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The impact of land confiscation for the separation wall
on farming system management and development
in Jenin district

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on farming system management and development
in Jenin district

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Thesis Approval

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Dedications

A very special gratitude to my parents, for their tolerance and support throughout my 32 years life. I'm Thankful to God for having them as parents.

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Khalid Ali Mustafa Suleiman

Declaration

I certify that this thesis submitted for the degree of Master is a result of my own research, except where otherwise acknowledged, and it (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signature:

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Date: 23/11/2005

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Definitions and abbreviations

- Farming systems approach: an approach that can be applied in farming, or at rural development projects, programs and strategies. It provides the philosophy, the concept and the strategy for developing and introducing solutions to problems at the farm/household and village level.
- Farming system: the entity comprising family, farm and household where needed, goals and the resulting behavior of those living in the household and on the farm are of paramount interest. They are recognized through activities on farm, in the household and outside the farm.
- Gross Margin: can express the economic efficiency of production alternatives and benefits to the relevant resource such as land, labour, capital and water are estimated.
- Economic efficiency: is mainly related to the increase of gross margin per unit of area, amount of irrigation water and labour input. This provides information for defining the economic optimal cropping pattern system and water allocation among crops.
- Cash inflow: is used to cover farm cash out-flow and household expenses. The rest is put aside as savings, or used for farm investments such as reclaiming more land to increase the farm area.
- Cash outflow: comprises payments for household expenses, for production inputs (water, seed, fertilizers, pesticides, labour etc.), for investments in the farm (purchase of animals, new fruit trees and land reclamation) and The household expenses include payments for food, medicine, energy, water, clothing, education, and for social purposes.
- Cash balance is the difference between inflow cash and the outflow cash.
- Liquidity : is defined as the ability to meet one's financial obligations on schedule. In the case of farms as family enterprises, farm liquidity and family liquidity are inseparable
- The racial separation wall: it's the expansion annexation wall since it was built on a Palestinian lands in 1967.
- Buffer wall zones: involve extensive land requisition and the clearing of land and buildings along 360 km path.
- Back- to – back system: the transport of agricultural goods using a requiring off-loading and re-loading between vehicles at check points and barriers.
- Socio – economic analysis: The analyses that measure the future impact of any change by comparing the development with and without changes. More precisely, it is used to measure the impact of different strategy alternatives, in order to see any change in the farm, off-farm and household systems.

- Coping strategy Index (CSI): it's a mechanism of adopting a variety of short-term that has helped people get by till now, but the risk is undermining their ability to recover in the future.
- Organic agriculture : is one of several approaches to sustainable agriculture and a system of food production and consumption proper to environmentally- and health-conscious people, and many of the techniques used (e.g. inter-cropping, rotation of crops, double-digging, mulching, integration of crops and livestock) are practiced under various agricultural systems. What makes organic agriculture unique, as regulated under various laws and certification programs, is that: (1) almost all synthetic inputs are prohibited, and (2) `soil building' crop rotations are mandated.
- Agronomic approach: is generally understood that the proper use of natural resources such as water increases crop yields, social and economic efficiencies are also qualified by economic criteria.
- MOA: Ministry of agriculture
- OPT.: occupied Palestinian territories
- MOSA: Ministry of social affaires
- PNA.: Palestinian national authority
- MOE.: Ministry of education
- WFP.: World food program
- FAO.: Food and agriculture organization
- PENGON.: Palestinian environmental NGOs network
- IPM.: Integrate pest management
- PARC. : Palestinian agriculture relief committees.
- UN.: United nation
- PCBS: Palestinian central bureau of statistics.
- PNBS: Palestinian national bureau of statistics.
- PANIC: Palestinian national information center.
- HCIDC: House of comomos international development committee.
- FORUM.: Palestine private sector
- OCHA: Office for the coordination of the humanitarian affairs.
- UNESCO: United nation education and science cultural organization
- GDP: General domestic product
- MIAS: Market information and analysis system

Abstract

With the rising of population, demand for agricultural land and food production is rising too, while the natural resources (land and water) become more limited.

Therefore, a state of conflict and competition over land and water resources has arisen and continues to prevail, since the agriculture sector has contributed to the over all income especially women activities, provides people with most of their food needs and provides work opportunity for those who were forbidden to go to Israel to work.

The process of confiscation the land for the above reasons, follow these means: Land confiscation for security needs included Jordan valley lands about 190 thousand donoms, Land confiscation in a claim of governmental lands which contributes about 13% from the area of west bank, which is the most familiar, Land confiscation for establishing settlements or expansion it, and to create by-pass roads for their use, and the settlements that founded from 1977 – 1983, with a total of 15165 donoms in Jenin area from 938028 donoms ,and they are: Harmeesh, Hannaneet, Rehan, Shakeed, Mevodotan, Ganim, Qadim, Sa Nur, Homesh and Arraba Military Post

And finally the most of the confiscated fertilized land was taken by the racial separation wall, and we aren't to forget the by-pass roads that connect settlements with green line (1948), these roads takes over 1650 donom, so we will focus in our study on the racial separation wall in Jenin district.

The overall objective of the research that's conducted in the period from May 2004 to June 2005, is studying the impact of land confiscation and the natural resources on the agriculture management systems in Jenin district to develop, determine and analyze the measures of the socio - economic impacts from the use of limited land and water in such way that improve and sustainable living standards of the farming population.

For descriptive and comparative study, Information was collected by questionnaires through interviews in means of family survey, and secondary data from different sources. The family survey include the farmers in two areas, the selection of the locations depended on the most affected families by the separation wall and the most confiscation of natural resources, which led to escalate unemployment, so the locations in area 1 are Anin, Al-Taybeh and Zboba at the north west, Tura Ash Sharqeia and Al Gharbeia, Ya'bad, Nazlet AL-Sheikh Zeid, Om Dar, Al-Khuljan, Zabda and Daher Al- A'bed in area 2 at the south west of Jenin.

The process of the separation wall construction had a major economic impact, while the relative intensity of the impact varies by location and economic activity; its immediate effects included *the destruction or confiscation of agricultural land and assets*: a total of 1094 donoms just confiscated from 2068 donoms of the targeted group in the study of considered area, that the farm income decreased in area 1 by 9.23% after the wall, since it depends on lands in farming, while in area 2 they depend on animal breeding so the percentage increases by 4.96%.

And the reason is *Inaccessibility to agricultural land like grazing lands (pastures) and assets, including water resources that are very expensive and not available. Added limitations on the mobility of people and goods (marketing by using of pass roads), therefore higher transactions costs*: Marketing faces 67.68 % in area 1 and 66.67 % in area

2 for farming production of farmers, the productivity is subjected to severe impacts from the political situation especially in area 2 for the animal production and in area 1 for olive oil production. The alternative of Israeli markets is the wholesale market in Nablus or Jenin, and a temporary one in Quabatia, with its extensive trade of large quantities of agricultural products; as a result 65% of the farmers prefer to sell their goods and products at the farm or in their homes.

For our recommendation, the priority should be taken into consideration in most affected villages by land confiscation to improve all public services (education, health and basic infrastructure) from all aspects, with a number of recommended actions could be applied to determine the basic needs of compounds and different sites in Jenin district through focusing on negative aspects of the separation wall, so to minimize the damages or even eliminate it, such as developing human resources and supporting the cooperative level as agricultural co-operatives, social services, and establishing active youth centers with vocational training for low income laborers.

Encourage sectors that provide job opportunities to create new markets for Palestinians labor forces through developing productive sector and agricultural sector by governmental and NGO's (International or local) through:

Establish new agricultural roads to ease the farmers transitions to their land and markets, rehabilitate new lands for planting, use consecutive planting, especially plastic houses nurseries, and develop some economical value crops like olive and tobacco, rehabilitate old water wells and small streams to elevate quality water and then increase the planting area, recycle water from plastic houses and home use to irrigate farms by using water harvesting system, establish profitable veteran clinics to provide health service for animal assets, rehabilitate pines and fields especially at the east part of the district and secure emergency food aid for those who have lost their homes and land due to the wall. And get advantage of international, national, and holly occasions to empower Palestinians about their national and social duties which achieve cooperative society.

Table of Contents

#	Subject	Page
	Dedication	---
	Declaration	I
	Acknowledgments	II
	Definitions and abbreviations	III
	Abstract in English	V
	Table of contents	VII
	List of tables	IX
	List of figures	X
	List of Appendices	X
Chapter One: Back ground of the racial separation wall		
		1
1.1	Introduction	1
1.2	Justifications of the study	5
1.3	The problem of the study thesis	6
1.4	The study thesis questions	6
1.5	Objectives and hypothesis	7
1.6	Previous studies	7
1.7	Organization of the study	8
Chapter Two : Methodology		
		9
2.1	Introduction	9
2.2	Selection of the Study Area	9
2.3	Collection of the data	11
2.4	Questionnaire and Interviewing	11
2.5	Data Processing	11
2.6	Limitations of the study	12
Chapter Three : Farming systems analysis		
		14
3.1	Family resources analysis	14
3.1.1	Gender	14
3.1.2	Educational status of household leaders	15
3.1.3	Family labour force	16
3.1.4	Division of labour	17
3.1.5	Work place	18
3.1.6	Decision making and share cropping	18
3.1.7	The ownership and land use patterns of the farm land	18
3.1.8	Livestock resources	21
3.1.9	Water resources	24
3.1.10	Capital resources	24
3.2	Problems in crop production	25
3.3	Problems in livestock production	26
3.3.1	Input related problems	26
3.3.2	Animal disease related problems	26
3.3.3	Grazing related problems	27
3.4	Farmers future expectations	27
3.5	Farmer's hopes for the next generation	28
3.6	Future objectives	28
3.7	Gross margin analysis of major crops	29

3.7.1	Gross margin for vegetable crops	30
3.7.2	Gross margin for field crops	30
3.7.3	Gross margin for fruit trees	31
3.8	Gross margin analysis of livestock production	33
	Chapter Four :The impact of land confiscation by the separation wall on farming system management and development in Jenin district	34
4.1	The Impact of the separation wall on the wall villages	34
4.2	The destruction and damages of agricultural sector by the wall through the Intifada in Jenin district:	34
4.2.1	Indirect damages (Unemployment)	34
4.2.2	Direct damages (Land and water destructions and confiscations)	36
4.3	The socio-economic situation of the families in the wall villages	37
4.3.1	Farm income	37
4.3.2	Off farm income	39
4.3.3	Liquidity and cash balance	40
4.3.4	Household expenditure	41
4.4	Physical and economical access to food	41
4.5	Coping strategies	42
4.6	Consumer response to the organic products and improving local seeds	44
4.7	Marketing and prices	46
	Chapter Five :Conclusions and recommendations	47
5.1	Summary	47
5.2	Conclusions	48
5.3	Recommendations	52
	References	54
	Appendices	56
	Abstract in Arabic	73

List of Tables

#	Title of the table	Page
1.1	The settlements in Palestine, August 2005	1
2.1	shows the source and type of analysis of primary data	11
3.1	Demographic characteristics of household leader and families	15
3.2	The work division of the surveyed families around the wall area villages in area 1 and area 2, before and after the wall	17
3.3	Division of labour of farming process, in area 1 and area 2 by gender	17
3.4	The percentage area before and after the wall in area 1	18
3.5	The percentage area before and after the wall in area 2	19
3.6	Growing crops in the study area 1 (Don.) and production (kg/total don.), in wall area villages, before the wall	19
3.7	Growing crops in the study area 2 (Don.) and production (kg/total don.), in wall area villages, before the wall	19
3.8	Growing crops in the study area 1 (Don.) and production (kg/total don.), in wall area villages after the wall	20
3.9	Growing crops in the study area 2 (Don.) and production (kg/total don.), in wall area villages after the wall	21
3.10	Sheep breeding (average number/farm) in the surveyed families in Area 1&2 of wall area villages	22
3.11	Goats breeding (average number/farm) in the surveyed families in Area 1&2 of wall area villages	22
3.12	Cows breeding (average number/farm) in the surveyed families in Area 1&2 of wall area villages	23
3.13	Hens breeding (average number/farm) in the surveyed families in Area 1&2 of wall area villages	24
3.14	Percentage of families owing the tools and equipment, wall area villages,	24
3.15	Farmer's opinions on the future (%), wall area villages	27
3.16	Farmers' wishes regarding the careers of their children (%), wall area villages	28
3.17	Farmers' wishes regarding their work (%), wall area villages	28
3.18	Percentage of crops in the wall villages before the wall	39
3.19	Percentage of crops in the wall villages after the wall	30
3.20	Gross margins for field crops in the wall area villages before the wall	30
3.21	Gross margins for field crops in the wall area villages after the wall	31
3.22	Gross margins for olives crops in the wall area villages before the wall	32
3.23	Gross margins for olives crops in the wall area villages after the wall	32
4.1	Average income for the wall area villages in area 1 and 2 before and after the wall, in Palestine 2004	35
4.2	Last statistics of the wall in Jenin villages, 19/3/2003 by Jenin MoA	36
4.3	The descriptive percentage of the farm income and the off – farm income before the wall in wall villages,	39
4.4	The descriptive percentage of the farm income and the off – farm income after the wall in wall villages	40
4.5	Cash balance (in Jd) in the wall villages before the wall	40
4.6	Cash balance (in Jd) in the wall villages after the wall	40
4.7	Analysis of household expenses (Mean values in Jd/Family), wall villages	41
4.8	CSI mechanisms analysis in area 1 & 2 in the wall area villages	44

4.9	The analysis of the consumer attitude to the improving and local seeds, in wall area villages	45
4.10	The analysis of the consumer attitude to the organic products, in wall area villages	46
4.11	The trends of marketing and the awareness of the prices	46

List of Figures

#	Title of the Figures	Page
2.1	The percentage number of questionnaires per village	10
2.2	Map of the wall area villages	13
3.1	Educational status of household heads (%), wall area villages in area 1	16
3.2	Educational status of household heads (%), wall area villages in area 2	16
3.3	The total area in the study area with the total production for each crop Before the wall, in the wall area villages	20
3.4	The total area in the study area with the total production for each crop after the wall, in the wall area villages	21
3.5	The total of live stock rising (average number/farm) in the surveyed families in Area 1, wall area villages,	22
3.6	The total of live stock raising (average number/farm) in the surveyed families in Area 2, wall area villages	23
4.1	Main source of food in the wall area villages, Palestine 2004/2005	42

List of Appendices

#	Title of the appendices	Page
6.1	The total area in the study area with the total production for each crop before the wall, in the wall area villages, Palestine 2004	57
6.2	The total area in the study area with the total production for each crop After the wall, in the wall area villages, Palestine 2004	57
6.3	Total of live stock breeding (average number/farm) in the surveyed families in Area 1&2 of wall villages, Palestine, 2004	57
6.4	Last statistics of wall area villages, 19/3/2003 by Jenin MoA	58
6.5	Damages in Jenin district, January 2003 by Jenin Department of Agriculture	58
6.6	Damages in the folks of cattle (house of live stock)	58
6.7	The direct losses of Intifada and the separation wall Till 2003 as the statistics made by the Agricultural Department in Jenin district	59
6.8	Indirect losses	59
6.9	The analysis of cash out flow in wall area villages before the wall, Palestine 2004/2005	59
6.10	The analysis of cash out flow in wall area villages after the wall, Palestine 2004/2005	60
6.11	Map displays the wall in the west bank	61
6.12	Questionnaire	62

Chapter one

Background of the Racial Separation Wall

1.1 Introduction

Israel has used a complex legal and bureaucratic mechanism to take control of more than fifty percent of the land in the west bank, which was used mainly to establish settlements and create reserves of land for the future expansion of the settlements (Palestinian national bureau of statistics (2001).

The principal tool used to take control of land was to declare it "state land." This process began in 1967, and is based on a manipulative implementation as the Ottoman lands law of 1858, which applied in the area at the time of occupation, other methods used by Israel to take control of land is seizure for military needs, declaration of land as "abandoned assets," and the expropriation of land for public needs, each of these methods are based on a different legal foundation. In addition, Israel has assisted private citizens purchasing land on the "free market." (B'Tselem (2004).

The process used in taking control of land breaches the basic principles of its due procedure and natural justice. In many cases, Palestinian residents were unaware that their land was registered in the name of the state, and by the time they discovered this fact, it was too late to appeal, the burden of proof always lies on the Palestinian claiming ownership of the land, even if he meets this burden, the land may still be registered in the name of the state on the grounds that it was transferred to the settlement as shown in table 1.1 (Office for the coordination of the humanitarian affairs in the occupied Palestinian Territories(2005).

Table 1.1: The settlements in Palestine, August 2005

Area	Number of settlements	Total surface area in donom
West Bank	167	84199
Gaza Strip	18	17636
Total	185	101835

The agriculture sector play the main role in Palestinian economy, since it secure the food and help creates new job opportunities for the Palestinians, and also it is a part of gross domestic product in addition to the hard availability of currencies through the profits of exportation (Arij (2002).

With the rising of population, demands for agricultural land rises as well as the food demands, while the natural resources (land and water) becomes more limited (Palestine, Ministry of Agriculture, 2003).

On the other hand, the excessive use of chemicals and pesticides was escalated in the last decade, as we start using more developed farming systems, the occupation policies controlled our agriculture economy by borders and force us to deplete what is remaining from our resources (after they had finished their racial wall), by using what is lift from the bad technology in agriculture systems.

As a result of using chemicals and what is left of the land after confiscation, the farmers were motivated to look for new techniques to improve their farming systems and keep their natural resources from depletion as Integrate Pest Management and organic agriculture.

Therefore, a state of conflict and competition over land and water resources has risen and continue to prevail, which left an adverse impact on the Palestinians standards of living in Jenin district during and after building the separation wall, Israel's destruction of infrastructure, natural resources, homes and land is attempt to create a living situation that is not economically or structurally viable for living and tear social relation a part of the within communities.

Besides, the result the Israeli start to feel insecure and hopeless towards the suicide bombers operations, some of them have the urge to get ready of the Palestinian by killing or deport them abroad, the idea of the separation wall was being put to separate the Palestinians compounds of 1967 from the Israelis of 1948 territories and tighten up security on the borders, as a solution to ensure Israeli security and safety.

Development and military occupation do not combine. As a result of the high risk of destruction, the focus of the development has been on "soft" development and particularly on building human capacity (United nation education and science cultural organization, 2002).

The process of confiscation the land for the mentioned reasons, go as follow:

1. Land confiscation for security needs including Jordan valley lands about 190 thousand donoms.
2. Land confiscation in a claim of governmental lands contributes about 13% from the total area of west bank (this type is the most familiar).
3. Land confiscation for establishing or expansion settlements, also to create by- pass roads for their use with 15165 donoms from 938028 donoms area of Jenin governorate, and the important settlements are: (Sana' Badawi, October 2005, personal contact).

