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Srinivasan G
Assistant Professor, Department
of Agricultural Economics,
Annamalai University, Tamil
Nadu, India

K Arulmani
Ph.D. Scholar, Department of
Agricultural Economics,
Annamalai University, Tamil
Nadu, India

Allied Agro Avenue for farm profitability in Dryland systems by palm Gur production: An economic analysis

Srinivasan G and K Arulmani

Abstract

Dryland agriculture is water-limited; thus, improvements must come about primarily by improving the efficiency of water use. Palm Trees, such as the Palmyra, are always efficiently utilize the available water supply and the water demand can also be matched in drought summer season. Therefore greater degree of control and a higher level of knowledge of the system that farmers have in the Dryland areas have to be utilized effectively for sustainable agriculture. One such indigenous technique which are developed to make dry land agricultural systems more sustainable is palmyra cultivation and its value addition. At this juncture, this paper discuss about value addition in Palmyra palm in specific, palm gur production with the following specific objectives (i) To analyse the output of palmgur industry under different farm size and (ii) to offer policy implications based on the study. Virudhunagar district of Tamilnadu was selected for this study.

The study found that the cost and output increase as the farm size increases. It is due to the fact that the large farm size spend more money for labour force than any other farm size. Moreover, the production is also higher in the large size farms. Reduction in the cost involved in tapping and collecting the juice and transporting it to central places of manufacturing, improved labour saving devices for the tappers especially various mechanical devices and training of skilled tappers and preservation of the palmyrah juice till it is used for gur manufacturing are the specific suggestions from this study. Adopting suitable policy measures in palm gur sector is essential to make value addition from palmyra is economically viable and to do Palmyra cultivation is sustainable.

Keywords: Palm Gur, Tapping, Sustainable Dryland farming

Introduction

Dryland agriculture is water-limited; thus, improvements must come about primarily by improving the efficiency of water use. Such an improvement may occur by ensuring the maximum plant biomass is produced per unit water transpired. Palm Trees, such as the Palmyra, are always efficiently utilize the available water supply and the water demand can also be matched in drought summer season to avoid severe water stress that can specifically avoid the decrease of the fraction of harvestable biomass. Such fraction, called harvest index, is maximum under ample water supply but is not reduced by the severe water stress during drought in Palmyra. Therefore greater degree of control and a higher level of knowledge of the system that farmers have in the Dryland areas have to be utilized effectively for sustainable agriculture. One such indigenous technique which are developed to make dry land agricultural systems more sustainable is palmyra cultivation and its value addition. At this juncture, this paper discuss about value addition in Palmyra palm in specific, palm gur production. It is observed that the palmyrah is growing mainly in the dry districts of Tamil Nadu; Virudhunagar district ranked first by having a large number of palmyrah trees followed by Thirunallveli and Thoothukudi districts. Palm Gur is made from the extract of Palmyra trees called Neera. Urbanization and increasing educational level inversely affect the tappers availability and palm gur production. In this situation, this study was undertaken with the following specific objectives and they are (i) To analyse the output of palmgur industry under different farm size and (ii) to offer policy implications based on the study.

Design of the Study

Virudhunagar district was selected for this study as it was ranked first by having large number of palmyrah palm trees and two blocks were randomly selected. From those two blocks, five villages from each block were randomly selected. From each village 12 palmyrah tappers were selected randomly. In total, 120 palmyrah tappers were selected by simple random sampling method and these tappers were contacted individually for the collection of information with the help of pre tested questionnaire.

Correspondence
Srinivasan G
Assistant Professor, Department
of Agricultural Economics,
Annamalai University, Tamil
Nadu, India

of palmyrah farm viz., large, medium, and small surveyed.

Results and Discussion

Production of Different Farm Size

Table.1. shows the per tree production of different categories

Table 1: Per Tree Production of Different Farm Size

Category of farms	Number of trees	Total production in Kg	Per tree production in Kg	Pe percentage of per tree production
large	1827	199083	109.35	44.00
medium	872	73348	84.90	34.00
small	600	33980	53.09	21.50

From the above table.1 it is evident that the per tree production of large size farm was 44.35 per cent followed by medium (34.15 per cent) and small (21.50 per cent) Large farm has the largest percentage of production than the other farms. Thus it is inferred that the production is higher for large size farm. It is attributed to the fact that the owners of farms possess wealthy land which reflects the fertility of the soil.

Correlation between Cost and Output of Palmgur Per Tree in Different Size of Farms

Table 2: Correlation between Cost and Output of Palmgur Per Tree in Different Size of Farms

Size of farm	co-efficient	't' statistic	't' table values at 1% level
small	0.64	6.57	2.576
medium	0.79	8.38	2.787
large	0.89	15.48	2.576

Significance at 1 % level

From the table.2. It is observed that the calculated value of 't' for all categories are found to be significant and it is inferred from the result that the cost and output increase as the farm size increases. Hence positive correlation exists between cost and output.

Conclusion

The study found that the cost and output increase as the farm size increases. It is due to the fact that the large farm size spend more money especially for labour force than any other farm size. Moreover, the production is also higher in the large size farms. Reduction in the cost involved in tapping and collecting the juice and transporting it to central places of manufacturing, improved labour saving devices for the tappers especially various mechanical devices and training of skilled tappers and preservation of the palmyrah juice till it is used for gur manufacturing are the specific suggestions from this study. Adopting suitable policy measures in palm gur sector is essential to make value addition from palmyra is economically viable and to do Palmyra cultivation is sustainable.

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