

A Study of Coconut Plantation Management Practice: Problems and Status

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ABSTRACT: Coconut is one of the most important agricultural plantation crops in many countries and “tree of life”. Coconut worldwide is confronting significant difficulties to its existence. Recently the quantity of coconut farming has diminishes in Malaysia due to poor agricultural practices and farm management. The aim of this paper is to study the problems facing by coconut producers and also the status of coconut estate practice in Malaysia. The article further aims to identify the technique to determine coconut plantation practices and to uncover the real issues confronting coconut farmers. In this study, the data from a field observation and an interview are being collected. We discovered the techniques for coconut based farming that was problematic traditional manual cultivation practices with lack of proper management practices. On the other hand, the study reveals that lack of awareness of the farmers regarding the information of plants, pest problems and diseases as coconut is grown without any monitoring activities. The results are potential to help the coconut plantation manager in identifying the problem and status of coconut plantation management practices.

KEYWORDS: Coconut plantation, management, problems, status

INTRODUCTION

In recent times, the quantity of cultivated coconut has diminished in Malaysia, while in the meantime all tree parts of coconut still has been utilized largely by Malaysian. For instance, coconut trunks are utilized for building little bridges, coconut shells and husk can be utilized, and as a colour the roots are utilized and also for a mouthwash and a pharmaceutical. Coconut yield is low compared with most other oil bearing products. On an average, one hectare of oil palms yields four tons while contrasted with coconut only about a ton.

In Malaysia, it has around 110,000 hectares total coconut cultivation. “The major states of coconut plantations in Malaysia are Selangor (129, 878), followed by Johor (79,469), Sabah (69,318), Sarawak (868, 474), Perak (58,854), and Kelantan (40,275)” (Department of agriculture, 2013). While other areas are less than 20,000 hectares. The Perlis was the smallest

territory of coconut estate in Malaysia which just 1,119 hectares are shown in Table 1.1.

Table 1: The major areas of coconut plantations according to states in Malaysia

Name of the states	Hectares
Perlis	1,119
Kelantan	40,275
Perak	58,854
Sarawak	868, 474
Sabah	69,318
Johor	79,469
Selangor	129, 878

Source: Department of Agriculture, 2013

“In Malaysia, coconut is the fourth important industrial crop after oil palm, rubber and paddy

in terms of total planted area". (Sivapragasam, 2008). Regarding exports, the nation has seen an expansion in the export of coconut based final products, for example, powder of coconut milk, parched coconut and activated carbon. In spite of its amazing history and utilization, worldwide coconut goes through major difficulties to its reality. In Malaysia, the low supply of crude materials is the main obstacle faced by the coconut processing division, comprehensive of both for eatable (e.g. copra, oil) and non-consumable (e.g. husks, shell and wood) materials. Different variables adding to the low yield are poor farming practices and farm administration with low soil ripeness which needs fertilization. At this stage, coconut producing methods are undermined and alongside it, the job of a large number of agriculturists with very few options. Regarding planting and management of coconut cultivations, Ohler (1998) pointed out that present day management of coconut farming is gone for assisting the individuals who work with little scale farmers and group of agriculturists through the unpredictable zone of coconut management. On the other hand, the profitability of coconut farming may rely upon numerous different factors, for example, yearly rainfall, varieties, farm estate age, soil verity, area of agro ecological zone, and management systems (e.g. moisture and soil preservation, manure application, disease & pests control and weed identification) (Samarajeewa et al.,2001). It obviously demonstrates that coconut cultivation in Malaysia is nearly to vanish contrasted with other coconut farmers all around the globe, for example, Vietnam, Indonesia, Cambodia and Philippine. Until today, many techniques for coconut based farming have been introduced but all these techniques are categorized as poor farming and manual representations of plantation. This is due to the point that the requirement for particular manual skills is making issues in the coconut business. This issue may be a direct result of the various livelihoods of coconut and the distinctive farming method where it is cultivated. Reduction the issue may require another approach that brings reproducers, agriculturists and genomic researchers together to explore a more extensive

scope of employments for coconut decent variety from the breeding level to the last items that achieve the end users. Henceforth, the motivation behind this research is to show the computer dependent system and to build up a solution that would help reduce it. Ensure that coconut farming won't finish in Malaysia since we realize that it is sufficiently productive to us.