1. Ganim settlement

It is situated in the eastern part of Jenin city, bordered by 'Aaba village and Al-Almaniya are of Jenin city at the north, the town of Deir Abu D'eef at the east, Um-at-Tut village and Khirbit Sab'aen at the south, and at the west by Qadim settlement, Jenin city and As-Sweitat area.

This settlement was established in 1983, on the land of Deir Abu D'eef and 'Aaba villages. Its area 185 donoms; the settlers expanded it in 1999, thus taking more land from A'aba Ash-Sharqiya villages, this settlement was established for civil purposes and it is one of the settlements linked to 'Afula. It includes about 120 housing units.

2. Qadim settlement

It is close to Ganim settlement, surrounded by 'Aaba village to the east and Al-Almaniya area of Jenin city to the north. It was established on governmental land and countryside in

1981, its area is about 166 donoms and constructed for civil purposes and it is officially linked to 'Afula, It consist about 80 housing units.

At the beginning of Intifada, it has become a military base for the Israeli army to launch attacks on Jenin city and nearby villages.

And we aren't to forget the by-pass road that connects Qadim and Ganim with Al Jalma check point (borders of green line 1948), this road eats up 225 donoms from the east area of Jenin.

3. Sa Nur settlement

It situated on the main road of Jenin-Nablus near 'Aja, Sa Nur and Jaba' villages, about 77 donoms in area; consist old building known as "Al-Muqata'a" and an old mosque which has been transformed into a synagogue, it has good infrastructures , 20 mobile houses and 20 caravans.

4. Homesh settlement

It is situated to the south east of Silat ad-Daher village, it has a distinguish geographical site due to its height on Al-A'teibat mountain, about 680 meters above sea level, it is built on a governmental land, connected to Silat Ad-Daher village, about 10000 donoms in area, it was established in 1978 and connected to Jenin-Nablus main road by one kilometer branch roads.

It has about 105 housing units. Its internal prepared branch roads, it has a sewage network linked to a treatment net; also has a food factory and automobile electric signaling apparatus, has a services council too.

5. Arraba Military Post

It is located near Mevo Dotan settlement, constructed for military purposes. The total area owned by the government is 12204 donoms, and the individual ownership equals to 162554 donoms.

And also there are five settlements in Jenin area; they are (Palestinian national bureau of statistics (2005) :

1. Harmeesh: 108 donoms of Frassen area in Jenin district, founded in 1983
2. Hananeet: 496 donoms of Ya'bad area in Jenin district, founded in 1981
3. Rehan: 294 donoms of Barta'a Al-Sharqeia area in Jenin district, founded in 1979
4. Shakeed: 360 donoms of Ya'bad area in Jenin district, founded in 1981
5. Mevo dotan: 258 donoms of Arraba and Ya'bad area in Jenin district, founded in 1983

And finally the by-pass roads that connect Ya'bad settlements and the green line confiscate 1425 donoms from Jenin area.

4. The confiscation of fertilized land by the racial separation wall is the most harmful for Palestinians' life than any presence of settlements, five of which, (Ganim, Qadim, Sa Nur, Homesh, Arraba Military Post) were evacuated later on August 2005, and the land was

given back to the Palestinians, so we will focus in our study on the racial separation wall in Jenin district.

The idea of separation between 1948 and 1967 land starts to dominate the political talks as a political or security solution, but now it's been a security solution issue only, although some of the Israeli try to enforce it as a political solution, but it hasn't been known yet if it is going to represent both, the most dangerous settling plan that Israeli came up with in the process of their occupation to the rest of the Palestinian territories in 1967, is to confiscate the most rich land with source of water in the west bank.

The Israeli start to build the separation wall in 2003, start off at 8 meters height and 750 meters length, made from a number of barriers of deep cemented caves, high electrical wired and electronic radars in addition to the remote area among these barriers (Agricultural associations and statistic center (2003).

The separation wall will be confiscated about 23.4% from the west bank total area, in its early stage, starts from Salem near Jenin at 45 kilometers in length to Kanah settlement near Tulkarem at 138 kilometers in length.

The first phase of construction involving extensive land requisition and clearing of land and buildings along an approximately 126 kilometers route through the north-western governorates of Jenin, Tulkarem, Qalquilia, and Salfit, were officially launched on June 16th 2002. the Jenin, Tulkarem, and Qalquilia governorates have 37 % of all the agricultural land in the West Bank, work is also underway on 21 kilometer in the Bethlehem and Jerusalem areas; of these 147 kilometers, 80 kilometers were scheduled to be completed by May 2003 with the remaining 67 were finished by July 2003 (Palestinian Agriculture Relief Committees (2004).

As of December 2002, the separation wall runs through a substantial part of the best and most productive agricultural land of the West Bank. Approximately 1000000 donoms of land have already been confiscated. causing direct damage to approximately 53 communities in Jenin, Tulkarem and Qalquilia governorates affecting an estimated population of 141 800 has been documented including the destruction of some 84000 donoms of olive and other fruit trees, 615 donoms of irrigated land (including greenhouses), 37 kilometer of water networks and 15 kilometer of agricultural roads. In addition, a total of 2380000 donoms of land are being cut off between the green line and the separation wall, with 57% of this land cultivated, mostly with olive trees and field crops (Al democracy (2005).

More than 210000 Palestinians live in 1967 towns suffer a great deal of problems and complications as a result of this wall, as of 13 towns sheltered 117000 Palestinians became trapped between the wall and the green line, along with the depth wall located at the east of the separation wall secluded 19 villages which sheltered 128500 Palestinian.

An additional of 36 towns located to the east of the separation wall or the depth wall, which sheltered about 72000 people, have been separated from their farms and fields located at west of the wall (Palestinian Environmental NGOs Network (2003).

The first phase of construction will incorporate 26 “agricultural crossings” along its route, with an additional of five crossings in the “depth barriers” located further to the east.

Palestinian farmers will reportedly be able to have an access to their land through these gates; the intention is to construct three types of gates: the passage of people gate; the passage of agricultural vehicle gate; and the transport of agricultural goods gate using a “back-to-back” system (requiring off-loading and re-loading between vehicles) ; residents at the western side of the separation wall will be granted special permits by the Israeli Civil Administration to cross to the eastern side, as will as farmers living on the opposite side.

The racial annexation expansion wall will be an elaborate structure; depending upon location, sections will comprise some (or all) of the following elements as buffer zones ostensibly for security purposes, that involve extensive land requisition and the clearing of land and buildings along its 360 kilometer path: 4 meters deep trenches on both sides; a dirt path “to which access will be forbidden” where potential infiltrators would be exposed to fire; a trace path that tracks foot prints; an electronic warning or “smart” fence; a concrete barrier topped with barbed wire; a concrete wall rising as high as 8 meters; a two-lane military patrol road; and fortified guard towers placed at intervals posts. In addition to the separation barrier complex, there are also plans for “depth barriers” 150 meters in length to be erected a few kilometers east of the principal barrier and designed to funnel access into communities east of the separation barrier through a limited number of checkpoints.

The Separation wall in the west bank is a real example for taking the land by force on one hand and practice racism on another. For the following reasons (Jamal Jum’a presentation, September 2003, personal contact):

1. The wall will be as 240 kilometers to the east of the Truce line (green line) which has been there since 4/6/1967.
2. The wall has been made from high cemented pipes and barriers, electrical wires, and electronic radars, in addition to the vacant land has been taken to distance these barriers and the Truce line.
3. The mass of people, who form 25% from the total population in the west bank, will be exposed to the Israeli torture and forced to experience racism, according to the Israeli declaration all the people will be monitored closely, they'll be forbidden from moving around at night, they must obtain permit from the Israeli authority so to pass through, on the other hand, the settlers enjoy all the freedom available to them, and move around freely.
4. This wall is pre introduction stage to establish a new wall at the east ,which it'll take over 12370000 donoms from Pans (Al Ghore) land present about 21.9% from the total land of the west bank, this mean that Israel is planning to take over 45.3% of the total land in the west bank .
5. By building this wall, Israel is violating the United Nation resolutions 242, 1397, 338, 1402 and 1404, declared by the United Nation Council that considered the Palestinian land is an occupied territory, and considered it a violation of Geneva convention in 1994.

1.2 Justifications of the study

Most worlds' countries are concern about the knowledge and the directions of the community personals behaviors and opinions to different new changes and variables to ward the affect of the development program's on the adaptation of socio economical

situation and the traditional cultural levels, also to put new plans and techniques that can be use for the benefit to the community personal in short term and in less effort and cost. So, in this stage as the racial separation wall has been completed in most of the regions in the west bank, we expect that there will be an effect of the racial wall on the standards of living for the Palestinian community, which encourage me as a researcher to choose the study of the isolated compounds at the separation wall that needs some acknowledgement of rising difficulties in the daily life, since there is no back ground information, data or advance references about this situation.

1.3 The problem of the study thesis

The Israeli occupation confiscate the Palestinians rich land and water resources for settlement purposes, which prevent agricultural development and destroyed it in many cases for the importance of this sector in the following aspects:

1. Contribute to the over all income.
2. Provide people with most of their food needs.
3. The main sector is to absorb labor and working women.
4. Provide work opportunity for those who were forbidden from going to Israel to work, because of the continuous foreclosures.

So the main problem that need more detailed research in the study is the confiscation of the Palestinian land by the wall and the affect of the wall on the management and development of farming systems, in addition to the continuous closures, and create obstacles ahead of the Palestinians trading movement. Since the second Intifada began on 29/9/2000 Israel has used a new strategy presented as follow:

1. Confiscate the agricultural land, destroy water wells and ruin as much as they can from properties.
2. Prevent the farmers from reaching their fields and markets.
3. Prevent the workers from reaching their destiny in the west bank and Israel, so the unemployment rate has increased and the wages have been decreased in Jenin area.
4. Destroy and tearing the ties of social relation ship among relatives in villages, and a situation of pessimism took place among the targeted families.
5. Separate the study area of the green line in 1948 and the area in 1967.

1.4 The study thesis questions

1. How was the production to the farmers in the wall area villages concerns farming production and marketing, in case of confiscating lands with high prices of inputs and low prices of out puts?
2. Did they change their farming system to alternative farming cultivation like organic agriculture or the use of local seeds?
3. What is the impact of land confiscation by the wall on social situation?
4. What is the impact of land confiscation by the wall on economical status especially the unemployment rate and wages?
5. What is the impact of land confiscation on insuring food for the wall area villages?

1.5 Objectives and Hypothesis

The main purpose of this master thesis is a comparative analysis of studying the impact of confiscation of the natural resources (land, water) on the agricultural system management and development in Jenin district before and after the confiscations by the wall.

Also to specify the economic (income) and social situations with the limited and available resources, through an efficient use of these resources in order to identify how to develop it as to fulfill the needs of both people and land.

The specific objectives of the study are:

1. To study and analyze the impact of the wall on farming systems, regarding the production and marketing.
2. To study and analyze the impact of the wall on the socio - economic situation.
3. To study and analyze the impact of the wall on food security.

The general hypothesis is that the confiscation of land used to build the separation wall affects economic, social development of the Palestinians in the wall area villages.

The specific hypothesis is:

1. The separation wall has a negative impact on the social standards level.
2. The separation wall has a negative impact on the economical standards level.
3. The separation wall has a negative impact on the development of farming systems.
4. The separation wall has a negative impact on the food insurant standards.

1.6 previous studies

The researcher made revision of the previous study related to thesis title by using manual and internet researching of what available from any data or information concerning with the direct socio and economical analysis of the separation wall.

The researcher screen and purify data and information about the impact of land confiscation by the separation wall on farming system management and development in Jenin district.

In a book released by Palestinian environmental NGOs Network (PENGON (2003) “ The Racist Separation Wall in Palestine 2003” , the book discuss the impact of the wall on the Palestinian society, the land confiscation, uprooting the trees, control the water resources , and also mentioned the analysis legality of the international human rights.

The economical polices research institute releases report about the economical control number 10 in December 2003 (MASS (2003) about the separation wall prepared by Dr. Ghania Malhees, submitted to Al-Aqsa Box with Islamic bank for development , May 2003, the report focuses on the Israel separation plan to isolate Jerusalem from west bank and isolate the Palestinian compounds after dividing it into small blots, and also the report explains the procedure of implementing the racial separation wall and its expected reflects and effects on life.

In a report on the internet site www.poica.org called “Campaign against the racial wall – stop the Israeli squeezing on the Palestinian” the report shows the wall area and building process and its influence on the future borders, also the report is concerned about the socio economical status of the Palestinian people, in addition to the impact on water assets and environment.

In a study prepared by (Hassasneh, 2005) clarify the Ideologies roots and the strategic policy for the separation, cost and interest , in addition to the separation plan process, that’s a result of political plan not security plan , which is the final borders of the Palestinian state.

In a study prepared by (The World Bank (2004), called the Palestinian Economy and the Settlements, the economy situation in Palestine becomes a disastrous and conclude that the Palestinian are facing the worse case in economy depression due to the imposed Israeli restrictions on the mobility of the goods and people, which cause great deal of depression in the local production and escalate poverty and unemployment level.

Ministry of Planning and International Cooperation (Palestine,MoP,2004) prepared a study about the overall social and economical development under these conditions , and focused on strengthening the relation ship between the relief and the development to be used in sufficient way with the available resources toward the Arabic economy.

Ministry of Education (Palestine,MoE,1999), the five–year education development plan 2000/2001 – 2004/2005, Ramallah, 1999, stated that there is a torture effect on the students behaviors, and on their educational achievements that has been fallen back as many of them dropped-out from schools in some cases.

Also Ministry of Agriculture (Palestine, MoA, 2004) prepared a study a bout the socio economical situation in the Palestinian territories, and the negative impact of the occupation regarding confiscating lands and water resources, or destroying the Palestinian economy to the benefit of the Israeli economy.

1.7 Organization of the Study

This work is organized in 5 chapters as follows:

Chapter 1 introduces the problem and outlines objectives and hypotheses of the study.

Chapter 2 summarizes the research design and the theoretical framework adopted in the study methodology.

Chapter 3 and analysis of the different farming systems in the study area, additionally, the chapter presents an in-depth analysis of families related to different study area the economic, financial, social implications.

Chapter 4 is the impact of land confiscation by the separation wall on farming systems management and development in Jenin district, including the present and future impact analysis of the availability and food insurant at the farm and social level.

Chapter 5 contains the summary, conclusions and recommendations.

Chapter Two

Methodology

2.1 Introduction

This study fits and focuses on the socio-economic analysis that begins with the description of the general conditions of studied areas and the different farming systems in the region. It is necessary, therefore, to understand studied area conditions, environmental conditions and the diversity of the farming system regarding the subsystems of the family: farm, household and off farm activities, this is then followed by detailed analysis of the farm and household system, the analysis of the farming system deals with past developments and the current situation.

The argument that it is more appropriate to look at household and farm systems instead of production systems is a strong one, particularly in smallholder areas, since in smallholder farming, the farm and the household are very closely related, and closely related objects should be considered in one system (Meqdad, 1999).

The development of a region is heavily determined by decisions at the micro (family), village and regional levels, so decisions are made in light of the needs and objectives of the decision makers and the resource constraints. The potentials of the farming systems approach are:

1. Better understanding of the decision-making process in a farm family.
2. Better understanding of the farmers' environment and its relationship to conditions determined at the project level with special reference to resource availability, allocation and infrastructure.

This study estimates some efficiency indications in order to identify the problems and potentials of the system. The concept of efficiency is used to describe the input and output related to each case of different farming system as gross margins per production resources can express the economical efficiency of production alternatives and benefits to the relevant resource such as land, labor, fund and water are estimated, taking the value of production and subtracting the variable costs per unit of area then calculate the gross margin from the farm family survey data, family labor, which is not so easy allocated because it is fixed or indivisible, is not included in the variable costs in the gross margin analysis.

2.2 Selection of the study area

Information was collected by means of family survey, key person's survey by questionnaires in the interviews and secondary data from different sources.

The family survey include the farmers in two areas, each area have many locations, the selection of the locations depended on the most affected by the wall and most confiscation of natural resources, more unemployment, non green houses or irrigated agriculture since they are depending on arid agriculture, so the locations are Anin, Al-Taybeh and Zboba from the northern west, Tura AL-Sharqeia and Al-Gharbeia, Ya'bad, Nazlet AL-Sheikh Zeid, Om Dar, Al-Khuljan, Zabda and Daher Al-Abed from southern west of Jenin.

Sixty families were selected randomly, and thirty families were selected from each area, so as to have more real analysis that reflect the reality of the bad situation they live due to the Israeli standards in their area's.

And here is some information about most affected villages by the separation wall:
(Jenin governorate (2003).

1. Anin: located at the northern west of Jenin city, by the green line (Near Umm Al-Fahem town in the occupied land of 1948), population of 2688, it is 16500 donoms in area, 2774 donoms of olive trees field, while the area of pastures is 9050 donoms, 90 % of the citizens work in Israel and now become jobless, over 12000 donoms confiscated and nearly 3000 of olive trees uprooted.
2. Zboba: located at the northern west of Jenin city, by the green line (near Salem town in occupied land of 1948), population of 1000, it is 5000 donoms in area, 90 % of the citizens work in Israel and now become jobless, over 3000 donoms confiscated and nearly 100 of olive trees uprooted .
3. Tura AL-Asharqeia: located at the southern west of Jenin city, population of 250 and it is 3900 donoms in area, 90 % of the citizen work in Israel and now become jobless, over 1500 donoms confiscated and nearly 200 of olive trees uprooted.
4. Tura Al-Gharbeia: located at the southern west of Jenin city, population of 1000, and it is 5000 donoms in area, 90 % of the citizen work in Israel and now become jobless, over 3500 donoms confiscated and nearly 650 of olive trees uprooted

A descriptive and comparative figure to show comparison between study area 1 and 2 regarding their problems and expected solutions and results, as we see in figure 1

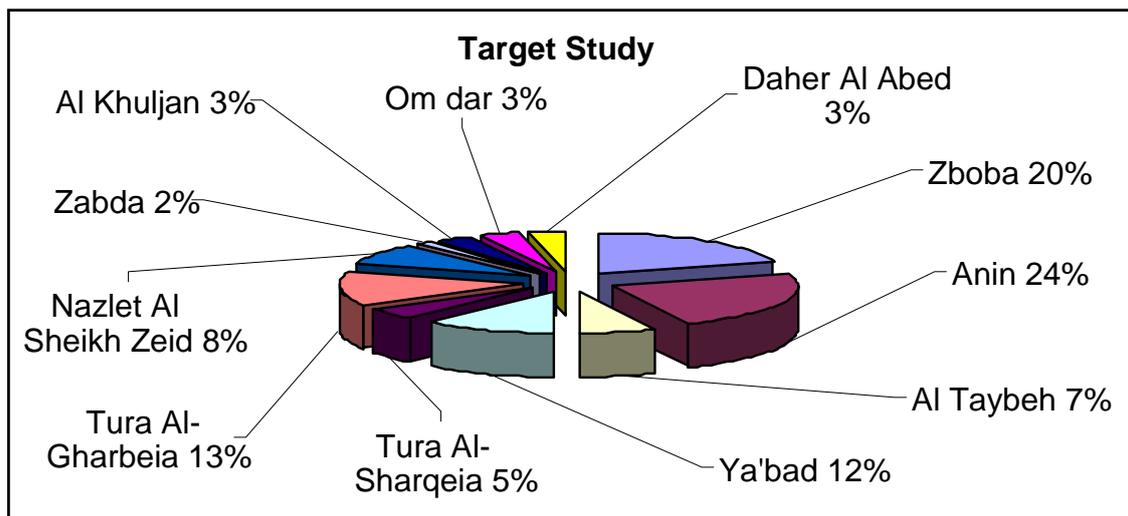


Figure 2.1: The percentage number of questionnaires per village

2.3 Collection of the data

The collection of information at the micro level followed three steps:

1. Decisions concerning strategies and technique of data collection.
2. Random selection of farm households and
3. Design of questionnaires and the interviews for the surveys.

