ECONOMIC ANALYSIS OF SUGARCANE PRODUCTION IN AMPARA DISTRICT

387

BY

KALANA VIMUKTHI WADASINGHA





FACULTY OF AGRICULTURE : EASTERN UNIVERSITY SRILANKA 2014

Faculty of Agriculture
Lanke

ABSTRACT

Sugar is one of the main food item consumed in Sri Lanka. The annual per capita consumption of sugar in Sri Lanka is around 30 kg and the total annual requirement of sugar in the country is around 550,000 t. But, only about 50,000 tons are produced locally. The balance requirement has to be imported. The total annual expenditure on sugar imports is around Rs. 20 billion. Sugarcane production played a significant role in Ampara district among 4440 of farmers. It contributes significantly for annual country's production of sugar. Therefore this study was designed to economically analyze sugarcane production in Ampara District.

The present study was conducted in five major sugarcane cultivating AI ranges in two DS division of Ampara district. Stratified random sampling method was used to draw the sample. Data were collected through pretested questionnaires and were analyzed using SPSS package for frequencies, cross-tabulations and regression analyses.

Profitability is the key factor which decides the long term sustainability of the sugar production. Aspects of socioeconomic characteristics of sugarcane farmers, different inputs used and their cost involved in sugarcane production, and factors affecting for the profitability were studied.

The average age of the farmers was 41.03 years. The average monthly income from sugarcane farming was Rs.23,200 and average experience of farming was 10.33 years. Average family labour contribution was 2-3. All of the farmers sold their sugarcane production directly to sugarcane factory situated at Hingurana. The sugarcane farmers had receive more yield for sugar production in variety Co-775 than M 59-438.

Average yield of Co-775 and M 59-438 were 44.79 tons/ acre, 39.14 tons/ acre respectively. There were two purposes of cultivation. Sugar production had given profit than planting materials production. Sugar production yield price was Rs.4200 per ton and planting materials was Rs.3800 per ton. But cost of production was same for both purposes. Time period of harvesting was shorter in planting material production than sugar production. Glyphospate, Duron and Gramoxon were the chemicals used in sugarcane production. Average cost of chemicals was Rs.6084.45 per acre. Urea, TSP and MOP were the fertilizer used in sugarcane cultivation. Average cost of fertilizer was Rs.7912.88 per acre. Average cost of planting material and labor costs were Rs.14400 per ton, Rs.84021.43 per ton respectively. The labor cost was higher compared to other cost of production.

Extend of land, varieties cultivated and experiences of the respondents affected significantly for total income. Sugarcane cultivation was profitable in the Ampara district and it contributes development of livelihood of farmers in Ampara district.

TABLES OF CONTENTS

ABSTRACT	i
ACKNOWLADGMENT	iii
TABELS OF CONTENTS	iv
LIST OF TABLES	viii
FIGURE	xi
1. INTRODUCTION	1
1.1. Background	1
1.2. Sugarcane production in Ampara district	3
1.3. Research problem	3
1.4. Objectives of study	4
1.5. Limitation of the study	4
2. REVIEW OF LITRETURE	5
2.1. Sugarcane: An important cash crop	5
2.1.1. Crop Growth Phases	6
2.1.1.1. First stage: Germination and establishment phase	6
2.1.1.2. Second stage: Tillering phase	
2.1.1.3. Third stage: Grand growth phase	7
2.1.1.4. Fourth stage: Ripening and maturation phase	8
2.2. Sugarcane production	9
2.2.1. Sugarcane production in the world	9
2.2.2. States of Sugarcane production in Sri lanka	10
2.2.3. Production and requirement of Sri lanka	11
2.3. Sugarcane varieties	12
2.3.1. Nomenclature of sugarcane	12

2.3.2. Major sugar cane varieties in Sri lanka	13
2.3.3. Breeding programs of Sugarcane	14
2.3.4. Current status and achievements of sugarcane breeding	14
2.3.5. Major achievements	15
2.3.6. Future plans in varietal improvement in sugarcane	16
2.3.7. Proposed Strategies for varietal improvement	16
2.4. Current state of the sugar cane Industry	17
2.5. Sugarcane as a source of fuel	18
2.6. Other by-product from sugar cane	19
2.7. Climate requirements	20
2.8. Soil and climatic requirement of sugar cane	20
2.9. Sugarcane Morphology	21
2.9.1. Roots	21
2.9.2. Stalk	21
2.9.3. Leaves	21
2.10. Sugarcane growth and development	21
2.11. Abiotic Stress	22
2.11.1. Sugarcane responses to abiotic stress: Salinity	23
2.11.2. Management of soil salinity	24
2.12. Sugar Sector in the next decade	25
2.13. The role of the Private Sector	25
3. RESERCH METHOTOLOGY	28
3.1. Study area	28
3.2. Description of Ampara district	28
3.3. Location of the study area	29

	3.4. Method of Data Collection	30
	3.5. Sampling Procedure	30
	3.6. Analyzing procedure	31
4.	RESULTS AND DISCUSION	33
	4.1. Socio economic status of sugarcane farmers	33
	4.1.1. Civil status	33
	4.1.2. Age of the respondents	34
	4.1.3. Gender of respondent	34
	4.1.4. Family size	34
	4.1.5. Education level of farmers	34
	4.1.6. Occupation	35
	4.1.7. Monthly income of sugarcane farmers	35
	4.1.7.1. Average monthly income of farmers from sugarcane	35
	4.1.7.2. Total Average monthly income of primary farmers	36
	4.2. Sugarcane production	37
	4.2.1. Farmers experience in sugarcane production	37
	4.2.2. Family labor contribution in sugarcane farming	38
	4.2.3. Management practices for sugarcane cultivation	39
	4.2.4. Planting materials	41
	4.2.5. Name of varieties cultivated	41
	4.2.6. Yield differences between Co-775 and M 438-59	
	4.2.7. Purposes of sugarcane cultivation	43
	4.2.8. Chemical usage for weed management	44
	4.2.9. Fertilizer usage for sugarcane production	44
	4.3. Marketing of sugarcane	45

4.4. Supportive activities and extension services	46
4.5. Cost benefit analysis	46
4.5.1. Explanation of costs	46
4.5.2. Fixed cost	47
4.5.2.1. Cost of rented land	47
4.5.3. Variable cost	47
4.5.3.1. Planting materials	47
4.5.3.2. Chemical costs	47
4.5.3.3. Fertilizer cost	48
4.5.3.4. Labor cost	48
4.5.4. Average Income of farmers	49
4.5.5. Average Gross Income per season (sugar production)	49
4.5.6. Average Gross Income per season (planting materials)	50
4.6. Factor affecting for sugarcane production	50
5. SUMMARY AND CONCLUSION	53
5.1. Summary	53
5.2. Conclusions	54
5.3. Recommendations	55
REFERENCES	56
APPENDIX	