According to FAO (2016) subsequently, vast global groups are addressing about coconut cropping, similarly they are addressed by their clients or the common society on oil palm farming. It opens up tremendous opportunities for enterprising farmers who produce coconut and various value-added products by following organic methods of farming and processing to realize better returns by way of the premium price available for the organic products that is reviewed by George (2010).

In compliance with, Choudhury (2002) in his study "Problems and Prospects of Coconut Cultivation in Assam" pinpoints the following problems of coconut cultivation in Assam. First, there is lack of awareness of the farmers on recent developments related to crop improvement, crop protection, production and cropping system; Secondly, there is an absence of value planting materials to the agriculturists; Thirdly, absence of legitimate management methods, as coconut is grown in a very uncared condition without applying fertilizer and irrigation; Fourthly, pest problems and diseases caused by fungi and phytoplasma result in different degrees of crop loss.

Batugal (2014), COGENT coordinator, IPGRI, Serdang, Malaysia and senior Scientist likewise built up various methods for enhancing the efficiency, however the farmer frequently does not have enough assets to receive these and the technologies advancements and presented are regularly past his/her methods. This is the reason the coconut is viewed as an idle man's harvest which isn't the same as saying that the coconut framers are that way.

Another study conducted by Srinivasan (2002) reported that the profitability of the coconut is

compelled by different burdens. Among them, the root (wither) disease is the real issue in southern locale of Kerala and Tamil Nadu and furthermore in Goa. In this way, the impacts of water deficit on the efficiency, development, and physiology of coconut have been generally archived (Prado et al. 2001; Azevedo et al. 2006; Gomes et al. 2007).

On the other hand, Desai et al. (2003) found that coconut palm is attacked by 107 pests. Among them the leaf eating caterpillar is one of the major pests. Dry and green patches which appear on the lower surface of the leaves are the major symptoms of infestation. Palms of all ages are susceptible to infestation by black headed caterpillar. The aim of this study is to discuss about the problems facing by coconut producers and also the status of coconut plantation management practices in Malaysia.

METHODOLOGY

Coconut plantation field observation



Figure 1: The study area. (Source: Google maps)

Observational studies were carried out at the study area (refer Figure 1). From the study area, the subject were observed which consisting of coconut breed, plantation method and site of plantation, the disease, weeds influencing coconut development and coconut trees in light of their breed as we were at a plantation site by personally going there. These images were helps

this study for providing a clear concept and valuable information relating to the subject. Here it's showing the traditional cultivation practices are the major causes for the decline in productivity. The area of plantation is neither organized nor planned wisely that wastages area and harming of soil here.

Interviews with people

Other than observation, the data for this study are collected from an interview. The set of interview questions being used to get information required for the study. It was a face to face interview with the respondent. The interview was conducted with one of the cocunt plantation manager in the north part of Malaysia. The interview and subsequent discussion lasted 75 minutes. The study chose to interview with this manager because he was in charge of coconut plantation with land sized 7.6 acres. There were total 454 trees in that planted area. The inter distance among the trees was about 9x9 square meters for each tree in plots. The interview had several specific goals in mind when it approached with questions for revealing actual plantation problems. He was the wellspring of primary information. From the meeting, this study found and got some answers concerning the status of coconut plantation and helpful data relating to the subject. It is revealed from the interview that is very important to select dried leaves or dead leaves or diseased leaves to remove weeds and pests. Hence, the study also has been conducted to obtain the user's opinion on the status, problems and opinion farmers from coconut plantation.

