

Table of Contents

Contents	Page
Examination Decision	ii
Dedication	iii
Acknowledgments	iv
Statement of Author	v
Biographical of the Author	vi
Table of contents	vii
List of figures	xi
List of table	xii
List of Abbreviations	xii
Abstract	xiv
1. Introduction	1
1.1. Problem statement	1
1.2. purpose of the study	4
1.3. Objectives of study	4
1.4. Hypothesis of the study	5
1.5. The study structure	5
2. Literature Review	6
2.1. Classification of production systems in sheep and goats	6
2.1.1. Traditional or extensive production system	7
2.1.1.1. Advantages of extensive (traditional) system	8
2.1.1.2. Disadvantages of extensive (traditional) system	8
2.1.2. Semi-intensive system	9
2.1.2.1. Advantage of semi-intensive system	9
2.1.2.2. Disadvantage of semi-intensive system	9
2.1.3. Intensive system	10
2.1.3.1. Advantage of intensive system	10
2.1.3.2. Disadvantages of intensive system	11
2.2. Distribution of sheep and goats in the study area	11
2.3. Socio-economic factor	12
2.3.1. Family size	13
2.3.2. Family members' classification	13
2.3.3. Management of sheep and goats	13
2.3.4. Economical factor.	14
2.3.4.1. Type of housing or bran in sheep and goats	14
2.3.4.2. Sheep and goats feed source and diet	15
2.3.4.2.1. Price and cost of feed	16
2.3.4.2.2. The forage feed in sheep and goats	17
2.3.4.2.3. Rangeland and type of grazing in production systems	18
2.3.4.2.4. Grazing system using in production systems	19

2.3.4.2.4.1. Continuous grazing system	19
2.3.4.2.4.2. Rotational grazing system	19
2.3.4.2.4.3. Current management practices of extensive systems	20
2.3.4.2.4.4. Time and hour for grazing	20
2.3.4.3. Source of water	20
2.4. Herd of sheep and goats	21
2.5. Special feature of sheep and goats	23
2.5.1. Awassi sheep	23
2.5.2. Assaf sheep	24
2.5.3. Domestic goats (black goats)	24
2.5.4. Shami goats	25
2.6. Economic assessment of sheep	25
2.7. Marketing factor	28
2.7.1. Market location	29
2.7.2. Market form and price	29
2.8. The profitability in the sheep and goats	30
3. Methodology	31
3.1. Introduction	31
3.2. Research Method	31
3.3. Research Instrument	32
3.4. study area	32
3.4.1. Description of the study area	32
3.4.2. The reason for selecting these site	35
3.5. Survey and data collection	35
3.5.1. Informal survey	35
3.5.2. Formal survey	36
3.5.3. Study sample	37
3.5.4. Data collection	38
3.6. Data analysis	38
3.7. Determinants of the research	38
4. Results	39
4.1. Distribution of sheep and goats owner in study area	39
4.2. Socio-economic factor	39
4.2.1. Human resources	40
4.2.1.1. Family size	40
4.2.1.2. Family members classification	40
4.2.1.3. Gender distribution of the farm owner	40
4.2.1.4. Age distribution of farm owners	41
4.2.1.5. Experience of the farm owners	41
4.2.1.6. Main profession of the farm owners	42
4.2.1.7. The education level of the farm owner	42
4.2.2. Management resource	43
4.2.2.1. The labor distribution according to gender in production systems.	43
4.2.2.2. Responsibilities & work distribution among the farm members	43