Table 2.1 shows the collected data in description of natural resource development, management and challenges as Primary data and reports with the target groups by questionnaires about the socio – economic situation, and secondary data from the decision making centers, or any references such as the local NGO's as PARC and PENGON, Ministries as local governmental, agriculture, information and ministry of economics, and any research or book reference.

Table 2.1 shows the source and type of analysis of primary data

Type of Information	Sources	Type of analysis
Farm, family and Household information	Primary data	Description and analysis of the farm, family and household system before and after the wall

2.4 Questionnaire and Interviewing

The questionnaire was set by 3 PhD Examiners in Jenin Al-Quds Open University, and they wrote notes after careful reading, they were specialized in economy and management, social development and scientific research.

A structured and standardized questionnaire assures consistent data collection from different families. The questionnaire was used to collect primary data from farm family households.

The questionnaire consisted of two parts: a family and farm household includes production, resource availability, farmer problems and preferences, coding was done after data collecting due to some open ended questions.

2.5 Data Processing

Entering data from questionnaires into Microsoft Excel software and get it arranged as a data bank system. Because field data usually presents the problem of extreme and missing information, usually must be edited.

Data bank was designed to compose family interview data, data calculated from the collected data, such as income, statistical data.

The quality assessment of the data comprises the identification of extreme values and the assessment of their reliability, tests of reliability were then done by visual check after which extreme values and wrong answers were addressed, extreme values or outliers were detected and taken off it.

Missing values were also dealt with by replacing missing data with appropriate substitutes. Descriptive statistical methods such as frequencies, percentages, arithmetic means and standard deviation were used, for data analysis the software Excel 5.0 and SPSS for Windows version 10.07 were used and T – test to know the similarities and differences among the target study. Word and Excel XP were used for word processing.

2.6 Limitations of the study

This study was done in the period from March 2004 to March 2005 during this period I finished the data collection by the interviews in a questionnaire form from August 2004 to October 2004 , the study applied on the most affected villages by the racist separation wall in Jenin district which located at the northern west area of Jenin (Area 1: Anin, Al-Taybeh and Zboba), and at the west area (Area 2: Tura Ash Sharqeia and Al Gharbeia, Ya'bad, Nazlet AL-Sheikh Zeid, Om Dar, Al-Khuljan, Zabda and Daher Al- A'bed).



Figure 2.2: shows Map of the wall villages (Palestinian Hydrology Group (2002))

Chapter Three

Farming systems analysis

3.1 Family resources analysis

The socio-economic situation of farming systems is important in understanding the processes and procedures by which decisions are made regarding methods of planting to be used and kind of crops to be planted, the main socio-economics factors affecting agriculture systems in the wall villages are the cultivating and marketing of products, financial support for farmers, land tenure, farm size, ownership of water resources, living standard, household supply, cultural freedom, political freedom.

The farming systems in the region of study were clustered for analytical purposes according to the stratification of the survey, which itself was based on differences in the quantity and use of available limited natural resources after the wall which would be managed and developed, the analysis of farming system characteristics within these strata and identification of differences between them are thus considered in two areas: Area I (Zboba, Anin and Al-Taybeh), & Area II (Tura Al-Sharqia, Tura Al-Gharbeia, Ya'bad, Nazlet Al-Sheikh Zeid, Zabda, Al-Khuljan, Om Dar & Daher Al-Abed), the selection of the locations depends on the most affected by the wall and most confiscation of natural resources, rising unemployment, there is no green houses or irrigated agriculture since they are depending on arid agriculture, the farmers are responsible for day-to-day operations and farm management.

As a study case, in Jenin district, the percentage of land use for agriculture in targeted districts is 50% in Jenin (Care international (2003), farmers are becoming very skeptical about ever reaching their lands in the future and after the wall is completed.

The anger expressed against the separation wall and an attempt by Palestinians, internationals, and Israelis to protest against the separation wall and show the world that it is unacceptable in the 21st century.

3.1.1 Gender:

In this section, the family composition, especially in terms of age, sex and educational levels of family members that characterize the human resources of family, will be discussed.

The survey showed that the average family size was 7.9 percent in Area 1 and 8.43 in Area 2 (Table 3.1).

Most of surveyed families in area 2 are Bedouins and depending on breeding animals, so they needed to have more children to help them in their daily life activities, which was the reason for limited education achievement to them.

The age and gender combination of a family determines the availability of labor for the various activities undertaken by the family , and indicated that 44.72% of the populations were males in area 1, and 45.84% in area 2, while the females percentage is 54.43 in area 1 and 54.15 in area 2, the most active age group, 16-60 years, is composed of (68.86%) in

area 1 and (76.72%) in area 2 while females (59.68%) in area 1 and (76.64%) in area 2, and 33.3% of families in area 1 have 3 males compared to 43.3% in area 2 with a range of 38.3% of females.

Table 3.1: Demographic characteristics of household leader and families

Averages of families of Farming systems # of cases	Study Area 1 N=30	% in study area 1	SD of study area 1	Study Area 2 N=30	% in study area 2	SD of study area 2
Number of persons per family	7.9	-	3.34	8.43	-	2.69
males per family (between 16 and 60 years)	2.43	68.86	1.73	2.96	76.72	1.15
females per family (between 16 and 60 years)	2.56	59.68	1.56	3.50	76.64	1.59
persons per family (below 16 and above 60 years)	2.90	26.85	1.93	1.96	18.91	1.40
age of family head in years	53.10	-	15.34	58.43	-	13.77

The only significance is between area 1 and 2 regarding number of person's per family at $\alpha = 0.05$, since 0.006 in area 1 and 0.008 in area 2 is less than $\alpha=0.05$, at the mean value for area 2 is larger than area 1 that is 8.43 for area 1, and we accept this hypothesis and that mean's the animal rearing in area 2 is obvious than area 1.

3.1.2 Educational status of household leaders:

The educational level of household leaders may affect the speed of transfer of new ideas; high level of education gives farmers more opportunities to access innovation.

The survey results (Figures 3.1 and 3.2) indicated that 53.3% of household head has finished the primary education level in area 1 and 43.3% in area 2.

Household heads who have finished secondary school were 30.0% in area 1 and 26.6% in area 2.

These results indicate that literacy and basic education of household heads are the usual case in the study region, whereas the higher education of farmers in the area 1 is 13.3% which is twice than in area 2 (6.6%), while we observed that the illiterate people in area 1 is 3.3% and 23.3% in area 2, and there is a significant differences since in area 2 there are children who dropped out of school, who are used to help their families breeding animals and harvest farm crops.

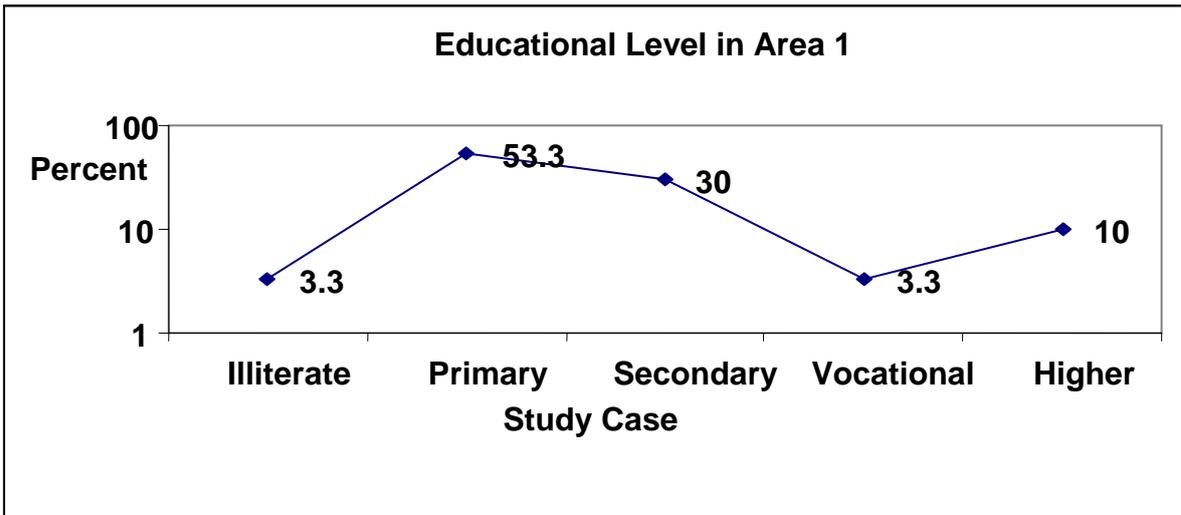


Figure 3.1: Educational status of household leaders (%), wall villages in area 1, Palestine, 2004 / 2005

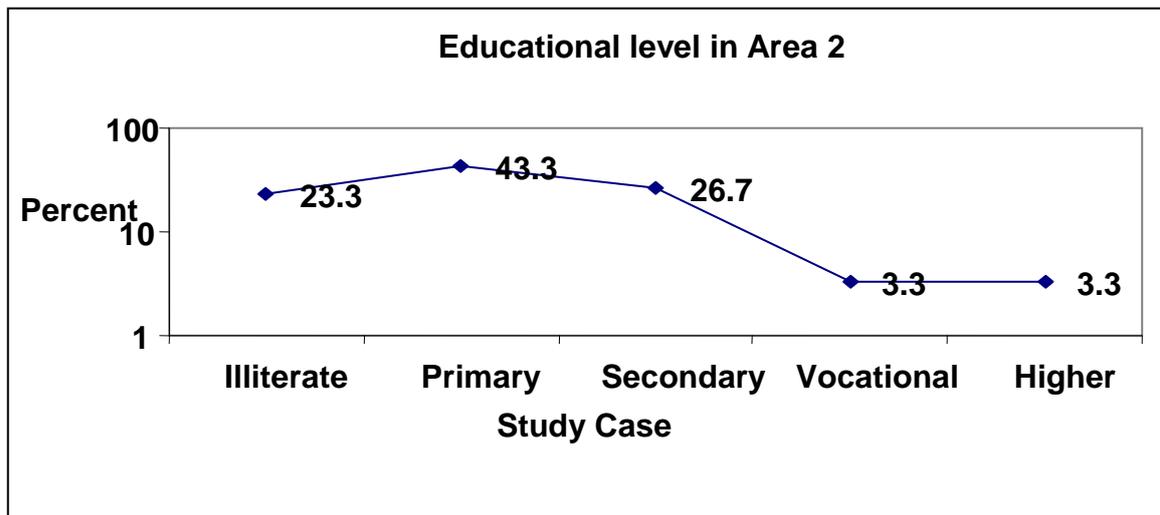


Figure 3.2: Educational status of household leaders (%), wall villages in area 2, Palestine, 2004 / 2005

3.1.3 Family labor force:

The family size determines the family labor capacity to work either on their farm, or in off farm activities (Table 3.2), families who have one breadwinner are 63.3% compared to 26.7% have two breadwinners.

Most family labor force is used to carry out farm activities on their own farms and lands, while a small part of this force is used for animal breeding, rain fed agriculture is the most common method used in the area of study that need less labor, water and less risk and hazards than irrigated agriculture.

The relatively small role of off farm activities is due to the restrictions created by the occupation and the separation wall, which hinders most Palestinians in the area of study to

find opportunities in off-farm employment and makes agriculture the main source of income for their families, so as we see in the table below, most of workers used to work in Israel before the wall (39.9% in area 1 VS 46.7% in area 2) as their number decreased after the wall (3.3% in area 1 VS 28.35% in area 2), the percentage of farming in area 2 after the wall theoretically should increase because Israel closed the borders, but here the percentage is decreasing since most of citizens in area 2 depending on breeding animals , which has no medical care or enough pastures for.

The percentage of workers in Israel still high in area 2 comparing to area 1, since most workers have Israeli citizenship.

Table 3.2: divisions of families working activities in the wall villages in area 1 and area 2, before and after the wall, Palestine 2004

Case study Type of the work	% In study area 1		% In study area 2	
	After	Before	After	Before
Work in Israel	3.3	39.9	28.35	46.7
Free work	20.0	21.65	14.3	32.75
Farmers	31.55	24.95	17.7	20.0
PNA	6.6	4.95	13.3	11.1
Casual work	38.25	8.35	3.3	6.6
Aboard	0	0	1.1	1.1

By T- test, the Hypothesis is, there is no difference between area 1 and 2, regarding the salaries, before and after the wall at $\alpha = 0.05$ level at sig. 0.00000000000038, which is less than α , so the decision is: we reject the hypothesis since there is a difference between area 1 and 2, before and after the wall to the salaries before the wall which is equal to the mean value of 8952 JD yearly.

3.1.4 Division of labor:

The results of the field survey are shown in table 3.3 agriculture tasks distribution between males and females, men perform all mechanized practices such as plowing, irrigation, fertilization, spraying, cultivation, harvesting and delivering production to the market. Women are active in agricultural activities such as land preparation, weeding, fertilizing, and harvesting. In addition, women have the responsibility for corral feeding and milking. Children contribute in jobs like thinning and transplanting.

Table 3.3: Division of labor of farming process, in area 1 and area 2, Palestine, 2004/2005
By gender

Task	Male	Female
Land Preparation	Yes	Yes
Fertilization	Yes	No
Chemical Spraying	Yes	No
Harvesting	Yes	Yes
Transfer of production to market	Yes	No

3.1.5 Work Place:

Before establishing the wall, an estimated 43.3% of members of farmers work only on their farms, with no other source of income, while the remaining 56.7% have employment either in the west bank or in Israel, and most family members (mainly men) help their families to cover a major part of the family expenditures.

But after the wall, 24.62% of the members of the farmers return back to farming and breeding animals , and 15.95% of them still working in west bank , due to the continuous closures and intensive check points around west bank.

3.1.6 Decision making and share cropping:

For an evaluation of the decision making, a differentiation is needed according to family owned resources and outer resources, information from the survey shows that the head of the household is generally considered the decision maker in agricultural practices also regarding the sale of livestock production were mainly made by both the household head and his/her spouse and his family members, all of these activities managing and cultivating carried out by the land owners and their families, without any additional labor (Hijawi, 2003).

Sharecropping is dominant in the study area especially in harvesting the olives fruits farming field crops among family members, the head of the family usually shares in decision making regarding agricultural activities, the arrangement to split the production among his family members especially those are married and live in the same house, as we know most of families are extended ,that the head of the family(owner) provides the land, pays the fixed costs, and shares in some of the other production inputs such as fertilizers and pesticides, the family members bear the labor costs, machinery rental costs and other production expenses.

After the season is over, farm records are used to calculate the expenses and the output value to determine the farm's returns. The essential idea is that the returns are divided in the same proportion as the costs, which is commonly shared fifty/fifty.

3.1.7 The Ownership and land use patterns of the farm land:

The ownership in area 1 is larger than area 2 before and after the wall, since they depend in area 1 on farming patterns rather than animal patterns that is obvious in area 2 than in area 1, the tables 3.4 and 3.5 clarify the ownership of lands for the farmers in area 1 and area 2 before and after the wall.

Table 3.4: The percentage area before and after the wall in area 1

Case (donom)	More than 100	50-100	Less than 50	Zero Acre
Before the wall	4%	30.86	27.27	4%
After the wall	2.5	23.4	17.9	0

Table 3.5: The percentage of the area before and after the wall in area 2

Case (donom)	More than 70	30-70	Less than 30	Zero Acre
Before the wall	5.5%	9.2	19.4	27.7%
After the wall	4.76	11.5	28.6	0

Finally, 737 donoms was confiscated from 1520 donoms, in area 1 and the rest is 783 donoms, while in area 2, the rest is 191 donoms from 548 donoms which that means the confiscated are 357 donoms.

The land use patterns before the wall (table 3.6 and 3.7), and after the wall of private farmland also shows the dominance of olive trees crops that cover more than 89.67% of the area 1, while it covers 88.32% in area 2, followed by wheat with 5.789% of the cultivated area 1, while it is 9.12% in area 2.the third important crop is almond which is 2.17% in area 1 and tobacco in area 2 that covers 2.55% , followed by pulses with 1.44% in area 1 and 0.92% of okra in areal.

