from small scale farmers to commercial plantation. Apart from encouraging the small-scale farmers to merge into estate plantation, the Sarawak government embarked on commercial plantation through the state agencies like Land Custody and Development Authority (LCDA). Incentives are also provided to the private sector to encourage establishment of estate plantation.

The Sarawak government also encouraging the sago farmers to cultivate sago by applying modern and scientific cultivation methods (Yaakub et al., 2018). However, the current practice shows that sago can only grow well in certain type of soil with certain care by the local sago farmers. Hence, the indigenous knowledge of sago cultivation is viewed as vital to be incorporated in the scientific methods of cultivating sago especially when the Sarawak state government is embarking on opening large track of land for sago commercial plantation. Thus, the objective of this paper is to investigate the issues and challenges in enhancing sustainable sago palm cultivation by the sago farmers in the Mukah Division of Sarawak, Malaysia.