

DETERMINANTS OF GROUNDNUT PRODUCTION IN THIRUKKOVIL DS DIVISION OF AMPARA DISTRICT

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ABSTRACT

A study was carried out in the Thirukkivil DS division of Ampara district to find out the factors determining the groundnut production. Using the random sampling procedure, a sample of 75 groundnut farmers was selected and a structured interview schedule was used to collect the primary data. Collected data were analyzed by using the SPSS. From the study, it was found out that the average age of groundnut farmers in the area was 48 years, 77.3% were males, and 92% were married. The average family size of a household was 4 members, and only 3 were involved in groundnut farming, about 93.3% of farmers worked as part time groundnut farmers. The average family income was Rs. 15,800 per month. Majority of the farmers had farming experience of 11 years. Most of farmers (89%) had cultivated in their own land in *Maha* season compare with other two seasons and most of farmers (36%) had cultivated in leased land in mid season compare with other two seasons. Most of farmers (66%) had cultivated in highland extent of 164 ac in *Maha* season. About 65% of farmers were cultivated in *Maha* and *Yala* seasons in study areas. Average groundnut cultivated extent was 2.4 ac, 1.83 ac and 2.53 ac in *Yala*, mid and *Maha* season respectively. According to the results the average net profit from groundnut cultivation was Rs. 56,175/ac in *Yala* season, Rs. 34,975/ac in *Maha* season and Rs 34,296 in mid season. Average net profit was high in *Yala* season because groundnut seeds demand was high and good market price during the season. Chi-square analysis indicated that there was a significant association between average groundnut yield obtained in *Yala* season and educational level of groundnut farmers, type of farming and use of IPNS techniques by the groundnut farmers in the study area. It is therefore recommended that government and relevant private institutions should take necessary steps to strengthen their extension services by considering the above factors to enhance the groundnut production.

Keywords: Chi-square, Groundnut, Profit, *Yala* season, Yield

INTRODUCTION

Groundnut (*Arachis Hypogaea* L.) is the 6th most important oil seed crop in the world. It contains 48 - 50% oil, 26 - 28% protein and 11 - 27 % carbohydrate, minerals and vitamin (Mukhtar, 2009). In Sri Lanka, groundnut is a crop which cultivated in highlands under rain fed condition in *Maha* season and in paddy lands of dry and intermediate zones under irrigation during *Yala* season. It is grown mainly in Monaragala, Hambantota, Puttalam and Kurunagala districts. Though groundnut is an oil crop, in Sri Lanka it is demanded as snacks and confectionaries (Department of Agriculture, 2006). In *Yala* season of 2013, total production of groundnut was 13,921 MT and extent of cultivation was 5799 ha with an average yield of 2.4 MT/ha while in *Maha* 2013/2014, the total production of groundnut was 9,568 MT and extent of cultivation was 9,885 ha with an average yield of 0.97 MT/ha (Department of Census and Statistics, 2014). Ampara District is in the dry zone and two seasons are cultivated with the help of irrigation facilities. In Ampara district, groundnut was cultivated in 392.5 ha in *Yala* 2013 and the production was 588.75 MT in interprovincial area and it was cultivated in 14.1 ha and the production was 22.56MT in provincial area. In *Maha*

2013/2014 groundnut was cultivated in 1366.15 ha and the production was 2137.84 MT in interprovincial area and it was cultivated in 21 ha and the production was 40.5MT from provincial area (Department of Agriculture, 2014a & 2014b). Thirukkivil DS division is one of the DS divisions in Ampara district and groundnut was the main crop cultivated in this DS division. The total production of groundnut was 585 MT and extent of cultivation was 360 ha in *Yala* and in *Maha* 2013/2014, the total production of groundnut was 920 MT and extent of cultivation was 575 ha in Thirukkivil DS division (Department of Agriculture, 2014a). Presently groundnut farming plays a significant role in rural areas among small scale and large scale farmers in the Thirukkivil DS division of Ampara district. Profitability is the key factor which decides the long term sustainability of the groundnut production in this area. To ensure the sustainability of groundnut production in Thirukkivil DS division it is vital to identify the key factors which influence the groundnut production. In this context a study was undertaken to find out the factors influence the groundnut production in Thirukkivil DS division of Ampara district.

METHODOLOGY

The population of this study consisted of groundnut growers in Ampara district. Seventy five (75) numbers of groundnut growers were randomly selected from seven Grama Niladhari divisions for this study purpose. Data were collected from primary and secondary sources. Questionnaire survey was employed to collect the primary data. Secondary data necessary for the study obtained from the relevant sources.