Table 3.6: Growing crops in the study area 1 (donom) and production (kg/total don.), in wall villages, before the wall, Palestine 2004/2005.

crops	Area (don.) in study area 1 N=30	Production Kg/total donom	% of area 1	% of production In Area 1
Okra	14	1200	0.92	1.17
Water Melon	0	0	0	0
Squash	0	0	0	0
Tobacco	0	0	0	0
Wheat	88	26750	5.789	26.2
Barley	0	0	0	0
Pulses	22	2000	1.44	1.96
Olives	1363	70650	89.67	69.26
Almonds	33	1400	2.17	1.37
Total	1520	102000	100	100

Table 3.7: Growing crops in the study area 2 (donom) and production (kg/total don.), in wall villages, before the wall, Palestine 2004/2005.

crops	Area (don.) in study area 2 N=30	Production Kg/total donom	% of area 2	% of production In Area 2
Okra	0	0	0	0
Water melon	0	0	0	0
Squash	0	0	0	0
Tobacco	14	2750	2.55	6.4
Wheat	50	12000	9.12	11.76
Barley	0	0	0	0
Pulses	0	0	0	0
Olives	484	27900	88.32	65.41
Almonds	0	0	0	0
Total	548	42650	100	100

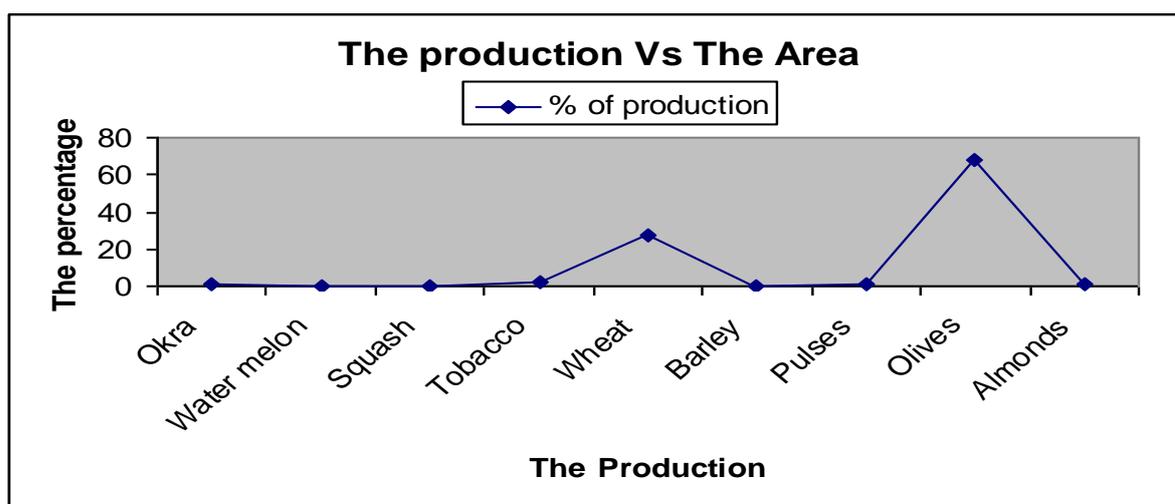


Figure 3.3: The total area in the study area with the total production for each crop before the wall, in the wall villages, Palestine 2004.

While the situation after the wall (table 3.8 and 3.9) of private farmland shows the dominance of olive trees crops that cover more than 87.35% of the area 1, while it covers 92.14% in area 2, followed by almond trees with 3.32% of the cultivated area 1, while it is 0% in area 2.the third important crop is planting wheat which is 3.19% in area 1 and 2.61% in area 2, followed by tobacco with 2.29% in area 1 and 0.52% in area 2.

Table 3.8: Growing crops in the study area 1 (donom) and production (kg/total don.), in wall villages after the wall, Palestine 2004/2005.

crops	Area (don.) in study area 1 N=30	Production Kg/total donom	% of area 1	% of production In Area 1
Okra	0	0	0	0
Water melon	10	4000	1.27	8.49
Squash	7	500	0.89	1.06
Tobacco	18	1850	2.29	3.92
Wheat	25	7800	3.19	16.56
Barley	0	0	0	0
Pulses	13	500	1.6	1.06
Olives	684	31500	87.35	66.87
Almonds	26	950	3.32	2.01
Total	783	47100	100	100

Table 3.9: Growing crops in the study area 2 (donom) and production (kg/total don.), in wall villages after the wall, Palestine 2004/2005.

crops	Area (don.) in study area 2 N=30	Production Kg/Total donom	% of area 2	% of production In Area 2
Okra	0	0	0	0
Water melon	0	0	0	0
Squash	0	0	0	0
Tobacco	10	1720	0.52	11.88
Wheat	5	1500	2.61	10.36
Barley	0	0	0	0
Pulses	0	0	0	0
Olives	176	11250	92.14	77.74
Almonds	0	0	0	0
Total	191	14470	100	100

The areas that cultivated with vegetables are lowest in all farming systems and represent only 2.26% in area 1 with 0.0% in area 2. The highest in all farming systems is the fruit trees and represented 91.25% in area 1 and 90.23% in area 2, the middle is the field crops that represented 7.19% in area 1 and 9.76% in area 2 (table 3.18 and 3.19)

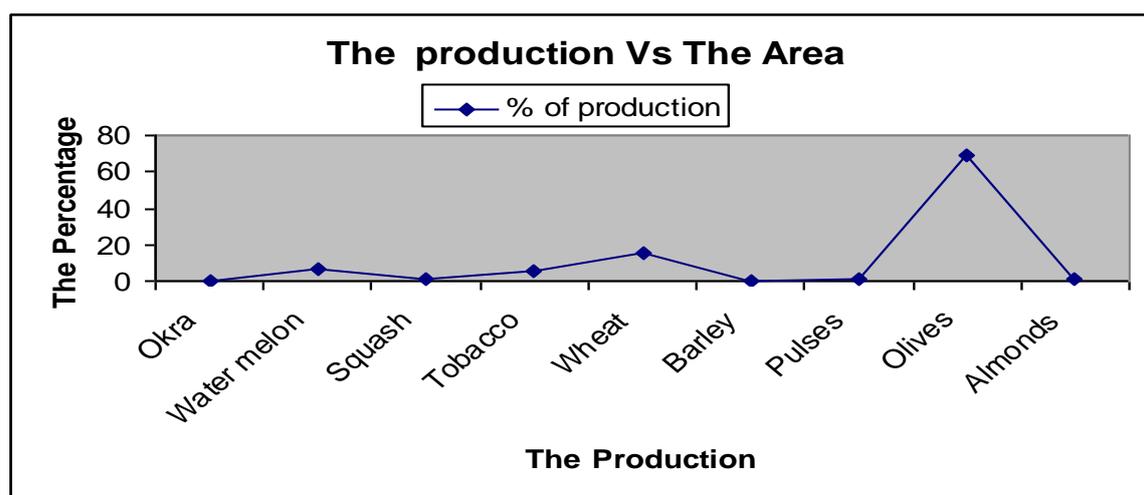


Figure 3.4: The total area in the study area with the total production for each crop after the wall, in the wall villages, Palestine 2004.

3.1.8 Livestock resources:

Livestock is a minor resource of farming systems in the study area. Breeding sheep (Table 3.10 and 3.11) was common in families of area 1 with 70.5%, while in area 2 is 35.19%, followed by goats that is 58.6% in area 2 while 9.15% in area 1.

Table 3.10: Sheep breeding (Average number/farm) in the surveyed families in Area 1&2 of wall villages, Palestine, 2004.

Live stock	Study Area 1 N=30	Study Area 2 N=30	Total	% of area 1	% of area 2	% total
Sheep (#)	108	195	303	70.5	35.19	42.85
Milk (L)	10680	2600	13280	62.16	5.08	19.10
Live animal (#)	79	130	209	86.80	35.1	45.30
Revenue	29965	38050	68015	82.46	33.16	45.02
Expenses	1880	1450	3330	83.50	37.17	54.10
Cross Margin	28085	36600	64685	82.93	33.12	44.80

Table 3.11: Goats raising (average number/farm) in the surveyed families in Area 1&2 of wall villages, Palestine, 2004.

Live stock	Study Area 1 N=30	Study Area 2 N=30	Total	% of area 1	% of area 2	% total
Goats (#)	14	325	339	9.15	58.6	47.9
Milk (L)	1500	16500	18000	8.73	32.2	26.36
Live animal (#)	11	235	346	12.08	63.5	75.05
Revenue	3150	65750	68900	8.66	57.3	45.60
Expenses	220	1600	1820	9.77	41.02	29.59
Cross Margin	2930	64150	67080	8.65	58.05	46.46

There is significant number of goats between area 1 and 2 at $\alpha = 0.05$, since 0.002 in area 1 and 0.006 in area 2 is less than $\alpha=0.05$, at the mean value for area 1 (4.67) is smaller than area 2 (81.25), and we accept this hypothesis also for all of variables since there is a significance in number.

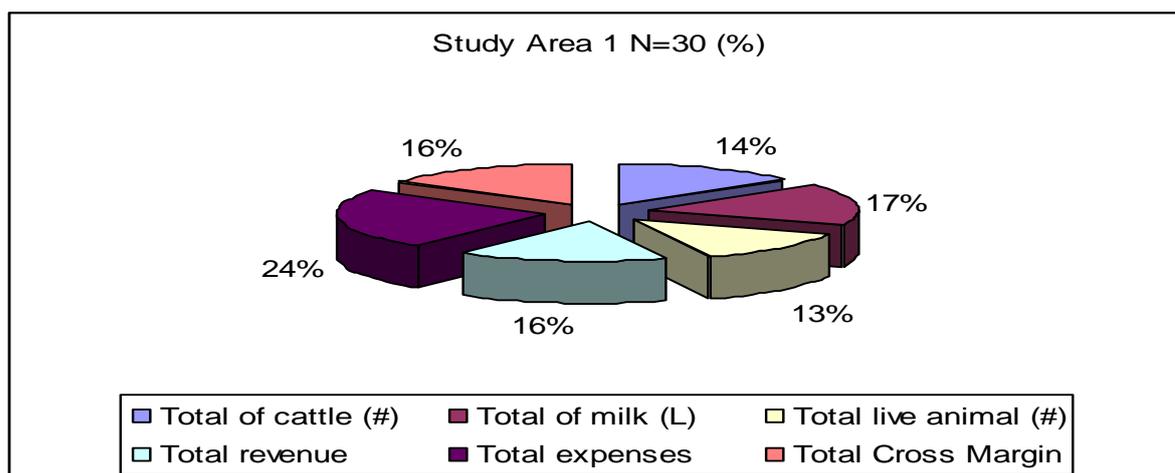


Figure 3.5: The total of live stock raising (average number / farm) in the surveyed families in area 1, wall villages, Palestine 2004.

Cows breeding (Table 3.12), when practiced, was limited in most cases to one or two milking cows on the farm. The milk production was used for household consumption and the surplus was sold when market existed.

Calves born on the farm were usually destined for sale. The low number of animals consumed in the household and the relatively high number of animals sold reflect the main economic purpose of calves keeping which is the sale of live animals (mainly the fresh meat produced on the farm) in order to ensure the cash required to cover the farm and household expenses.

Table 3.12: Cows breeding (average number/farm) in the surveyed families in Area 1&2 of wall villages, Palestine, 2004.

Live stock	Study Area 1 N=30	Study Area 2 N=30	Total	% of area 1	% of area 2	% total
Cows (#)	1	9	10	0.65	1.62	1.40
Milk (L)	5000	32000	37000	29.10	6.26	54.18
Live animal (#)	1	5	6	1.09	1.35	1.30
Revenue	3000	10600	13600	8.25	9.24	9.00
Expenses	150	850	1000	6.60	21.79	16.20
Cross Margin	2850	9750	12600	8.41	8.82	8.72

The animals destined for sale are mainly males of the born on the farm in the past year and the adults of female, which are not pregnant during the year, female's newborn is usually kept on the farm to fortify the original stock of productive females, the majority of the families own donkeys especially in the high and mixed quality farming systems.

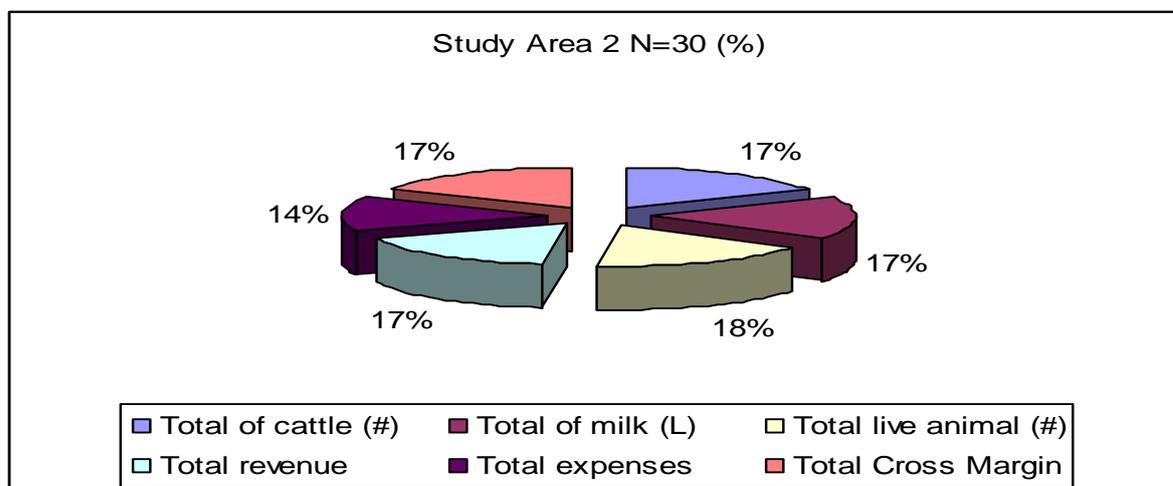


Figure 3.6: The total of live stock breeding (average number/farm) in the surveyed families in Area 2, wall villages, Palestine, 2004.

The lowest portion for hens (Table 3.13) with 19.6% in area 1 and 4.5% in area 2 followed by breeding cows with 1.62% in area 2 and 0.65% in area 1, which is used for house consumption.

Table 3.13: hens breeding (average number/farm) in the surveyed families in Area 1&2 of wall villages, Palestine, 2004.

Live stock	Study Area 1 N=30	Study Area 2 N=30	Total	% of area 1	% of area 2	% total
Ducks & chickens (#)	30	25	55	19.60	4.50	7.70
Eggs (kg)	35	84	119	100.00	100.00	100.00
Revenue	220	315	535	9.77	0.27	0.35

3.1.9 Water resources:

Water resources availability and use will be described at the farm household and village, (which is used for drinking and livestock and in some cases for private garden irrigation) provides information on the availability of water that reflect water infrastructure in the wall villages (Palestinian Hydrology Group (2002)

The main water source is found in the surveyed villages, by 100% from public water which is distributed by pipe lines. These sources are used to satisfy the needs of all activities in their life.

Also 100% of the surveyed families in both area 1 and 2 have gathered rain water in wells for later use in critical times.

In time of lacking water for their needs, they'll buy tanks of water by trucks or tractors from the authorized water supplement councils with about 0.75 Jordanian dinnar for each 1m3, especially in area 2 where is 50% of farmers are breeding animals and 37.7% in area 1, of them, for irrigation, all their farming systems are rain irrigated in the wall area villages which don't use any other way, they depend on rain water, and they collect it in wells for the use of growing crops.

3.1.10 Capital resources:

Most families in the area of study do not own simple tools and equipment for farming, an estimated 74.3% of the families in area 1, and 80.95 % in area 2, families who have a tractor is 10.25 % in area 1 and 4.76 % in area 2 as we see in table 3.16

The tractors and farming machines are used on their own farms but may also be rented to neighbors for plowing, the other benefit of it, is that they can be used for delivering inputs to the field, and farm products to markets and other outlets.

Table 3.14: Percentage of families owing the tools and equipment, wall villages, Palestine, 2004.

Tools and equipment / Number of cases	% in Study Area 1 ,N=30	% in Study Area 2 ,N=30
House	100	100
tractors	10.25	4.76
Farming machines	0	4.76
Car or pickup	15.38	9.52
Storages	20.50	0
House for live stock	15.38	33.33

The primary mode of transportation is pick-up trucks. The families who owned a pickup ranged from 9.52% in area 2 to 15.38% in area 1, most families use them mainly for going to Jenin city and neighboring villages.

3.2 Problems in crop production

The main problem according to the answers given by 97.66 % in area 1 and 83.34 % in area 2 farmers experienced closures and check points land confiscation, demolishing and up-rooting trees, there is no accessibility to the rest of their land, surplus of olive oil yearly, and the high prices of transportations, since they have a surplus in their farm and animal production.

And also marketing which lead to a low or even a none farm cash surplus if there is no access to it and is subject to severe impacts from the political situation especially to area 2 for their animal production and in area 1 for olive oil production, sales to Israeli markets yield higher prices but rely on illegal, black markets during times of political frictions, the alternative is the wholesale market in Nablus or in Jenin, and a temporary one in Qabatia, with its extensive trade of large quantities of agricultural products.

And we aren't to forget the effect of using the long and bad by- pass roads while delivering the products which 100% cost high prices and many hazard problems regarding the shaky security situation in the area, which caused by the Israeli measures as the presence of many temporary and post check points between the market and the city center.

For this problem of transportation, large quantities and some times large surpluses of the product such as olive oil and tobacco, go to Jenin market and displayed with low prices. The farmer is obliged to accept such prices because if he refuses to sell he'll risks losing the yield due to spoilage, and sometimes when the prices are low because of excess quantities, the yield is not harvested at all.

Sometimes sales value cover only transportation costs paid to reach of these markets and this is because of the overstocked which mainly happens when Israeli markets are inaccessible due to border closures.

Concerning field crops, especially the main field crop of wheat, the main problem is the lack of markets, this explains why such crops are cultivated on a very small scale (7.28% & after the wall compared to 8.17% before the wall, from the total farm production in both area 1 and 2, table 3.20 & 3.21) and why the production is mostly oriented to home consumption. Wheat straw is generally used to feed the cattle on the farm; wheat grain is processed into flour and used for home needs.

The wheat also consumed in the form of processing wheat (Burgul and Freekeh), or grind wheat, is used in preparing some traditional meals. Wheat cannot be considered as a subsistence crop. 55% of families satisfy their needs by buying bread or flour from the market, this product is found in the market where it is easier for the consumer to get processed wheat at a low price, the other field crops are mainly cultivated to feed cattle on the farm.

In addition to marketing problems, interviewed farmers also mentioned other problems. They can be summarized as follows:

Lack of infrastructure, lack of family labor force and hired labor (which is expensive for the farmer), costly inputs (pesticide, fertilizer, plough, seeds and transport), lack of cash to purchase inputs to maintain and reclaim the land, in addition to the increase of soil and plant diseases, unstable weather conditions, increase of investment costs, lack of agricultural roads and passages.

3.3 Problems in livestock production

The Problems in livestock production are same in area 1 & 2, which are mainly: marketing of outputs, animal diseases and grazing problems.

Farmers by 37.7 % in area 1 and 50 % in area 2 consider marketing problems as the most important problem they face, which was a result of building the wall, in cattle husbandry, the main problem is lower sale price of milk, and the marketing of milk since some families have their own cows, farmers sell the milk to other farmers in the same village or to the surrounding villages in study area 2.

According to the percentage above, the surveyed farmers trader impose low prices equivalent to the prices of Israeli milk available at the market, the farmers' alternative to the use of milk that exceeds household consumption and that cannot be sold is processing it into cheese and buttermilk (Arab.: Labaneh) and the sale of these products.

In addition to milk marketing problems, goat keepers face critical problems concerning the sale of animals, wholesalers control the marketing channels for goats and thus are in a position to dictate prices, they impose low prices which farmers are obliged to accept due to their need for cash, the sale of fresh meat which is the main source, in wintertime, the market price of goat meat is relatively high but the animals aren't healthy due to insufficient natural vegetation and to the lack of food supplemented. Therefore, selling activities are limited. In summer, however, when animals are more saleable, the prices are low.

