

Acknowledgement

I would like to thank my pilot teachers who have been most helpful with their suggestions ,criticisms and compliments when the study seemed so overwhelming .They reinforced my fundamental belief science is of value to all students and has an important message for all of us. I would like to express my appreciation and indebtedness to Dr.Hag Hamad Abdalaziz for permission to cite unpublished work for carrying out. I wish to express my appreciation to many individuals and organizations who kindly gave .me permission to use data appearing in previously published work

Dedication

(To My Family (Father, Mother, Brothers and Sisters

To My Wife

.To My Friends and Colleagues

LIST OF CONTAINTS

S/No	Topic	Page
	Dedication	I
	Acknowledgement	II
	List of Contents	III
	List of Tables	VI
	List of Figures	VII
	Abstract	VIII
Chapter One	Introduction	
1.1	Background	1
1.2	Importance of Gum Arabic	3
1.3	Problem statement	3
1-4	Factors affecting Gum production	4
1.4.1	The physical factors	4
1.4.2	The length of the rainy season	4
1.4.3	The biotic factors	5
1.4.4	Socio-economic factors	7
1.4.5	Drinking Water Supply	7
1.5	The Objectives .	7
1.5.1	The main objective	7
1.5.2	Specific objective	8
1.6	Hypothesis	8
1.7	Research methodology	8
1.7.1	The study area	8
1.7.2	Time of Survey	8
1.7.3	Method of data collection	8
1.7.3.1	Data sources	9
1.7.3.2	Sample technique	9
1.6.3.3	Sample size	9
1.7.4	Method of data analysis	9
1.8	Organization Study	9
Chapter Tow	Literature Review	11
2.1	Definition of Gum Arabic	11
2.2	The Gum belt in Sudan	12
2.3	Land tenure	14
.2.4	Gum Arabic production	14
2.4.1	Tapping	15
2.4.2	Harvesting	16
2.5	Yield	16

2.6	Collection	17
2.7	Gum Arabic marketing	17
2.8	Gum production tend	17
2.9	Gum Arabic export	21
Chapter three	Research Methodology	23
3-1	Study area	23
3-1-1	Location	23
3-1-2	Climate	23
3-1-3	Soil	24
3-1-4	Population	24
3-1-5	the activities	24
3-2	Methods of data collection	24
3-2-1	Data Sources	24
3-2-2	Sample form	25
3-2-3	Sample technique	25
3-2-4	Sample Size	25
3-2-5	Time of survey	26
3-3	Methods of data analysis	26
3-3-1	Descriptive analysis	26
3-3-2	Gross Margins analysis	27
3-3-3	Regression analysis	27
3.3.3.1	Multiple regression	27
3.3.3.2	Linear production function	30
3.3.3.3	Cobb.Douglas production function	31
3.3.3.4	Select production function	32
Chapter Four	Result and Discussion	34
4.1	Socio-economic Characteristics	34
4-1-1	Age	34
4-1-2	Education level	34
4.1.3	Family size	35
4-1-4	Marital Status	36
4-1-5	Farm size	36
4.2	Prices	37
4.3	Floor Price timing	37
4.4	Water Problems	38
4.5	Gross Margins	39
4.6	Multiple regression	40
4.6.1	Specification of the model	40
4.6.2	Factors affecting Gum Arabic production	42
4.6.2.1	Gum Arabic price	43
4.6.2.2	Annual farm income	43

4.6.2.3	Production cost	43
4.6.2.4	Education level	43
4.6.2.5	Family size	44
4.6.2.6	(Area planted(farm size	44
4.6.2.7	Productivity	44
4.6.2.8	Water problems	44
4.6.2.9	Gender	45
Chapter Five	Summary , Conclusions and Recommendations	45
5.1	Summary	46
5.2	Conclusions	47
5.3	Recommendations	47
5.4	References	49
5.5	Accessories	51
5.5.1	Questionnaire	51
5.5.2	Regression	55