4.2.3. Economical resources	44
4.2.3.1. The barn types and constructions material	44
4.2.3.2. The feed resource of sheep and goats in three production systems	45
4.2.3.3. Feed stuffs	45
4.2.3.4. The pasture in extensive and semi-intensive production systems	46
4.2.3.4.1. Reliance on grazing as a source of sheep and goats feed	46
4.2.3.4.2. Grazing area	47
4.2.3.4.3. Grazing season	47
4.2.3.4.4. Time and the grazing method	48
4.2.3.4.5. The pasture ownership	48
4.2.3.4.6. Movement freedom and herding process	49
4.2.3.4.7. The grazing restrictions	50
4.2.3.5. Land ownership/tenure status	51
4.2.3.6. Feeder and drinker design and materials	52
4.2.3.7. Water source	52
4.3. Herd structure	53
4.3.1. Sheep and goats breed	53
4.3.2. Reproduction and production of sheep and goats	54
4.3.2.1. Meat production	55
4.3.2.2. Mortality rate	55
4.3.2.3. Milk and milk productions	55
4.4. market system	56
4.4.1. Place of marketing	56
4.4.2. Price of marketing	57
4.5. Profitability of sheep and goats at the three production systems	57
4.5.1. Profitability of sheep and goats at the intensive PS	58
4.5.2. Profitability of sheep and goats at the semi-intensive PS	59
4.5.3. Profitability of sheep and goats at the extensive PS	59
5. Discussion	61
5.1. Distribution of sheep and goats owner in study area	61
5.2 Socio-economic factor	61
5.2.1. Human resources	61
5.2.1.1. Family size	61
5.2.1.2. Family members classification	62
5.2.1.3. The gender of farm owner	62
5.2.1.4. Age of the farm owner	63
5.2.1.5. Experience of farm	63
5.2.1.6. Main profession of owners	64
5.2.1.7. The education level of the farmers	64
5.2.2. Management resource	65
5.2.2.1. Labor distribution according to gender in production systems	65
5.2.2.2. Responsibilities & division of labor gender	65
5.2.3. Economical resources	66
5.2.3.1. Type of barn in sheep and goats at three production systems	66

5.2.3.2. The feed resource of sheep and goats in three production systems	66
5.2.3.3. The concentrated feed in sheep and goats	67
5.2.3.4. The forage feed in sheep and goats	68
5.2.3.4.1. Reliance on grazing as a source of sheep and goats feed	68
5.2.3.4.2. Grazing area	68
5.2.3.4.3. Grazing season	68
5.2.3.4.4. Time and the grazing method	68
5.2.3.4.5. Ownership of pasture land	69
5.2.3.4.6. Responsible grazing process	69
5.2.3.4.7. Movement freedom and herding process	69
5.2.3.4.8. The grazing restrictions	70
5.2.3.5. Land ownership/tenure status	70
5.2.3.6. Feeder and drinker design and materials	70
5.2.3.7. Water source	72
5.3. Herd structure	72
5.3.1. Sheep and goats breed	73
5.3.2. Reproduction and production of sheep and goats	73
5.3.2.1. Meat production	74
5.3.2.2. Milk and milk productions	74
5.4. Market location and condition	75
5.5. Profitability of sheep and goats at the three production systems	76
5.5.1. Profitability of sheep and goats at the intensive PS	77
5.5.2. Profitability of sheep and goats at the semi-intensive PS	77
5.5.3. Profitability of sheep and goats at the extensive PS	78
6. Conclusion and Recommendation	79
6.1. Conclusion	79
6.1.1. Human Resources	79
6.1.2. Management Resources	79
6.1.3. Economical Resources	79
6.1.4. Herd structure	80
6.1.5. Market system	80
6.1.6. Profitability for the production systems in sheep and goats	80
6.2. Recommendation	81
7. References	82
Appendix	89
Arabic abstract	96