3.3.1 Input related problems:

100 % of animals breeding farmers in area 2, complained in particular about the high cost of fodder, and lack of cash to buy necessary inputs, and also about a scarcity of land range. Additional problems were the lack of extension services, and the lack of family labor for herding, since the head of the family and the elderly work in breeding animals. The sale of goats is the most important source of cash inflow; this indicates that problems in selling animals can directly affect the living standard of the family.

3.3.2 Animal disease related problems:

These problems were a result of the lack of cash to buy veterinary medicine or to pay for a veterinarian, as well as from the lack of qualified veterinarians. Veterinary clinics are mainly located outside the villages of study area, e.g. in Jenin. Farmers stated that visits by veterinarians were expensive and treatments were not always effective. Farmers usually

buy medicines from shops after analyzing the health problem of the animal by themselves, so sometimes the animals die.

3.3.3 Grazing related problems:

Even there is a decreased of pastures, due to the political situation in the area of study, the livestock is increasing after the wall by 7.78 % in area 1 and 18.97 % in area 2 than before the wall, to fit their needs and to overcome the depletion in farms' income and so to improve their family income, which called income earning activities.

3.4 Farmers future expectations

Objectives, in describing farmers, are the result of their view of problems in prevailing physical, economic, social and cultural conditions, to understand farmers' view of their problems, the farmers were asked about their future expectations regarding their problems. The farmers identified their main expectations for the future of their families and classified them in the following order of priority, one of the main expectations was that the income will be worse than today with 33.3% in area 1 and 43.3% in area 2 (Table 3.15).

Table 3.15: Farmer's opinions on the future (%), wall villages, Palestine, 2004/2005.

Farming System Number of cases	Study Area 1 N=30	Study Area 2 N=30	% area 1	% area 2	Total of area1 And area 2	% of total
The income						
Better than today	0	0	0	0	0	0
Same as today	20	17	66.6	56.6	37	61.6
Worse than today	10	13	33.3	43.3	23	38.3
The living standards						
Better than today	0	0	0	0	0	0
Same as today	22	21	73.3	70.0	43	71.6
Worse than today	8	9	26.6	30.0	17	28.3
The resources						
Better than today	0	0	0	0	0	0
Worse than today	30	30	100	100	60	100

Other main expectations were diminishing resources, which 100 % of the families in Area 1 & 2 expected to worsen, in addition, they expected worse living standards in the future with 26.6 % in area 1 and 30.0 % in area 2, while they expected the living standards like

today 71.6 % in the study area, this means that most of the farmers in the wall villages are pessimistic.

3.5 Farmer's hopes for the next generation

Farmers were asked to indicate in which sector they would like their children to be engaged later on, this question was used to estimate the future potential of the agricultural sector in the study area from the farmers' point of view, all of the farmers hoped that their children obtain a high level of education and have a chance to get a permanent job side by side with home agriculture, this might be an outcome of improving the education of their children, this intention was 100 % in both area 1 & 2 (Table 3.16).

Table 3.16: Farmers' wishes regarding the careers of their children (%), wall villages, Palestine, 2004/2005.

Farming System Number of cases	Study Area 1 N=30	Study Area 2 N=30	% area 1	% area 2	Total of area1 And area 2	% of total
High education and regularly salary from agriculture or any work	30	30	100	100	60	100
more knowledge of agricultural	0	0	0	0	0	0

3.6 Future objectives

The farmer's wishes regarding their own work are shown in table 3.17, no significant difference was found in the farmer's future objectives in the study area, in the area 1 & 2, the intention of farmers to invest in farming is minimal, and have the desire to change their job.

Table 3.17: Farmers' wishes regarding their work (%), wall villages, Palestine, 1999/2000.

Farming System Number of cases	Study Area 1 N=30	Study Area 2 N=30	% area 1	% area 2	Total of area1 And area 2	% of total
Like to change his work	27	28	90.0	93.3	55	91.6
Like to stay in agriculture	3	2	10.0	6.6	5	8.3
Reasons for leaving agriculture						
The income is decreasing	12	11	40.0	36.6	23	38.3
The resources are not sufficient	12	16	40.0	53.3	28	46.6
Legal issues	0	0	0	0	0	0
The work is hard	3	2	10.0	6.6	5	8.3
others	3	1	10.0	3.3	4	6.6

All of the farmers in the study area would like to invest extra money in their farms especially because it is not easy to get a job with a permanent salary, and the chance to work in Israel is decreasing due to the political situation and the wall, so the only thing that the people can do is try to increase their income from agriculture.

3.7 Gross margin analysis of major crops

Gross margins in crop production were calculated with average values of each activity for the reference period 2004 / 2005, it provide a measure of relative profitability of the different crops, gross margins were calculated per unit of resources used, e.g. land, funds which indicates how well the total investment in resources is remunerated.

The intention behind the calculation of the gross margin is to assess the efficiency of resources when they are used in crop and livestock production, the value of the crop and livestock outputs used for the livestock production in the farm as well as for the household consumption were estimated according to the average of local market prices, and also to avoid the problems of allocation of cost by ignoring overhead costs, it only concentrates on the revenues and variable costs of the respective enterprises, gross margins are useful to assess the efficiency of individual enterprises.

We'll compare the efficiency of **off farm activities income** and land resources activities income with variety of crops among the area of study as well as within each area. Crop production was classified into three groups: 1) Vegetable crops, 2) Fruits and 3) Field crops.

Among production activities, crop activities play the most important role in the area of study. Rain fed cultivation is practiced, the most important crops are vegetables (okra, watermelon, squash), field crops (tobacco, wheat, barley, pulses), and fruit trees (olives and almonds), the differences in cropping patterns depend not only on the managed cultivation system, but also on the soil characteristics and topography (upland and lowland areas), which has suitable soils and **suited agricultural purposes**.

What we will see in table 3.18 and 3.19, the most economical crop in the study area before the wall is the fruit trees that represented by olive trees and almonds , followed by field crops mainly tobacco and wheat .

And the same thing after the wall, even there is a land confiscation and up-rooting trees and no access to the rest of the land.

Table 3.18: Percentage of crops in the wall villages before the wall (based on table 3.6, 3.7, 3.8) , Palestine 2004/2005.

crops	% in study area 1 N=30	% in study area 2 N=30	% of total area 1 & area 2
Vegetables	0.92	0	0.67
Field crops	7.23	11.67	8.17
Fruit trees	91.84	88.32	90.90

Table 3.19: Percentage of crops in the wall villages after the wall (based on table 3.6, 3.7, 3.8) , Palestine 2004/2005.

crops	% in study area 1 N=30	% in study area 2 N=30	% of total area 1 & area 2
vegetables	2.17	0	1.79
Field crops	7.15	7.85	7.28
Fruit trees	90.67	92.14	90.69

3.7.1 Gross margin for vegetable crops:

Main vegetable crops include okra, water melon, and squash, there wasn't any greenhouse in the area of study.

Vegetable crops are cultivated on a small area in the farm; for house consumptions, this creates the potential for differences, especially in terms of value of production among the farms, which is relatively small.

3.7.2 Gross margin for field crops:

Field crops consist of mainly wheat, pulses (beans, broad beans for house consumptions and mainly lentils) and tobacco, the efficiency of land used for field crops is relatively similar in the area of study, most of the farmers concentrate on growing tobacco and wheat because of its higher profits than in the case of other field crops.

Table 3.20: Gross margins for field crops in the wall villages before the wall, Palestine 2004/2005.

Activity: Wheat and tobacco for farm (JD / Farm)	Wheat in study area 1 N=30	Wheat in study area 2 N=30	Tobacco in study area 1 N=30	Tobacco in study area 2 N=30
Value of sales	7775	3075	0	7300
Value of consumption	1125	525	0	200
Value of production	8900	3600	0	7500
Cost of seeds	628.5	595	0	650
Cost of fertilizers	17.5	0	0	0
Cost of pesticides	0	0	0	0
Cost of transportation	200	0	0	100
Total Variable Costs for expenses	846	595	0	750
Gross Margin in JD/farm	6929	2480	0	6550
Gross Margin in JD/Do.	78.73	49.6	0	467.85

The farmers in this area of study did not apply fertilizer to field crops, because they practiced crop rotation for wheat but they use it for tobacco in low quantities, they grow barley or tobacco one year and wheat in another the second year wheat, without use of Pesticides.

The value of production from wheat comes from grain and straw yields, they each contribute to approximately 50 % of the field crops value, while the value of the production from tobacco comes from leaf yields only and the farmers do not produce any seeds.

Table 3.21: Gross margins for field crops in the wall villages after the wall, Palestine 2004/2005.

Activity: Wheat and tobacco for farm (JD / Farm)	Wheat in study area 1 N=30	Wheat in study area 2 N=30	Tobacco in study area1 N=30	Tobacco in study area 2 N=30
Value of sales	1740	250	540	3360
Value of consumption	700	275	200	340
Value of production	2440	525	740	3700
Cost of seeds	457.5	62.5	260	320
Cost of fertilizers	7.5	0	0	350
Cost of pesticides	0	0	0	0
Cost of transportation	0	0	230	0
Total Variable Costs for expenses	465	62.5	490	670
Gross Margin in JD/farm	1275	187.5	50	2690
Gross Margin in JD/ Do.	51	37.5	5	149.5

After the wall the gross margin for wheat is 51 JD /acre in area 1 and 37.5 JD / donom in area 2, which that means, the production of wheat in area 1 more over area 2, and for tobacco 149.5 JD/ donom in area 2 and 5 JD/ acre in area 1, which is over production in area 2.

The difference is the cross margin for tobacco and wheat is that before the wall it is was cultivated more than after the wall, since there is a reduction of lands area and it explains the low marketing costs since most of the farmers sell their field crop production directly in the farm rather than in market, or keep it for family consumption.

3.7.3 Gross margin for fruit trees:

Olives and almonds are the dominant rain irrigated agriculture crops of fruit trees in wall area villages, concerning gross margin of olive tree per acre in JD it's 101.76, 150.14 consequently before the wall for area 1 and area 2.

Table 3.22: Gross margin of olive crops in the wall area villages before the wall, Palestine 2004/2005.

Activity: olives for farm (JD / Farm)	olives in study area 1 N=30	Olives study in area 2 N=30
Value of sales	123275	112797
Value of consumption	2925	3206
Value of production	126200	116003
Cost of seeds	0	0
Cost of fertilizers	1150	726.5
Cost of pesticides	5750	5000
Cost of transportation	770	320
Total Variable Costs for Expenses	7670	6046.5
Gross Margin in JD/farm	115605	106750.5
Gross Margin in JD/Do.	101.76	150.14

While after the wall it's 56.98 and 85.34 consequently, so there is a significant difference in the olive production systems in area 1 and 2 at the same period for area 1, or after and before the wall (Table 3.22). This can be attributed to the land confiscation and up-rooting trees.

Table 3.23: Gross margins for olives crops in the wall villages after the wall, Palestine 2004/2005.

Activity: olives for farm (JD / Farm)	olives in study area 1 N=30	Olives study in area 2 N=30
Value of sales	37584	24849.5
Value of consumption	2561	2460
Value of production	40145	27309.5
Cost of seeds	0	0
Cost of fertilizers	2525	150
Cost of pesticides	750	1250
Cost of transportation	800	320
Total Variable Costs for expenses	4075	1720
Gross Margin in JD/farm	33509	23129.5
Gross Margin in JD/Do.	56.98	85.34

3.8 Gross margin analysis of livestock production

The gross margin analysis of livestock production is based on average values of production and cost components and expenses calculated from the survey for the year 2004/2005, including the interest rate of capital operation of variable costs (Table 3.10 – 3.13).

The dominant in animals breeding is goats (47.94%) then sheep (42.85%) followed by chickens (7.77%) and cows (1.41%), and it's relatively high in area 2 when compared with area 1.

The gross margin for all live stock in area 2 is larger than area 1, since the villages in area 2 are smaller and depends mainly on live stock rather than agriculture and also due to the mountainous geographic area rich in pastures and third reason refers to the demographic inhabitants whom they are bedews related to small villages due to the availability of grazing lands for their live stock.

Chapter Four

The impact of land confiscation for the separation wall on farming system management and development in Jenin district

4.1 The impact of the separation wall on the wall villages

The process of the separation wall construction has itself had a major economic impact, while the relative intensity of the impact varies by location and economic activity, its immediate effects include: a) the destruction of agricultural land and assets; b) inaccessibility to agricultural land and assets, including water resources; c) added restrictions on the mobility of people and goods, and therefore higher transactions costs; and d) uncertainty about the future and a consequent dampening of investment in economic activities including agriculture , (see the appendices : tables 6:5, 6:6, 6.7 and 6.8)

The initiation of racial separation wall in March 2002, which tightened restrictions on people and goods movement, together with the initial steps towards the construction of the separation barrier in the west bank, led to an even more difficult situation for food insurant, for the year 2002, the unemployment and discouragement averaged 284000 even though employment rose sharply from third to fourth quarter (Lefrancois, 2003).

The economic situation of Palestinian villages near the green line is strongly affected by the Israeli economy, the main source of income for families in these villages comes from working in Israel, since the beginning of the Intifada, these areas have experienced high rates of unemployment and insufficient water, in addition to other problems, the construction of Israel's separation wall exacerbates these difficulties, and also creates "new poor" when farmers lose their land or farm assets.

4.2 The destruction and damages of agricultural sector by the wall through the Intifada in Jenin district:

4.2.1 Indirect damages (Unemployment):

Most of Palestinians labor force used to work beyond the green line, which pays higher salaries comparing to the west bank, but it didn't last long due to the continuous closures that stand between them and their jobs (Table 4.1).

As of workers and farmers could not keep up their jobs in the west bank too, despite the fact that they have permits to do so, the purpose of these actions seems to force people leave the land as an easy catch for the Israelis, unemployment rate elevate after the Israeli violence attitudes to 70% which contribute to the increase of poverty rate (Private for Nida' Al-Quds, 2003).

Families were resorting to agriculture in order to cope with the current economic situation despite the low pays in agricultural work which is lower than any other economy sector, Further more, the wages paid to females in agriculture are significantly lower than those paid to males, everywhere, it appeared that many of the newly unemployed had resorted to this sector for food and income, the agricultural sector has grown in importance as a coping mechanism throughout the crisis as the household surveys shows. Nevertheless, the

magnitude of the harvest appears to be the biggest influence in agricultural employment. (United Nation Education and Science Cultural Organization, 2002)

According to the data in tables 3.2 and 4.1, 30.4% of families depend on working in Israeli private sector to earn their living salaries before the wall, comparing to 12.5% who became dependant on the same source after the wall, and 29.8% of resident depend on working in Palestinians private sectors to earn a living before the wall, compare to 35.1% who became dependant on the same source after the wall.

Table 4.1: The average income salary of wall villages in area 1 and 2 before and after the wall, in Palestine 2004

Case Study JD/Year	% In study area 1		% in study area 2	
	After	Before	After	Before
Less than 1000	0	0	0	0
1000-2000	18.57	12.85	13.10	7.0
2000-3000	28.57	5.71	24.10	10.40
3000-4000	15.75	12.94	17.10	11.75
4000-5000	25.70	17.10	0	3.50
5000-6000	5.71	8.57	17.10	21.52
6000-7000	0	2.85	5.75	11.75
7000-8000	2.85	14.28	14.10	5.26
8000-9000	0	8.57	0	0
9000-10000	0	2.85	3.50	5.26
More than 10000	2.85	14.28	5.26	24.56

By T- test, the hypothesis is, there is no difference between incomes before and after the wall at $\alpha = 0.05$ level at sig. in area 1, and the decision is: since the sig. = 0.0000000120 Which is less than α , so we reject the hypothesis as there is a difference between incomes in area 1 before and after the wall and salaries before the wall which is equal to the mean value of 6856 JD yearly .

For area 2, the hypothesis say that there is no difference between salaries before and after the wall at $\alpha = 0.05$ level at sig. in area 2, and the decision is: since the sig. = 0.000000088 Which is less than α , so we don't support this hypothesis, and there is a difference between salaries in area 2 before and after the wall and salaries before the wall which is equal to the mean value of 11048 JD yearly.

The potential Palestinian labor force (those 16 years of age and over) is expanding rapidly mainly due to the large and growing population of age 16.

In Jenin district, 72.79% from the surveyed families were males productive category in the area of study ; while females are 68.16% ,the rest 22.88% category is that below 16 years old and above 60 years old, which mean that the Palestinian community is youth and productive.

Unemployment rate of residence at the west of the wall is 25.2% and 31,6% of the east part, the average of employment with pay is 73.6% of compounds west the wall and 62.8% east of it, pointing out the rate of business owners west the wall 10,1% and 13.8% east of it (Palestinian central bureau of statistics, 2004).

The result was clear about 13.8% of the workers in the compound affected by the wall are working in Israel and settlements at 24.6% of the western and 12.4% of the eastern part, (Palestinian central bureau of statistics, 2003).

4.2.2 Direct damages:

1. Land destructions and confiscations

Jenin as a case study, is one of the north districts of Palestine and the west bank ,rich with agricultural land ,it's called (Palestine vegetable basket), as shown in a table 4.2, because of the enormous production of fruit , vegetables, olives , olive oil, and watermelons year round compare to some other district.

The total area of agricultural land is 29928 donoms which is could be classified as follow : 13934 donoms olives, 123 donoms almonds, 9073 donoms field crops, 6741 donoms pastures and others 57 donoms, and the total area represent 28.23% from the total area in the wall districts in west bank (The apartheid wall campaign(2002).

Finally, from our calculated and surveyed data, 737 donoms was confiscated from 1520 donoms, in area 1, while in area 2, the confiscated areas are 357 donoms from 548 donoms.

This number of confiscated land is close to what we have in table 4.2 (Palestine, Jenin Ministry of agriculture 2002), but we know that the farmers experience more losses that entitled them to more compensation.

Table 4.2: Statistics of the wall in Jenin villages, 19/3/2003

Town	Land used for wall construction			Land beyond the wall			
	Area Acre	# of trees	Damage cost	Area Acre	# of trees	Designated pines	Natural pines
Nazlat Zied	63	630	67021	609 ,5	6009	-	-
Tura Al-Sharqeia& Al-Gharbeia	105 ,5	1045	111170	7	70	-	-
Zabda	82	498	50851	145 ,5	211	-	1000
Om Rehan	-	-	-	300	3000	1000	2000
Al Taybeh	63 ,5	635	127000	107	955	-	-
Anin	82	819	163800	825 ,5	8256	350	1650
Barta Al-Sharqeia	-	-	-	92	920	-	6000
Ya'bad	222 ,5	936	235047	37	-	300	3700
Almontar Al-Sharqeia & Al-Gharbeia	-	-	-	444, 5	4140	-	-
Daher Al-Maleh	4	40	10000	-	-	-	-
Al-A`raqa	30	300	75000	-	-	-	-
Total	562 ,5	4903	839889	2568	23561	1650	14350

2. Water

The west bank is known for its rich land with great water resources because of the rocky (mountainous) land nature trapped water inside it, in addition to being above sea level, for these reasons Israel want to take control over this land to use its reserve water for its own uses, and prevent its rightful owners from their share, so they start building settlements all over the targeted area, and then come up with the wall to finish the job, then shut down wells near the wall, without advance notice (Palestinian water authority (2003).