List of Tables

S/No	Topic	Page
------	-------	------

1.1	Declining of Gum Arabic	
2.1	Gum production tend and export quantity 1990/91 to 2007/08	19
3.1	The distribution of sample size	26
4.1	Producer's education level	35
4.2	Family size	35
4.3	Farm size according to areas	36
4.4	Farm size according to land tenure status	36
4.5	Area tapping in next season	37
4.6	Floor price timing	38
4.7	Water problem	38
4.8	(Gross margin of Gum Arabic production (SDG/mukhamas	39
4.9	(Gross margin of Kerkade and groundnut (SDG/mukhamas	40
4.10	Factors affecting Gum Arabic production	42

List of Figures

S/No	Topic	Page
1.1	Contribution of the Agriculture Sector in Gross Domestic Product	2
1.2	Factors affecting Gum Production	6
2.1	Gum Arabic belt in Sudan	13
2.2	Downpour Gum production during 1990/91 to 2007/08	20
2.3	Gum export during the period 1990/91 to 2007/08	22

Accessories

S/No	Topic	Page
5.1	Questionnaire	51

5.2	Regression	56
-----	------------	----

Abstract Abstract

This study was conducted in North Kordofan state, in Rwaba locality, which is one of the biggest areas of gum Arabic in the state. The overall objective of this study is to study the economics of gum production and measure the effect of important factors on gum

production. To achieve such purpose regression analysis was used, which relates the production to the factors affecting it. The descriptive analysis was applied to the primary data, which collected directly from producers through questionnaire in the study area during the season 2009/2010, using stratify sampling technique, sample size was hundred respondents .The descriptive analysis demonstrate that the illiteracy rate was high, the average of producers age was 55years old, and about 43 of producers have water problem, which affected negatively gum production. The gross margin analysis shown that the gum Arabic is less profitable in compare with other cash crops such as kerkade and groundnut. the results of the regression analysis demonstrate that the productivity, planted area, education level production cost and gum price are most effectives factors of gum .production

Finally the study recommended that

Setting real encourage price to improve gum production-1

Other generation income activities most be available to reduce farmers migration -2

Establishment and improve water sources, health and education services in the area-3

Improve the extension services to help producers to enhance their skills -4

Replanting gum trees to increase productivity of gum per mukhamas -5

Farmers association most is create to help them in production and marketing operations -6

الخلاصة

أجريت هذه الدراسة بولاية شمال كردفان , محلية أم روابة وهى من المناطق الرئيسية لإنتاج الصمغ العربى بالولاية . الهدف الأساسى من هذه الدراسة هو التدقيق من إقتصاديات غنتاج الصمغ العربى و قياس أهم العوامل المؤثرة فى إنتاجه .لتدقيق هذا الهدف تم جمع البيانات الأولية من المنتجين

مباشرة بواسطة الإستبيان خلال موسم 2009/2010 بإستخدام عينة مترافقة , وكان حجم العينة 100 منتج. تم إستخدام تحليل الهامش الربحى وتحليل الإنحدار فى تحليل البيانات. أوضحت نتائج الدراسة ان الصمغ العربى أقل ربحا عند م قارنته بالمحاصيل النقدية الاخرى مثل الكركدى و الفول السودانى , نتائج تحليل اللإنحدار أوضحت أن اللإننتاجية , المساحة المزروعة , المستوى التعليمى , تكاليف اللإننتاج و سعر الصمغ هى اكثر العوامل تأثيرا على إنتاج الصمغ. أوصت الدراسة بالآتى:-

- 1- وضع سعر تشجيع حقيقى لتحسين إنتاج الصمغ
- 2- ضرورة إيجاد أنشطة مدرة للدخل للحد من هجرة المزارعين إلى المدن
- 3- إنشاء وتحسين مصادر المياه والخدمات الصحية والتعليمية بالمنطقة
- 4- تحسين خدمات الإرشاد الزراعى لمساعدة المنتجين على تعزيز مهاراتهم فى إنتاج الصمغ
- 5- ضرورة إنشاء إتحاد أو جمعيات لمساعدة المزارعين فى عمليات الإنتاج والتسويق
- 6- إعلان سعر التركيز فى الوقت المناسب