RESULTS AND DISCUSSION

Profile of the Groundnut Farmers

The study has shown that most of the people involved in groundnut cultivation in Ampara district were males (70%). The average age of a groundnut farmer was 48 years. This indicates that majority of the farmers were under middle age category in the study area. It was observed from the results that the majority of the groundnut farmers (92%) were married. Majority of the farmers (93.3%) have other occupations apart from groundnut farming. Educational level of farmers was determined by the year of schooling they had followed. According the results, average educational level of most of the groundnut farmers was 8 years of schooling. The average family income of the groundnut farmers was Rs 15, 800 per month. Most of the farmers involved in the groundnut farming had 11 years of farming experience. The average family size of a household was 4 members in the study area.

Data on Groundnut Cultivation

Groundnut farmers in the Thirukkivil DS division have been cultivating groundnut in three different seasons, *Maha* season, *Yala* season and mid season. Among the three different seasons, a larger extent (164 ac) of high land was used for groundnut cultivation in *Maha* season. An extent of 121.5 ac of high land was used for groundnut cultivation in *Yala* season. Equal extent of paddy land (05 ac) was used to groundnut cultivation in *Yala* and mid season in Thirukkivil DS division. About 65% of farmers had cultivated groundnut in *Maha* and *Yala* seasons. About 21% of farmers had cultivated groundnut in *Maha* season only and about 9% of farmers had cultivated groundnut in both *Yala* and mid seasons. Very few percentages (4%) of farmers had cultivated in *Maha*, *Yala* and mid seasons in study areas. Among the groundnut farmers in the study area, 64% of farmers used tissa variety and 36% of farmers used local variety for their groundnut cultivation. Around 75% of farmers produced groundnut for seed purpose and around 25% of farmers produced groundnut for consumption purpose. Most of farmers (65%) had produced groundnut seeds in *Maha* and *Yala* seasons in the study areas. Only around 33% of farmers had registered under Department of Agriculture (DOA) seed certification service for groundnut

production and 28% of the farmers followed seed certification recommendations. Only around 39% of farmers had storage facilities to store their groundnut seeds. According to the findings average net profit from groundnut cultivation was Rs. 56,175/ac in *Yala* season, Rs. 34,975/ac in *Maha* season and Rs 34,296 in mid-season. Average net profit was high in *Yala* season because groundnut seeds demand was high and good market price during the season. The study also revealed that the total production of groundnut was 96.78 MT/ac in *Yala* season while it was 96.21 MT/ac in *Maha* season and the total production of groundnut was 8.55 MT.ac in mid season.

Factors influencing the Profit of groundnut Cultivation

Table 1: Chi square analysis between average groundnut yield and selected independent variables

Independent variables	χ^2	Df	p value	Decision
Educational level	14.503	06	0.024	Significant
Type of groundnut farming	14.423	03	0.002	Significant
Use of IPNS techniques	36.445	03	0.000	Significant

Table 1 shows the chi-square analysis between the groundnut yield and selected independent variables.

Educational level of groundnut farmers

There was a significant association observed between the average yield obtained in *Yala* season and the educational level of groundnut farmers ($\chi^2=14.503$, $p<0.05$). Among the groundnut farmers with secondary educational level, 67.5% obtained 501-750 kg of average yield in *Yala* season and 46.7% obtained 751 – 100 kg of average yield in the *Yala* season.

Type of groundnut farming

There was a significant association observed between the average yield obtained in by the groundnut farmers in *Yala* season and type of groundnut farming ($\chi^2=14.423$, $p<0.01$). Among the groundnut farmers who were engaged in groundnut farming in part time, 100% obtained 751 – 1000 kg of average yield in *Yala* season.

Use of IPNS techniques

There was a significant association observed between the average yield obtained in *Yala* season by the groundnut farmers and the use of IPNS techniques ($\chi^2=36.445$, $p<0.01$). Among the IPNS techniques users 82.1% of the groundnut farmers obtained 501-750 kg of average yield in *Yala* season. Among the farmers who did not follow the IPNS techniques, 100% obtained lesser than 250 kg of average yield.

CONCLUSION

This study attempted to determine the factors that influence the groundnut production in Thirukkivil DS division of Ampara district. Results show that the educational level of groundnut farmers, type of groundnut farming and use of Integrated Plant Nutrient System (IPNS) practices are the most significant factors influencing the groundnut production in Thirukkivil DS division in Ampara district. These factors need to be considered carefully by the government and other relevant authorities during extension activities which intern enhance the future production and sustainability of the groundnut cultivation in Thirukkivil DS division of Ampara district.

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