1. 36 well located in the confiscated area in addition to 14 well located in the isolated area, all of this wells pump yearly 6.7 million m³.
2. 35000 meter of pipe lines destroyed by Israeli bulldozers.

The price of one cubic meter bought from a municipality-managed network ranges from 0.5 to 0.75 JD throughout the wall villages, the price of a cubic meter obtained from a water tanker varies from 2.0 to 2.50 JD, but can go as high as 3.50 per cubic meter.

4.3 The socio-economic situation of the families in the wall villages

4.3.1 Farm income:

Family income is the revenue of off-farm activities added to the farm income, farm expenses cover costs of inputs and services in crop and livestock production, the difference between farm revenue and farm expenses is farm income.

These economic features will help to explain the reasons behind family's behavior in response to the use of natural resources, and reflect their living standard as well; all calculations refer to the agricultural year 2004/2005.

Farm income is the economic surplus of a farm in one year, which is available to the farming family, farm income is calculated as a residual after deducting all expenses from all revenues that are not directly related to family's resources, the result is the income of the family owned resources (House of commons international development committee, (2004).

Farm revenues comprise the value of farm sales; the value of the farm products consumed in the household, the increase in stocks, and the revenue from animal sales is the difference between the sale price and the value of the animal at the beginning of the agricultural year.

In Jenin district, livestock is a minor resource in the area of study, breeding sheep was common for families in area 1 with 70.5%, while in area 2 is 35.19%, followed by goats that is 58.6% in area 2 while 9.15% in area 1, (Appendixes 6.3).

The lowest portion for hens with 19.6% in area 1 and 4.5% in area 2 followed by breeding cows with 1.62% in area 2 and 0.65% in area 1.

As for animal production there are concerns over the land capacity to provide pasture for more animals as well as to control animal diseases due to restrictions on the availability of veterinary drugs and services, and testing to monitor diseases in order to ensure meat safety, the increase of Livestock productivity difficult given restriction on purchases of breeding stock. (Forum, 2004).

Among other problems animal product producers are facing is access to feed on at regular basis, particularly those engaged in the production of poultry meat and eggs, which has serious implications for productivity as delays in arrival time of food rations which cause mass losses, other problems facing this sector are the destruction of farm machinery and other assets, or even the killing of livestock and the poisoning of pastureland by settlers.

The result of the analysis shows that there are minor significant differences in farm's return in area 1 and 2 before the wall for the area 1, (Table 4.3 and 4.4), which is mainly from crop revenue that contributes to 84.5% of the total farms' return and to 36.77% of the total family income in area 1, the animal breeding incomes is 15.48% that is 6.73% from the total family income, this indicates a high percentage of families in this area depending on the off – farm income by 56.5% rather than depending on growing crops, that their mainly income source come from working in trading business in Israel.

While in area 2 the dominate income, comes from animal revenue with 57.23% which is 28.06% from the total family income, and the crop income is 42.76% that equal to 20.97% from the total family income , which means also highly dependence on the off- farm income by 50.97% that comes from working in Israel.

The situation after the wall differs a little bit than before the wall, 57.66% of the farm income in area 1 comes from the crop income, that is contribute by 19.76% from the total family income (Table 4.6), and the income that comes from animal breeding is 42.34%, that is contributes by 14.51% from the total family income, as 65.73% depends on off – farm activities.

In area 2, the dominant income comes from breeding animals with 87.1% that contributes 47.03% from the total family income, and the crop income is 12.89% from the total farm income that equal to 6.96% from the total family income, again 46.01% from the family income comes from the off – farm activities.

The crop income in area 1 decreases after the wall by 17.01% and the animal revenue return increases by 7.78%, so the farm income decreases by 9.23% which means that this portion transferred to off – farm activities represented by casual work in farming (it doesn't matter if the worker owns the land or worker by salary in it) or Palestinian national authority employees or in the private employee sector (if there is work available), but the largest portion are unemployed.

Off course, the reason for all this is land confiscation and up-rooting trees ,also the closures imposed on the west bank and the restriction on movement (Mobility access) of the Palestinian market employees or to the rest of their land by the temporary and fixed check points.

In area 2, the return of crops decreases by 14.01% and the return of animal return increases by 18.97% after the wall, so the farm returns increases by 4.96% after the wall for the following reasons:

1. Number of confiscated acres is less than area 1 (see the title 3.1.7 The Ownership and land use patterns of the farmland)

2. Number of acres for the villagers in area 2 is less than area 1 (Agriculture Possess)
3. The rest of land is mostly mountainous, natural pastures which mean that they not depending on cultivation and farming in this area on a large scale.
4. The trend in this area is breeding animals rather than agriculture, more over, the percentage of breeding animals increases on a large scale in both areas 1 and area 2, which is one of the main earning activities that contributed to the family income, table 4.3 and 4.4.

The analysis of gross margins showed that farmers already invest in their land, put money in the production of crops that yield the highest return on these resources, livestock raising is a minor activity in the study area especially in area 2, due to the high variable costs, marketing problems, animal diseases and the availability of pasture, marketing of products poses, according to farmers, it is the most important problem in agriculture.

The gross margin of olive trees per unit of land is larger than that for field crops followed by tobacco in area 1 before and after the wall, while it also larger for olives followed by tobacco and finally field crops in area 2 before and after the wall.

4.3.2 off farm income:

All of surveyed families before the wall in the area of study have an off-farm income; which includes also retirement payments, and income from selling or renting property such as houses, the average of off-farm income was higher in area 1 than area 2, which is in a similar situation after the wall.

Table 4.3: The descriptive percentage of the farm income and the off – farm income before the wall in wall villages, Palestine 2004/2005.

The case	% in study area 1	% in study area 2
Off – farm income	56.50	50.97
farm income	43.50	49.03
Crop income	36.77	20.97
Animal income	6.73	28.06

The income from monthly salaries is combined with income derived from employment and salaries of retirement, additional income comes mainly of the money offered by married sons who live apart from their family, salary from employment or daily labor wages (casual and seasonal work) is higher in area 1 than area 2 before the wall and after the wall. The contribution of farm returns varies over the years due to the following reasons: 1) insecurity of the agricultural production. 2) The cash flow of farm products sale is not guaranteed, because it depends on the political situation and the quantity of the production, which may go through Israel.

Table 4.4: The descriptive percentage of the farm income and the off – farm income after the wall in wall villages, Palestine 2004/2005.

The case	% in study area 1	% in study area 2
Off – farm income	65.73	46.01
Farm income	34.27	53.99
Crop income	19.76	6.96
Animal income	14.51	47.03

4.3.3 Liquidity and cash balance:

Liquidity is defined as the ability to meet one's financial obligations on schedule, in the case of farms as family enterprises, farm liquidity and family liquidity are inseparable (Hijawi 2003). The cash balance of families for one year in the area of study is shown in table 4.5 and 4.6 the average cash flow of the family comprises the sale of crops and livestock products, the cash income from off-farm activities and from using their own machinery outside the farm.

Table 4.5: Cash balance (in JD) in the wall villages before the wall, Palestine, 2004/2005.

Number of cases	Study Area 1 N=30	Study Area 2 N=30
Cash inflow	539194.5	408705
Mean value	13825.50	19462.14
Standard Deviation	9434.14	10888.09
Cash out flow	127886.5	61640
Mean value	3279.14	2935.23
Standard Deviation	2567.20	1696.18
Cash balance	411308	347065
Mean value	10546.35	16526.90
Standard Deviation	10832.18	10667.44

The results of analysis in table 4.5 and table 4.6 show a highly significant difference in cash balance among areas of study before the wall and after it, but there is no significant difference in cash balance between area 1 and 2 in the same period .Based on these tables it can be concluded that the chance of farmers saving money is higher in area 2.

Table 4.6: Cash balance (in JD) in the wall villages after the wall, Palestine, 2004/2005.

Number of cases	Study Area 1 N=30	Study Area 2 N=30
Cash inflow	250336.5	243890
Mean value	6418.88	11613.80
Standard Deviation	4204.66	11547.56
Cash out flow	110208	54132.5
Mean value	2825.84	2577.73
Standard Deviation	1325.75	1111.69
Cash balance	140128.5	189757.5
Mean value	3593.03	9036.07
Standard Deviation	4752.41	10893.08

4.3.4 Household expenditure:

Household expenditures counted larger sums of cash out flow before the wall in area 1, while it was less in area 2. It is about 85.4% of the cash outflow in area 1, 80.93% in area 2 (Appendices 6.9), as this percentage increases after the wall by 85.86% and 89.89% respectively to area 1 and 2, Appendixes 6.10 and table 4.7.

Household expenses is composed of expenses for food, clothes, electricity, transportation, water, gas, diesel fuel and other energy sources, telephone bills, medicine, health issues, education and others like social issues, such as, food accounts for about 51.62% of the household expenditures in area 1 and 50.96% in area 2.

Table 4.7: Analysis of household expenses (Mean values in JD/Family), wall villages, Palestine, 2004/2005.

Items	Total (JD\year) in study area 1 N=30	% of area 1	Total (JD\year) in study area 2 N=30	% of area 2	Total (JD\year) of area 1 & area 2	% of the total	Average for area 1 & 2	SD. for area 1 & 2
Food	48850	51.62	24800	50.96	73650	51.39	1227.50	520.54
Cloths	9820	10.37	5520	11.34	15340	10.70	255.66	126.84
Electricity	8600	9.08	4520	9.28	13120	9.15	218.66	103.37
Transportation	3710	3.92	1250	2.56	4960	3.46	82.66	67.19
Water	7574	8.0	4375	8.99	11949	8.33	199.15	106.56
Gas, Diesel & other energy	2670	2.82	1450	2.97	4120	2.87	68.66	30.88
Telephone	2885	3.04	1290	2.65	4175	2.91	69.58	61.20
Medicine	1865	1.97	1035	2.12	2900	2.02	48.33	19.82
Education	8440	8.91	4210	8.65	12650	8.82	210.83	247.96
Health insurance	216	0.22	210	0.43	426	0.29	7.1	11.29
Total / year	94630	100	48660	100	143290	100	2388.16	920.67

As shown in the above table and by T- test, the hypothesis that says, there is no differences between the two area's due to all items of household expenses ,if all of significant ones are larger than $\alpha = 0.05$, we can accept this hypothesis .

4.4 Physical and economical access to food

Food production varies significantly from one year to another, this instability in food production is not fully offset by the subsequent changes in food trade and aid, so it remains considerably instable in food supplies, most of the year-to-year variability is associated with plant products and stems largely from changes in the weather patterns and a large share of the change from year-to-year is associated with olive production. (Food agriculture organization -World food program: Food Security Assessment, 2003).

The respondents identified the following as their main source of food: local market (57%), food aid (24%), extended family (8%), and household produce (7%).

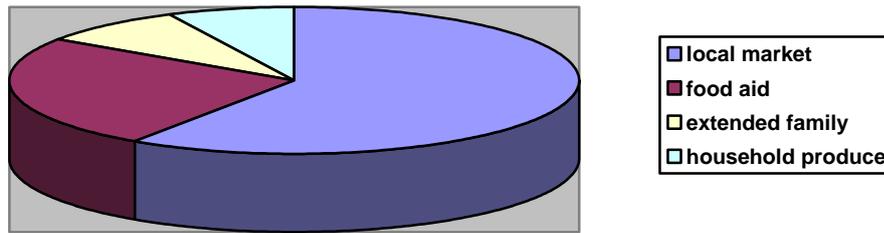


Figure 4.1: Main source of food in the wall villages, Palestine 2004/2005

The imposition of movement and access restrictions by the separation wall fundamentally changed the food demand factors, as strong growth in jobs opportunity and incomes turned into a massive loss of jobs and incomes. The cuts in expenditures, including food, removed the upward pressure on food prices even though population growth continued unabated.

Restrictions on people and goods mobilization have impeded physical access to food; curfews and the separation wall prevent food suppliers from getting food to shopkeepers and consumers.

The prohibition on the use of by-pass roads and the barriers placed on the roads made Palestinians use further restrict physical access to food, which affected food suppliers in their farms, as of the mobility restrictions, curfews, occupation and the construction of the separation wall make it difficult, and in some cases impossible to attend animals or plants.

In general there is a massive reduction in food consumptions as of food prices get higher and the quality of food become worse taken by children and all of reproductive aged women; these reductions are expected to lead to an increasing percentage of protein energy malnutrition as well as to micronutrient deficiencies. Substituting expensive nutritionally rich foods with cheaper foods carries long-term nutrition risks. Most vulnerable households have exhausted this desperate strategy, and were unable to limit their diet any further.

4.5 Coping strategies

With rising of unemployment, falling incomes and increasing in number of dependent household members, many of them were forced to find alternative to provide food for their families and they responded to these severe livelihood constraints by adopting a variety of short-term coping mechanisms that have helped them get by till now, but the risk is that their ability to recover in the future is being undermined.

The coping strategist index (CSI) created among families who lost their jobs in Israel or in west bank due to the closures and check points, and who lost their lands and crops by the wall, is to fit their family needs and daily expenses to survive. For many of the surveyed families, the first coping strategy was to cut expenditures on food, health, social events and utility bills, reducing spending on the quality and quantity of food were the most widespread coping mechanism followed by reduction of spending on clothes, health and education expenses, household maintenance, children's allowance and social activities, living with extended family members to save rent and pooling resources is another

common strategy, men try to postpone marriage; women try to marry earlier to reduce family's expenses.

Assets were sold, there is much reliance on crediting from shops and from water providers which led to wide-spread non-payment of utility bills. Farm households become more involved in subsistence food production for home consumption, traditional coping mechanisms such as rearing small livestock and planting home gardens were used to a greater degree although this rarely can meet all of the households' food needs. Some former land owners have returned to agriculture and those of whom have sold their land seek work for other landowners.

Destitution is close at hand after three years of living under strict closure policies; so the coping mechanisms of many households have been exhausted or are severely strained. (Palestinian national information center, 2002).

Economic access to food in terms of the ability to purchase food rather than food shortage is the main constraint to secure a healthy nutritious diet, members of vulnerable households consume minimum amount of more expensive protein and nutritious food such as meat, fish, dairy products, eggs and oil, many meals consist solely of bread and tea, cereals and increasingly potatoes, pulses, the cheaper vegetables and fruits form the core of their diet, the numbers of meals, the portion and number of meals by which certain foods are consumed have all been reduced and many reported that meals are prepared only once every three days in order to reduce fuel costs. Households economize on fuel costs by using wood for slow cooking and baking while using gas only for quick purposes such as coffee and tea (The World Bank (2001).

These CSI is differ from area 1 to area 2 but they are the same in some of them, according to the analyzed data in table 4.8, that collected from the surveyed families, the priority of CSI in area 1 is reducing the social activities (not exhausted 76.7%), regrouping of family members to save money, rely on less health and education expenses (exhausted 56%), collecting wood and grass (not exhausted 73.3%), making and selling foods and goods at home (exhausted 66.7%) and finally purchase food on credit.

For area 2 the priority for CSI are depending on food aid (exhausted 66.7%), reducing the social activities (not exhausted 50%), wood and grass collection (not exhausted 53.3%) and purchase food on credit (exhausted 73.3%) .

So the CSI nearly similar in area 1 and 2 regarding their needs, and whether it is exhausted or not, and they are common in these exhausted CS. sales of assets to invest in some activities, depend on food relief, rely on less health and education expenses and depend on aid from family and friends.

And for those not exhausted CS. consume less quality and variety of food, reducing the social activities, collecting wood and grass and go back to the land and agriculture.

Table 4.8: CSI mechanisms analysis in area 1 & 2 in the wall villages, Palestine 2004

Strategy Mechanisms	Ranking In which order used in study area 1(N=30)	Ranking In which order used in study area 2(N=30)
Living off Savings	3	5
Consume less quality & variety of food	3	4
Income earning activities	4	4
Purchase food on credit	3	3
Sales of assets to invest in income activities	5	4
Depend on food aid	4	1
Regrouping of family members to save money	2	4
Reducing the social activities	1	2
Rely on less health and education expenses	2	5
Wood and grass collection	2	2
Making and selling foods and goods at home	2	6
Depend on aid from family and friends	4	7
Begging	8	7
Women working (where they did not before)	7	7
Return to the land and agriculture	6	5
Send children to work for food	7	6
Children dropped out of school	6	7
Sales of Assets to afford food	5	4
Internal Migration	7	7

4.6 Consumer response to the organic products and improving local seeds

This section focuses on the socio-economic features of consumers reaction to improve local seeds in the area of study, 76.6% in area 1 and 36.6% in area 2 of farmers produce their seeds locally even 23.33% of them know the importance of it, but 80% in area 1 and 50 % in area 2 know that the more production comes from the improved seeds rather than local seeds even the local seeds more resistible to diseases and have cheaper price. (Table 4.9).

Table 4.9: The analysis of the consumer attitude toward the improved and local seeds, in wall area villages, Palestine 2004/2005.

Study case (yes)	Study Area 1 N=30	% in area 1	Study Area 2 N=30	% in area 2	total	% of total
The importance of local seeds	13	43.3	1	3.3	14	23.33
Production of seeds in the farm	23	76.6	11	36.6	34	56.6
Information about the names of local seeds	6	20.0	2	6.6	8	13.33
Local seeds accommodate with surroundings	27	90.0	10	33.3	37	61.66
Improved seeds accommodate with surroundings	12	40.0	11	36.6	23	38.33
Local seeds gives more production	5	16.6	6	20.0	11	18.33
Improved seeds gives more production	24	80.0	15	50.0	39	65.0
Local seeds and the resistance to the diseases	28	93.3	11	36.6	39	65.0
Improved seeds and the resistance to the diseases	11	36.6	10	33.3	21	35.0

In table 4.10 shows the trends toward organic products, 66.66% in the area of study they have found that the quality of organic products is good, about 30% of them were aware of health concerns.

And the awareness to the production of organic products is promoted since 25.0% of the surveyed families in the area of study belief that the natural manure and pesticides affects the quality of the organic production.

And some of the problems facing the organic agriculture are: highly prices of the products & unavailability of local seeds or natural manure and pesticides in the market plus the high prices, the needs for an extra money and effort, also water and time to turn to organic agriculture, some times the ethics and the traditions play main role against the marketing and consuming the organic products since it is not familiar to all of them.

Table 4.10: The analysis of the consumer attitude to the organic products, in wall villages, Palestine 2004/2005.

