## **CONTENTS**

- i. **Dedication**
- ii. Acknowledgment
- iii. Abstracts (English)
- iv. Abstracts ( Arabic )

	Chapter 1	Page
	Research plan	
1-1	Introduction	1
12	Statement of the problem	2
1-3	Research problem	5
1-4	Research questions	5
1-5	Purposes of the study	6
1-6	The importance of the study	6
1-7	Hypotheses	7
1-8	Definition of terms	
	Chapter 2	Page
	Literature Review	
2-1	Technology development	10
2-2	Source of new technology	10
2-3	Appropriate technology	11
2-4	Technology transfer	12
2-5	Adoption process	14
2-6	Two ways of development	15
2-7	The new trend: Target group partition	16
2-8	Mechanized farming	16
2-9	Extension unit (Damazin)	17
2-10	Sesame:(Ecology and structure)	17
2-11	Sesame Uses and Economic:	17
2-12	Production Areas in Sudan	18
2-13	Objectives of the agricultural research	18
	corporation program	

2-14	Reviewing of the recommended cultural	19
	practices for crop sesame	
	Chapter 3	Page
	Methods and procedures	
3-1	The place of the study	22
3-2	Population and sample selection	22
3-3	Data collection	23
3-4	Sources of the data	23
3-5	Data analysis	24
	Chapter 4	Page
	Finding and Discussion	Num
	I-personal characteristics analysis	ber
4-1	Distribution of respondents by age	25
4-2	Distribution of respondents by marital status	26
4-3	Distribution of respondents by Level of	26
	education	
4-4	Distribution of respondents by family size	27
	II-Economic characteristics analysis	28
4-5	Distribution of respondents by occupation	28
4-6	Distribution of respondents by income	28
	III Agricultural labors renting and cost analysis	29
4-7	Distribution of respondents by rabours renting	29
4-8	Distribution of respondents by labors cost	29
4-9	Distribution of respondents by knowledge of	30
	type of cultivars	
4-10	Distribution of respondents by extent of using	30
	improved seeds	
4-11	Distribution of respondents by source of	31
	improved seeds	
4-12	Distribution of respondents by way of preparing	31

	land	
4-13	Distribution of respondents by belief in	32
	recommended land preparation (attitude)	
4-14	Distribution of respondents by Level of	32
	knowledge of recommended land preparation	
4-15	Distribution of respondents by recommended	33
	crop sequence Knowledge	
4-16	Distribution of respondents by extent of using	33
	improved seeds practicing Recommended crop	
	sequence	
4-17	Distribution of respondents by extent of using	33
	improved seeds area cultivated with sesame	
4-18	Distribution of respondents by extent of using	34
	improved seeds suitability of recommended crop	
	rotation	
4-19	Level of knowledge of the recommended	34
	sowing date level of knowledge of the	
	recommended sowing date	
4-20	Distribution of respondents by belief that	35
	sowing in the recommended sowing day	
	increase the yield	
4-21	Distribution of respondents by extent of using	35
	improved seeds sowing date	
4-22	Level of knowledge of the recommended	36
	sowing date reasons of late sowing	
4-23	Level of knowledge of the recommended	36
	sowing date recommended seed rate knowledge	
4-24	Level of knowledge of the recommended	37
	sowing date practicing of Recommended seed	

	rate	
4-25	Level of knowledge of the recommended	37
	sowing date distribution of recommended seed	
	rate adequacy	
4-26	Level of knowledge of the recommended	38
	sowing date distribution of recommended	
	sowing method practice	
4-27	Level of knowledge of the recommended	38
	sowing date distribution of recommended	
	sowing method knowledge	
4-28	Level of knowledge of the recommended	39
	sowing date distribution of belief recommended	
	sowing method increase the yield	
4-29	Level of knowledge of the recommended	39
	sowing date distribution of respondents by	
	fertilization	
	Chapter 5	
5-1	Summery of the results	40
5-2	Conclusion	43
5-3	Recommendation	43
	References	45
	Appendix	

## List of tables & Figures

		Page
ble 1	Frequency distribution of respondents by age	25
ble 2	Frequency distribution of respondents by marital status	26
ble 3	Frequency distribution of respondents by level of education	26
ble 4	Frequency distribution of respondents by for family size	27
ble 5	Frequency distribution of respondents by occupation	27
ble 6	Frequency distribution of respondents by income	28
ble 7	Frequency distribution of respondents by agricultural labors renting	28
ble 8	Frequency distribution of respondents by cost of labors	29
ble 9	Frequency distribution of respondents by extent of improved seeds using	29
le 10	(Frequency distribution of respondents by improved seeds ( attitude	30
le 11	Frequency distribution of respondents by type of cultivars	30
le 12	Frequency distribution of respondents by the way of preparing land	31
le 13	Frequency distribution of respondents by belief of the recommended (land preparation(RLP	31
le 14	(Frequency distribution of respondents by knowledge of(RLP	32
le 15	Frequency distribution of respondents by recommended crop sequence (RCS) knowledge	32
le 16	Frequency distribution of respondents by practicing	32
le 17	Frequency distribution of respondents by total sesame area	33
le 18	(Frequency distribution of respondents by suitability of (RCS	33
le 19	Frequency distribution of respondents by the recommended sowing date knowledge	34
ole 20	Frequency distribution of respondents by belief sowing date increase yield	34
le 21	Frequency distribution of respondents by sowing date	35
le 22	Frequency distribution of respondents by the reason of sowing late	35
ole 23	Frequency distribution of respondents by recommended sowing date knowledge	36
le 24	Frequency distribution of respondents by recommended sowing date practicing	36

le 25	Frequency distribution of respondents by 1.5 Kg /Fed abundance	36
le 26	Frequency distribution of respondents by the recommended sowing method (RSM) practicing	37
le 27	(Frequency distribution of respondents by knowledge of(RSM	37
le 28	Frequency distribution of respondents by belief sowing by (RSM) .increase the yield	38
le 29	Frequency distribution of respondents by fertilization	38