List of figures

Table	Page
Figure 1: Map of Hebron district, with classification of the study	32
Figure 2: Percentage of sheep distribution at west bank and Hebron	33
Figure 3: Percentage of goat's distribution at west bank and Hebron	33
Figure 4: Percentage of sheep distribution at Hebron distract	34
Figure 5: Percentage of goats distribution at Hebron distract	34
Figure 6: The percentage of family member classification in study area	40
Figure 7: The percentage male and female at the daily business particles	43
Figure 8: The percentage of responsibilities and work distribution among farm members	43
Figure 9: The percentage of feed resources for sheep and goats at 2008 in study area	45
Figure 10: The folk of sheep and goats movement in the study area	49
Figure 11: Family member move with flock of sheep and goats	50
Figure 12: The herding of sheep and goats at study area	50
Figure 13: kind of grazing restrictions in study area.	51
Figure 14: Source of water in study area	53
Figure 20: Percentage of milk products sales by the sheep and goats in study area	55

List of Table

Table	Page
Table1: Number of sheep and goats, in the PT by governorate in 2007-2008	2
Table2: Number of sheep in Hebron district and in the study area 2002-2008	12
Table 3: Number of goats in Hebron district and in the study area 2002-2008	12
Table 4: local production of animal feed in PT 2003-2004	17
Table 5: Number of sheep and goats in PT Hebron district and study 2004-2005	22
Table 6: Milk production in PT and Hebron district at 2004-2005 (metric Tone)	27
Table 7: Meat production in PT and Hebron district at 2004-2005 (metric Tone)	27
Table 8: Value of sheep and goats meat and milk production in PT in 2004-2005	28
Table 9: Distribution of sheep and goats owner according to three production systems in the study area	39
Table 10: Average of family size for the farm owner in the study area	40
Table 11: The percentage of gender of owner according to production system	41
Table 12: The percentage of the farm owner according to age in study area	41
Table 13: The percentage of farm owner according to experience in three PS	41
Table 14: Percentage of the main profession for farm owner in three PS	42
Table 15: The percentage of education level for the farm owner in three PS	42
Table 16: The percentage of bran type and constructions material in animals at three production systems	44
Table 17: The percentage of feedstuffs according to production systems in sheep and goats	46
Table 18: The percentage of the pasture quantity according to production systems	47
Table 19: The percentage grazing area according to the production systems	47
Table 20: Number of month for grazing animals in production systems	48
Table 21: The percentage of type of grazing use in the production systems	48
Table 22: The percentage of ownership/tenure pasture in production systems	49
Table 23: The percentage of farmers who found restrictions for grazing	51
Table 24: Percentage land ownership/tenure in study area	52
Table25: The percentages and cost of feeder and drinker in sheep and goats.	52
Table26: The percentages breed of sheep and goats in three production	54
Table 27: The percentage of output in sheep and goats used for sale and home	56
Table 28: The percentage of marketing canal for sheep and goats products	56
Table 29: The price of sheep and goats products according to farmers.	57
Table 30: Fixed and variable cost, return, profits, in three production system.	58
Table 28: Profitability of the intensive production system in study area	58
Table 29: Profitability of the semi-intensive production system in study area	59
Table 30: Profitability of the extensive production system in study area	60

List of Abbreviations

ADOH	Agriculture Department on Hebron
ARIJ	Applied Research Institute Jerusalem
A.R.O	Agricultural Research Organization
BN	Bani-Na'im
BT	Beit-Omar
CP	Crude Protein
DM	Dry Matter
DRC	Domestic Resource Cost
FAO	Food and agriculture organization
GDP	Gross Domestic Production
EARO	Ethiopian Agricultural Research Organization
EE	Ether Extract
GIS	Geographical Information System
GS	Gaza Strip
HL	Halhoul
ILCA	International Livestock Centre for Africa
JD	Jordan Dinar
LRC	Land Research Center
MoA	Ministry of Agricultures
MoPIC	Ministry of Planning and International Cooperation
MP	Meteorological Palestinian
PA	Palestine Authority
PCBS	Palestine Center Bureau of Statistics
PMOA	Palestine Ministry of Agriculture
PT	Palestine Territories
SPSS	Statistical Package for Social Science
SR	Sa'ir
PS	Production system
USA	United State of America
UAWC	Union of Agriculture Work Committees
WB	West Bank