Study case (yes)	Study Area 1 N=30	% in area 1	Study Area 2 N=30	% in area 2	total	% of total
The quality of organic products in the market						
Excellent	5	16.6	0	0	5	8.33
Very good	11	36.6	0	0	11	18.33
Good	20	66.6	20	66.6	40	66.66
Bad	3	10.0	1	3.3	4	6.66
Organic manure and natural pesticide affect on the products	8	26.6	7	23.3	15	25.0
Preference of organic products	26	86.6	16	53.3	42	70.0
The healthily organic products	20	66.6	16	53.3	36	60.0
Awareness of the imported organic products	14	46.6	4	13.3	18	30.0

4.7 The marketing and the prices

The rate of farmers who sell their goods and products at its ground or in their homes is 65% It is not allowed by the , and they know the prices very well, 18.33% of them go to the market near their villages or the main market in Jenin or Qabatia (table 4.11).

Table 4.11: The trends of marketing and the awareness of the prices.

Case study	Study Area 1 N=30	% Area 1	Study Area 2 N=30	% area 2	Total	% of total
Prices Information						
From the market	17	56.6	10	33.3	27	45.0
From the friends and neighbors	8	26.6	18	60.0	26	43.3
Others	5	16.6	2	6.6	7	11.6
Awareness of prices fluctuation	29	96.6	14	46.6	43	71.6
The palace of selling products						
Farm	22	73.3	17	56.6	39	65.0
Market	7	23.3	4	13.3	11	18.33
Where is the market?						
Near the farm	4	23.3	7	23.3	11	18.3
In his/her village	5	16.6	3	10.0	8	13.3
In the near villages	16	53.3	14	46.6	30	50.0
The main market	5	26.6	6	20.0	11	18.3

Chapter Five

Conclusions and recommendations

5.1 Summary

The process of taking the land by force can be described in the following means:

1. Land confiscation for security needs as Jordan valley lands about 190 thousand donoms.
2. Land confiscation in a claim of governmental lands with contributes about 13% from the area of west bank, and this type of confiscation is the most common.
3. Land confiscation for establishing or expansion of settlements, and to create by-pass roads for their use with 15165 donoms from 938028 donoms area of Jenin district.
4. But most of the confiscated rich land was taken by the racial separation wall, which is the most harmful for the Palestinian life even than the presence of settlements, so we will focus in our study on the racial separation wall in Jenin district.

So the main problem that need more detailed research in the study is the confiscation of the Palestinian land by the wall and the affect of the wall on the management and development of farming systems, in addition to the continuous closures, and create obstacles ahead of the Palestinians trading movement.

The main purpose of this master thesis is a comparative analysis of studying the impact of confiscation of the natural resources (land, water) on the agricultural system management and development in Jenin district before and after the confiscations by the wall.

Also to specify the economic (income) and social situations with the limited and available resources, through an efficient use of these resources in order to identify how to develop it as to fulfill the needs of both people and land.

The general hypothesis that say the confiscation of lands to build the separation wall affects economic, social development of the Palestinians in the wall villages, has a negative impact on the socio economical level, and on the natural resources.

In general there is a negative impact of the wall on the development of farming systems in light of closures and check points, marketing, land confiscation, closing and destructing 36 well, demolishing and up-rooting trees, limiting area of pastures and animal diseases for the live stock, there is also no accessibility to the rest of the land, the yearly surplus of olive oil , the increased in the cost of transportation due to the use of by- pass roads, also the prices of agriculture inputs for the animals and the farming are increasing comparing to the prices of out puts, in specific.

5.2 Conclusions

1. The confiscated area was 737 from 1520 donoms in area 1, while in area 2, 357 donoms confiscated from 548 donoms, with a total 1094 donoms just from the study of targeted group, while the total area in the area of study is 150000 donoms for 15 western villages with 20000 populated was confiscated for the wall, 75000 donoms just they put their hands on it for security needs.
2. The areas that cultivated with vegetables are lowest in all farming systems and represent only 2.26% in area 1 with 0.0% in area 2, since they depend on semi arid farming process; the production from vegetables is enough for home consumption. The highest in all farming production is the fruit trees and it represents 91.25% in area 1 and 90.23% in area 2 (before and after the wall the olive tree is the dominant with 89.67% and 87.35% respectively in area 1, while in area 2 the percentage is 88.32% and 92.14% respectively), the medium one is the field crops that represents 7.19% in area 1 and 9.76% in area 2 (before and after the wall the wheat crops is the dominant with 5.78% and 3.19% respectively in area 1, while in area 2 the percentage is 90.12% and 2.61% respectively).
3. The dominant in breeding animals is goats (47.94%) then sheep (42.85%) followed by chickens (7.77%) and cows (1.41%), in area 2 which is high when compared with area 1, the gross margin for all live stock in area 2 is larger than area 1, since the villages in area 2 is small and depends mainly on raising live stock rather than agricultural ones, and also due to the geographic area which is mountainous that is rich in pastures, and third reason refers to the demographic inhabitants who are bedouins related to a big towns but live in this small villages due to the availability of grazing lands for their live stock.
4. According to the answers given by farmers to ward farming production, 67.68% in area 1 and 66.67% in area 2, complain that their main problems are: closures and check points, marketing, land confiscation, demolishing and up-rooting trees, there is no accessibility to the rest of the land, surplus of yearly olive oil, and the high cost of transportations, since they have a surplus in their farm and animal production.
5. The difference is the gross margin for farming products before the wall it is was cultivated more than after the wall, since there is a confiscation of lands, the gross margin after the wall is lesser than before the wall for all farm production, and the dominant in gross margin of plant production is olive trees.
6. All farmers that gather rain fall water in wells for later use of different purposes at all times by 100%, when there is a shortage in their water quantity needs, they buy water by trucks or tractors from the authority services councils with about 0.75 Jordanian dinnar for each 1m³, especially in area 2 where is the breeding of animals is dominant by 70% of them, for irrigation, all their farming systems are rain dependant in the wall village that don't have other irrigated methods, but it depends on rain fall water and collecting wells in all growing phases.

7. The income will be worse in the future by 33.3% in area 1 compared to 43.3% in area 2 , and those believe that the living standards will be worse in the future is 26.6% in area 1 compared to 30% in area 2 , with 71.6% in both study area think that the living standards still like today, in addition to 100% of the surveyed families expect the situation will be bad regarding land confiscation and diminishing the resources , and they hope in the future to educate their children for a good opportunity to have a stable job.
8. The farm income in area 1 decreases after the wall by 9.23% that is mean this portion transferred to off – farm activities represented by casual and seasonal work in farming or at PNA employees or in the private employee sector .

Off course the reason is land confiscation and up rooting trees inside by the closures around west bank to Israel or the restrict movement (Mobility access) to Palestinian market employee or to the rest of the land by the temporary and permanent check points.

In area 2, the farm income increases by 4.96% after the wall for the following reasons:

1. Number of confiscated acres is less than area 1.
 2. Number of acres for the villagers in area 2 is less than area 1 (Agriculture Possess)
 3. The rest of acres are mountainous natural pastures that mean they are not depending in this area on cultivation and farming in a large scale.
 4. The trend in this area is breeding animals rather than agriculture, more over the percentage of breeding animals increases in a large scale in both areas 1 and area 2, which is one of the main earning activities in the family's source of income.
9. According to consumer response to the organic products and improving seeds as an alternative solution to land confiscation, using chemicals and finally to have more revenue, 76.6% in area 1 and 36.6% in area 2 of farmers produce their seeds locally even 23.33% of them know the importance of it, but 80% in area 1 and 50 % in area 2 know that more production comes from the improved seeds rather than local seeds even the local seeds more resistible to diseases and have cheaper prices.

And the trends toward organic products, 66.66% in the area of study find the quality of organic products is good and 30% of them are well aware of the its health concerns.

And some of the problems facing the organic agriculture are: highly prices of the products & unavailability of local seeds or natural manure and pesticides in the market plus the high prices, the needs for an extra money and effort, also water and time to turn to organic agriculture, some times the ethics and the traditions play main role against the marketing and consuming the organic products since it is not familiar to all of them

10. By T- test, the percentage of workers in Israel is larger in area 2(46.7%) than area 1(39.9%) before the wall, that is decreased and still larger than area 1(28.35 VS.

3.3) after the wall, we conclude that since they have just finished their elementary school at most and they had to quit schools at early ages, they join field work, and 50% of the families who have relatives in the Arab villages behind the green line, and 43.3% are just working in the farm or breeding animals before the wall that is decreased to 24.62 after the wall since we have land confiscation and demolishing farm contents and taking land by force for security as they claimed, and the limited area of pastures and finally bad infrastructure services that leads to bad marketing, in addition to the use of by-pass roads that increase the cost of inputs compared to low prices of out puts, and so there is a significant differences between area 1 and area 2 regarding the salaries before and after the wall, to the salaries before the wall by a mean value of 8952 JD yearly, and also within the same area before or after the wall to before the wall in both area 1 with a mean value of 6856 JD yearly and in area 2 with a mean value of 11048 JD yearly.

11. Marketing problem which faces 67.68% in area1 and 66.67% in area 2 farming production, so 65% of farmers prefer to sell their goods and products at the farm or in their homes since the crop production is subject to severe impacts from the political situation as of the separation wall, check points and using by-pass roads especially in area 2 for their animal production, and in area 1 for olive oil production and finally the sales to Israeli markets yield higher prices but rely on illegality, and black markets during times of political frictions. The alternative is the wholesale market in Nablus or in Jenin, and a temporary one in Qabatia, with its extensive trade of large quantities of agricultural products.
12. According to household expenditure larger share of the cash out flow contributed before the wall in area 1, while it is less in area 2. It is about 85.4% of the cash outflow in area 1, 80.93% in area 2 (Appendices 6.9), while this percentage increases after the wall by 85.86% and 89.89% respectively to area 1 and 2.

Household expenditure is composed of food expenses, clothes, electricity, transportation, water, gas, diesel fuel and other energy sources, telephone, medicine, health issues, education and others like social issues, among of which is food accounts for about 51.62% of the household expenditures in area 1 and 50.96% in area 2.

As for the above table and by T- test, we can accept the hypothesis of no differences between the two area's due to the all items of household expenses ,as all the significant differences are larger than $\alpha = 0.05$

13. The CSI is differ from area 1 to area 2 but in some of them they are the same, according to the analyzed data in table 4.9, which was collected from the surveyed families the priority of CSI in area 1 is reducing the social activities (not exhausted 76.7%), regrouping of family members to save money, that relies on poor health and education expenses (exhausted 56%), collecting wood and grass (not exhausted 73.3%), making and selling food and goods at home (exhausted 66.7%) and finally purchase food on credit.

For area 2 the priority for CSI are depending on food aid (exhausted 66.7%), reducing the social activities (not exhausted 50%), collecting wood and grass (not exhausted 53.3%) and purchase food on credit (exhausted 73.3%) .

14. According to the liquidity and cash balance, the results of analysis show that there is a highly significant difference in the cash balance among the study area before and after the wall, but there is no significant difference in the cash balance between area 1 and 2 in the same period, so we can conclude that the opportunity for the farmers to save money is higher in area 2.
15. The private sector where most of the jobs has been lost remains in a deep depression , unemployment increased to 70%; investment, including the agriculture sector, remains on hold, as it has been for more than three years since the Palestinian economy was extremely dependent on the performance of the Israeli economy, so a coping strategist created among families who lost their jobs in Israel or west bank due to the closures and check points , and who lost their land and crops by the wall , to fulfill needs of their family and to satisfy their basic assets to survive.
16. Farmers become very skeptical about ever reaching their lands in the future and after the wall is complete, and continue to have difficulty getting access to attend their homes (The isolation of the Barta'a Al-Sharqia and Om Rehan compounds), fields and flocks, to obtain inputs when they need it, to deliver products to markets and to pay bills, also to continue waiting for compensation of accumulated damages to their property, also animal health concerns, as some pose a threat to humans, remain unattended with limited area of pastures, so the folks keepers tend to buy their animal fodders and water and drugs at high prices.
17. By T- test shows a significant difference between the two areas, and 76.68% of surveyed families are youth and productive , age from 16-60 in area 2, while in area 1 the percentage is 64.68%, which mean the surveyed families in area 2 have extended families with more family members to help with the work as they claimed.
18. The percentage level of education in area 1 (13.3%) is larger than area 2 (6.6%), this comparison oppose the illiterates which is in area 2 (23.3%) is larger than area 1(3.3), which support the above point regarding the work and dropping out of schools, and in a society where half the population is under 18, the effect of closure on education is very obvious. The psychological impact on children, arising from school closure and exposure to violence, is damaging future generations of Palestine and will only serve to perpetuate the cycle of violence and hatred.

5.3 Recommendations

This study could be applied to determine the basic needs of compounds and different sites in Jenin district through focusing on negative aspects of the separation wall. To minimize damages or even eliminate it, they can ease restrictions on the movement of people and goods, including areas around the separation wall in order to ensure free access of farmers to their lands, animals and markets, and:

1. Priority should be given and take into consideration in the most affected villages by land confiscation to improve all the public services (education, health and basic infrastructure) from all directions.
2. Develop human resources and support the cooperative level as agricultural co-operatives, social services, and establish active youth centers, with vocational training for low income laborers.
3. As almost all the lost jobs were in the private sector which is in a very depressed state, given the imbalances between employment in the public and private sectors, the goods production and service sectors as well as paid and non-paid workers, job creation should be predominantly for private sector of paid workers in the goods productive sectors of the economy.
4. Encourage sectors which provide job opportunities to create new markets for Palestinians labor forces through developing of productive sector as agricultural sector by governmental and Ngo's (International or local), to minimize the damage threat to future sufficiency of food supplies, and because food production appear to have suffered greater physical and economic damage, through:
 1. Construct and rehabilitate agricultural roads to ease the farmer's mobility to their land and market.
 2. Rehabilitation and Reclamation new lands for the purpose of planting, use consecutive planting, especially plastic houses nurseries, and develop some economical value crops like olive and tobacco.
 3. Rehabilitate old water wells and small streams to elevate quantity of water and then increase the planting area.
 4. Establish profitable veteran clinics to provide health service for animal assets.
 5. Recommended actions to ensure sustained gains in productivity to include improving the efficiency of water use (water harvesting), strengthening the agricultural research and extension system, rebuilding the farm credit system, accelerating the shift to vegetable production in plastic houses and improving the quality of animal breeding stock.

5. A Market Information and Analysis System (MIAS) should be developed to provide regularly the targeted price and give the producers information about markets, also to cooperatives, marketing groups, intermediaries and exporters on such items such as prices, costs of inputs and market opportunities that may be available in the regional countries, including Israel. This will allow key decisions to be made on what crop/variety to plant, when to sell, how much to store, when to buy inputs, etc. This would mitigate the risks associated with high fluctuations of agricultural prices in the region.
6. Food aid is only ever an emergency solution. But the farmers cannot readily fill the gaps in food production because of the extreme dislocation brought about by closures, the impact of movement restrictions and land confiscation have had on agriculture in particular.
7. Get advantage of international, national, and holy occasions to empower Palestinians about their national and social duties which achieve cooperative society.

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Appendixes

Table 6.1: shows the total area in the area of study with the total production for each crop before the wall, in the wall villages, Palestine 2004

crops	Total area (Don.) in study area	Total production In study area Kg/donom	% of total area	% of total production in area1 & 2
Okra	14	1200	0.67	0.82
Water melon	0	0	0	0
Squash	0	0	0	0
Tobacco	14	2750	0.67	1.9
Wheat	133	38750	6.43	27.48
Barley	0	0	0	0
Pulses	22	2000	1.1	1.38
Olives	1847	98550	89.31	68.12
Almonds	33	1400	1.59	0.96
Total	2068	144650	100	100

Table 6.2: shows the total area in the area of study with the total production for each crop after the wall, in the wall villages, Palestine 2004.

crops	Total area (Don.) in study area	Total production In study area Kg/donom	% of total area	% of total production in area1 & 2
Okra	0	0	0	0
Water melon	10	4000	1.02	6.49
Squash	7	500	0.71	0.96
Tobacco	28	3570	2.87	5.79
Wheat	30	9300	3.1	15.1
Barley	0	0	0	0
Pulses	13	500	1.3	0.96
Olives	860	42750	88.29	69.43
Almonds	26	950	2.6	1.54
Total	974	61570	100	100

Table 6.3: Total of live stock raising (average number/farm) in the surveyed families in Area 1& 2 of wall area villages, Palestine, 2004.