FINDINGS AND DISCUSSION

Problems affecting the coconut industries

Various observations, reports and studies reveal that decreases in coconut areas can be traced to the following several factors:

First, there is lack of proper management practices, as coconut is grown in a very uncared condition without applying fertilizer and irrigation. Hence, the traditional cultivation practices are the major causes for the decline in productivity;

Secondly, Coconut cultivation dependencies where there is no debate about coconut cultivation depending factors, for example, yearly rainfall, variety, age of the farm, soil compose, agro natural area, and management rehears (e.g. compost application, soil and moisture protection, weed control and disease and pests control). Further, the investigation on this issue is suggested to facilitate the information gathers from actual coconut plantation data such as tree location, number of trees, status, weed & pests control and satellite images will also facilitate additional importance for coconut farming practices;

Thirdly, Sustainability of farming system, past research has studied traditional framing system but there is a lack of the procedure for selection of unproductive and old coconut palm with area of plantation. Similarly, it is essential to identify earlier weeds and pests for ensuring normal growing and selection of quality seedlings for better yield of sustainable growth in productivity.

Fourthly, lack of awareness of the farmers regarding the information of plants (like the name, distribution of water, solar radiation and soil type or soil pH of the area or soil materials on the field and also air pressure). In this case little is known about the underlying mechanism through which the plant information is viewed to farmers. Nevertheless very few researchers investigate the influence of seasonal climatic factors on coconut yield and the relative influences of solar radiation, air pressure on coconut yield.

In addition to these other influencing factors are: low return, low yield, expanded hectares of decrepit estates, creepy illnesses and insects, normal disasters, aimless cutting of coconut trees, change of coconut farms into the creation of other beneficial harvests, shortage of skilled work, low and fluctuating cost of coconut items. Contrasted with most other oil bearing harvests, yield from coconut is low. As a rule, one hectare of coconut yields about a ton when contrasted with oil palm's four tons. The circumstance is additionally declined by the expanding area of coconut getting broken down.



Figure 2: The observation results from the

Figure 2 shows the results from the field observation where the presence of weeds and pests that is essential to identify earlier for ensuring normal growing and selection of quality seedlings for better yield to sustainable growth in productivity. Hypothetically, the best usage of light, water, supplements, and space by singular plants in a product stand happens when plants are equivalent separation from each other every which way. This separation is known as the equidistant plant dividing. Based on the observation, this study discovered that the distance of the coconut tree planted in this plantation is not equal and consistent. This is another investigation issue in cultivation site.

Future studies ought to be directed to decide the influencing factors that deliver the expected yield with the improvement of further developed management procedures. Based on this study, it can be said that the quest for the growers undertaking coconut plantation is very much needed and the coconut plantation in Malaysia are still actively cultivated even though the number of areas under coconut shows a significant decline. It is conceivable that one day coconut can be the principle contributor of the Malaysian economy. This study suggested that in order to increase the production of coconut, the new computerized coconut plantation methods need to be introduced because the interest for the coconut around the globe every year is increased.

CONCLUSIONS

In view of the findings that have been talked about before, it can be summarized that keeping in mind the end goal to plant coconut, it can't be denied that the agriculturists may confront numerous difficulties. The significant challenge facing by the agriculturists' are poor agricultural practices for farm management and also is pests attack. Region of plantation ought to be sorted out and arranged astutely to anticipate region wastage and hurting of soil here. In reality, there are no regular analyses on the performance and evolution of the coconut plantation system. As noted above if the coconut division isn't modernized in every one of its viewpoints, in numerous districts business coconut productivity may step by step turn into a medium and little scale business, and small agriculturists may meet challenges delivering their products even in the nearby markets. In the same way, the farmers must know the correct approaches to control it on the grounds that on the off chance that they handle it with the wrong systems, it won't diminish the quantity of pests attack yet will build the quantity of pests. Analysts need to create other technological bundles that would be secretly and socially gainful. Finally, future strategy should be focused to policy oriented studies on technology development for plantation management, market expansion and productivity improvement.

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