Live stock	Study Area 1 N=30	%	Study Area 2 N=30	%	Total
Total of cattle (#)	153	21.64	554	78.35	707
Total of milk (L)	17180	25.16	51100	74.83	68280
Total live animal (#)	91	19.73	370	80.26	461
Total revenue	36335	24.10	114715	75.94	151050
Total expenses	2250	36.58	3900	63.41	6150
Total Cross Margin	33865	23.45	110500	76.54	144365

Table 6.4: Last statistics of wall villages, 19/3/2003 by Jenin Governorate

Town	population	Town area /donom	Olive area /donom	Range & plains area
Nazlat Zied	544	1300	900	400
Tura asharqeia& al gharbeia	963 620	1700	632	250
Zabda	279	6000	542	3228
Om rehan	1780	3300	300	350
Al Taybeh	2775	6500	1103	2200
Aneen	2688	16500	2774	9050
Barta asharqeia	10766	10000	4036	6000
Ya'bad	38	37805	9766	8775
Almontar asharqeia & al gharbeia	162	-	-	-
Daher al maleh	1585	-	-	-
Al a'raqa	1585	1300	523	700
Total	22200	84405	20576	20576

Table 6.5: Classified damages in Jenin district, January 2003 by agriculture Jenin department

#	Case	Damage activity	Kind of damage	Area /donoms	#	value \$
1	Wall built on it	Crops	Crops	993.5		49675
2	Wall built on it	Crops	Field vegetables	3.5		525
3	Wall built on it	Crops	Green house vegetables	25		3750
4	Wall built on it	Crops	Olive	1905	15753	787650
5	Wall built on it	Crops	almonds	60.5	662	33100
6	Wall built on it	Crops	Poor land	160		8000
The wall built on it				3147.5	16415	882700
1	In side the wall	Crops	Crops	295		
2	In side the wall	Crops	Olive	5987.75	44082	
3	In side the wall	Crops	almonds	173.5	620	
4	In side the wall	Crops	Poor land	1124		
Behind the wall assessments				7580.25	44702	
Net total				10728	61117	

Table 6.6: Describing the damages in flocks of the cattle.

case	Damage branch	Damage sort	Area / acre	#
The wall built on it	Infrastructure	1.6	1.14	5

Table 6.7: Shows the direct losses of Intifada and the separation wall till 2003 as statistics made by the agricultural department in Jenin district

Data	Area / acre	#	Kind of damage	Value/\$
cows	-	14	Dead	10900
goats	-	972	Dead	19900
chickens	-	64273	Dead	103518
Chicken nursery	-	3	-	117680
Bee cells	-	186	Dead	31223
Cattle house	-	2	Destruction	21778
Gardening	336	-	Up rooting	47450
vegetables	1806.5	-	Damaging	420714
olives	767.5	-	Up rooting	333499
crops	2037.5	-	Damaging	317645
nurseries	-	10	Damaging	101600
Irrigation pipe lines	-	-	destruction	29218
Forests	-	-	Damaging	66666
Un planted	557	-	-	41934
Total	-	-	-	1663725

Table 6.8: Indirect losses

Data	Value / \$
Loss of marketing animals and their products	1086000
Loss of export in marketing sector	306648
Total	1392648

Table 6.9: The analysis of cash out flow in wall area villages before the wall, Palestine 2004/2005

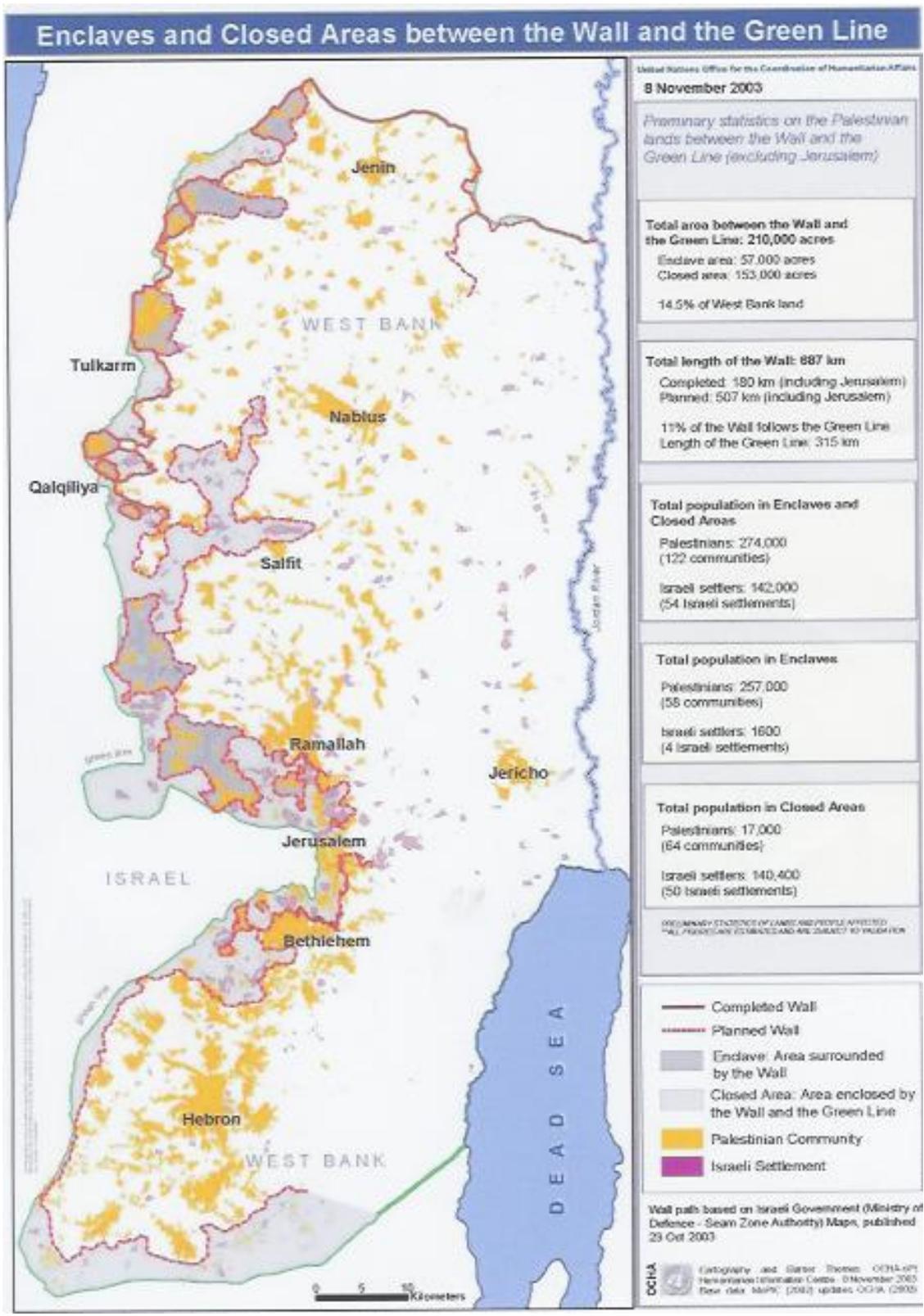
The case	Study Area 1 N=30	% of area 1	Average of area 1	SD. Of area 1	Study Area 2 N=30	% of area 2	Average of area 2	SD. Of area 2	Total of area 1& 2	% of the total
Crop expenses*	16414	12.83	420.87	1118.18	7850	12.73	373.80	1216.23	24264	12.80
Animal expenses**	2250	1.75	57.69	117.57	3900	6.32	185.714	345.10	6150	3.24
House hold expenditure	109222.5	85.40	2800.57	1749.10	49890	80.93	2375.71	1051.10	159112.50	83.95
Total (cash out flow)	127886.5	-----	-----	----	61640	-----	-----	-----	189526.50	-----

* Crop Expenses: All of the inputs in farm as fertilizers, pesticides, seeds cost, mechanical and wages expenditures and transporting of the out puts.

** Animal Expenses: All of the inputs to animals breeding as foddors, medical care, and mechanical and wages expenditures and transporting of the out puts.

Table 6.10: The analysis of cash out flow in wall villages after the wall, Palestine
2004/2005

The case	Study Area 1 N=30	% of area 1	Average of area 1	SD. Of area 1	Study Area 2 N=30	% of area 2	Average of area 2	SD. Of area 2	Total of area 1& 2	% of the total
Crop expenses	13328	12.09	341.74	750.76	1572.5	2.90	74.88	185.99	14900.5	9.06
Animal expenses	2250	2.04	57.69	117.57	3900	7.20	185.71	345.01	6150	3.74
House hold expenditure	94630	85.86	2426.41	929.97	48660	89.89	2317.142	921.52	143290	87.19
Total (cash out flow)	110208	----	-----	-----	54132.5	-----	-----	-----	164340.5	----



Map 6.11: The wall in the west bank (Office for the coordination of the humanitarian affairs (2005).

6.12

Research Questionnaire

The impact of land confiscation for the separation wall
On farming system management and development
In Jenin district

To: Dr. Thameen Hijawi

By: Khalid Suleiman

2004

Governorate _____ Village _____
Number of Questionnaire _____ Date: _____
Name of farmer _____ Tel: _____

CHAPTER ONE: SOCIO – ECONOMIC AND CULTURAL SITUATION STUDY

1. Demographic data

1.1 Member of family

1.1.1 Head of family

1.1.1.1 Sex (1) male (2) female _____ (_____)

1.1.1.2 Age _____ years (_____)

1.1.1.3 Level of education _____ (_____)

(1) Illiterate (2) Primary school (3) Secondary school (4) vocational school
(5) College (6) University degree (BSc or more)

1.1.1.4 Where are you living? (1) in the farm (2) near the farm (3) far from the farm but in the same city (4) far from the farm in other city

1.1.2 How many members are your households at present including head of family?

1.1.2.1 Total _____ (_____)

1.1.2.2 Male _____ (_____)

1.1.2.3 Female _____ (_____)

1.1.2.4 Male between 16-60 Years _____ (_____)

1.1.2.5 Female between 16 -60 Years _____ (_____)

1.1.2.6 Member below 16 years and above 60 years ____ (_____)

1.2 Education of the family

1.2.1 How many people are in the school in your family _____ person (_____)
male _____ (_____) female _____ (_____)

1.2.2 How many Person are continuing their studying after the school ____ (_____)
male _____ (_____) female _____ (_____)

1.3 Finance status of the family

1.3.1 Amount of saving money in this year _____ JD (_____)

1.3.2 Do you borrow money for your farm? Yes (1), NO (2) ____ (_____)

1.3.3 Number of credits _____ (_____)

1.3.4 Use of credits: (1) production (short term), (2) investment in farm (long-term),
(3) Household consumption (short term) _____ (_____)

1.3.5 Source of credit _____ (_____) (1) Commercial bank (2) Merchant
(3) Co-operative agricultural (4) Friend (5) others _____

1.3.6 Total credit per year _____ JD (_____)

1.3.7 Interest per year _____ JD (_____)

1.3.8 What was your guarantee _____

1.3.9 In the end of crop production, how much money do you still have debt?
____ JD (____)

1.3.10 How would you describe your income? (1) Low (2) medium (3) high

1.3.11 How many loans did your family run in the last four months, also from relations and friends?

1.3.12 Do you or some one of your family lend out money or other article of value to other people? (1) Yes (2) No

1.3.13 Do you get an interest rate? (1) Yes (2) no

1.3.14 If yes, how much? _____ %

- 1.3.15 which collateral (security) was requested for the credit?
 (1) Animals (2) land (3) durable consumer goods (4) friends of family guarantee for you (5) others
- 1.3.16 Are you member of Self-help groups or Cooperatives: purpose, functions, management, benefits? (1) Yes (2) No
- 1.3.17 which purpose has the self help group?
- 1.3.18 which benefits do you have from it?

1.4 Members of family work off-farm

- 1.4.1 Total of members of family work off-farm _____males _____females_____
- 1.4.1.1 Sort of work (specify) _____ (_____)
- 1.4.1.2 Salary / Wage _____ JD/ _____ (_____)

1.5 Hired labor for farming

1.5.1 Permanent labor in farm

1.5.1.1 Male

1.5.1.1.1 Total _____ person (_____)

1.5.1.1.2 Wage per month _____ JD (_____)

1.5.1.1.3 Sort of work (specify) _____

- (1) Preparing land (2) Fertilized (3) Spray Chemical (4) Harvesting (5) Transfer Production to market (6) others

1.5.1.2 Female

1.5.1.2.1 Total _____ person (_____)

1.5.1.2.2 Wage per month _____ JD (_____)

1.5.1.2.3 Sort of work (specify) _____

- (1) Preparing land (2) Fertilized (3) Spray Chemical (4) Harvesting (5) Transfer production to market (6) Planting (7) Others

1.5.2 Temporary labor in farm

1.5.2.1 Male

1.5.2.1.1 Total _____ person (_____)

1.5.2.1.2 Wage per day/month _____ JD (_____)

1.5.2.1.3 Sort of work

- (1) Preparing land (2) Fertilized (3) Spray Chemical (4) Harvesting (5) Transfer production to market (6) Others

1.5.2.2 Female

1.5.2.2.1 Total _____ person (_____)

1.5.2.2.2 Salary per JD/month _____ JD (_____)

1.5.2.2.3 Sort of work

- (1) Preparing land (2) Fertilized (3) Spray Chemical (4) Harvesting (5) Transfer production to market (6) Others

1.6 Household expenditures of the Family (expenditures for external products or services)

Items	Total (JD\year)	Remarks
1.6.1 Food		
1.6.2 Cloths		
1.6.3 Electricity		
1.6.4 Transportation		
1.6.5 Water		
1.6.6 Gas, Diesel & other energy		
1.6.7 Telephone		
1.6.8 Medicine		
1.6.9 Education		
1.6.10 Rent of the house		
1.6.11 Health insurance		
1.6.12 Other		
1.6.13 Total / year		

1.6.14 Are all of these items available locally, especially the food?

1. Yes 2. No

1.6.15 which are not available? When? Why?

1.7 Coping Strategies

Strategy Mechanisms	Ranking In which order used	Exhausted		Never Used
		1. Yes No	2.	
1.7.1 Living of Savings	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.2 Consume less quality & variety of food	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.3 Income earning activities	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.4 Purchase food on credit	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.5 Sales of assets to invest in profitable activities	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.6 Depend on food aid	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.7 Regrouping of family members to save money	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.8 Reducing the social activities	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.9 Rely on less health and education expenses	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.10 Wood and grass collection	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.11 Making and selling foods and goods at home	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.12 Depend on aid from family and friends	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.13 Begging	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.14 Women working (where they did not before)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.15 Return to the land and agriculture	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.16 Send children to work for food	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.17 Children dropped out of school	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.18 Sales of Assets to afford food	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1.7.19 Internal Migration	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

CHAPTER TWO: THE ANALYSIS OF FARMING SYSTEMS AND CROP PRODUCTION

2. Investment and Equipment

2.1 Construction

2.1.1 Sort of house

(1) House with Concert, (2) House with Zink, (3) House with Leaf (4) Other

2.1.1.1 Age of the house _____ years (_____)

2.1.1.2 The price of this house _____ JD (_____)

2.1.2 House for livestock

2.1.2.1 Do you have house for livestock? (1) Yes, (2) no __ (_____)

2.1.2.2 Price of this house _____ JD (_____)

2.1.3 Storage

2.1.3.1 Do you have a store? (1) Yes, (2) no _____ (_____)

2.1.3.2 What is the purpose of this store? _____ (_____)

(1) Keeping production after harvesting, (2) Keeping pesticide, Fertilizer,(3) Others _____

2.1.3.3 Price of this store? _____ JD (_____)

2.1.4 Tractor, Machines, Pickup and car

2.1.4.1 Which one of them do you have?

(1) Tractor (2) Farming machines (3) pickup or car

2.1.4.2 How much did you pay? _____ JD (_____)

2.1.4.3 Maintenance cost per year _____ JD _____ (_____)

2.1.4.4 Did you buy it by (1) Credit (2) cash? _____ (_____)

2.1.4.5 If by Credit, How much do you pay for the debt _____ JD (_____)

2.1.5 Green house

2.1.5.1 Do you have green house? (1) Yes, (2) No _____ (_____)

2.1.5.2 How many green houses do you have? _____ (_____)

2.1.5.3 Age of this green house _____ year's _____ (_____)

2.1.5.4 How much did you pay for each one? _____ JD (_____)

2.1.5.5 How many years can you use this green house more? _____ Years (_____)

2.1.5.6 Maintenance cost per year _____ JD _____ (_____)

2.1.5.7 Did you buy it by (1) Credit, cash (2)? _____ (_____)

2.1.5.8 If by Credit, How much it cost _____ JD _____ (_____)

2.2 Livestock Differentiate (in this year)

2.2.1 Sheep

2.2.1.1 Numbers of sheep _____ (_____)

2.2.1.2 Medicines, drugs and veterinary wages _____ (_____)

- 2.2.1.3 Price per unit _____JD (_____)
- 2.2.1.4 Products of milk _____kg (_____) average price ____JD (____)
- 2.2.1.5 Products of live animal_____head (_____), average price__JD(____)

2.2.2 Cows

- 2.2.2.1 Numbers of cows _____(_____)
- 2.2.2.2 Medicines, drugs and veterinary wages _____(_____)
- 2.2.2.3 Price per unit _____JD (_____)
- 2.2.2.4 Products of milk _____kg (_____) average price ____JD (____)
- 2.2.2.5 Products of live animal_____head (_____), average price__JD(____)

2.2.3 Goats

- 2.2.3.1 Numbers of goat _____(_____)
- 2.2.3.2 Medicines, drugs and veterinary wages _____(_____)
- 2.2.3.3 Price per unit _____JD (_____)
- 2.2.3.4 Products of milk _____kg (_____) average price ____JD(____)
- 2.2.3.5 Products of live animal_____head (_____), average price__JD(____)

2.2.4 Chickens

- 2.2.4.1 Numbers of chicken _____(_____)
- 2.2.4.2 Price per unit _____JD(_____)
- 2.2.4.3 Products of eggs _____kg(_____)average price ____JD(____)

2.3 Plant production

2.3.1 Drinking water

- 2.3.1.1 Is there any problems in using water (1) Yes, (2) No_____(_____)
- 2.3.1.2 What's it ? _____(_____)(1)Bad quality of drinking water for family (2)Water shortage in dry season (3)Salinity(4)Competition of water in village (5) the price is high
- 2.3.1.3 What type of water is used? _____(_____)
(1) Bad quality (2) good quality (3) high quality of water
- 2.3.1.4 Where does the water come from? _____(_____)
From well (2) form rainfall (3) spring (4) surface water (5) from authority of water
- 2.3.1.5 How much water has been used per year? ____ m3(_____),price_____JD
- 2.3.1.6 Do you think this quantity is enough? (1) Yes (2) no_____(_____)
- 2.3.1.7 How much of water do you need? _____(_____)

2.3.2 Irrigation water

- 2.3.2.1 What kind of irrigation system do you use?
(1) Drip irrigation system (2) sprinkler system (3) surface system (4) others
- 2.3.2.2 What kind of water resources were you using in the past _____(_____)
(1) Your own well (2) public well (3) from the water authority (4) rainfall (5) others
- 2.3.2.3 How was the quality of water you were using in the past _____(_____)
(1) High quality (2) bad quality (3) waste water (4) salinity water (5) others
- 2.3.2.4 What kind of water resources are you using now _____(_____)
(1) Your own well (2) public well (3) from the water authority (4) rainfall (5) others
- 2.3.2.5 Do you like to change your water resources (1) yes (2) No_____(_____)

2.3.2.6 If the answer is yes, why? _____(_____)

(1) Because it costs much (2) the quality of water is not good (3) the productivity is low (4) the quality of products is low (5) this source is not available any more

2.3.2.7 If you were buying the water how much does it cost? _____ JD/m³

2.3.2.8 where do you get the irrigation water?

(1) Well (2) collect the rainfall (3) spring (4) from river or dam or channel (outside) (5) others

2.3.2.9 Do you think this quantity is enough? (1) Yes (2) no _____(_____)

2.3.2.10 How much water do you need? _____(_____)

2.3.3 Vegetable, fruit and Field crops (before and after the wall)

2.3.3.1 Kinds of vegetables, Fruits and Field crops

(1) Tomato _____ Don (2) cucumber _____ Don (3) _____ Don

(4) Wheat _____ Don (5) _____ Don (6) _____ Don

(7) orange _____ (8) _____ (9) _____

2.3.3.2 The production (before and after the wall)

2.3.3.2.1 What were the prices of the products?

(1) Tomato _____ JD/kg (_____) (2) cucumber _____ JD/kg (_____) (3) _____ JD/kg (_____) (4) _____ JD/kg (_____) (5) _____ JD/kg (_____) (6) _____ JD/kg (_____) (7) _____ JD/kg (_____) (8) _____ JD/kg (_____) (9) _____ JD/kg (_____)

2.3.3.3 Seed inputs in vegetable crops production

2.3.3.3.1 Quantity of seeds (as % of the quantity now) _____%(_____)

2.3.3.3.2 Price / Kg. (as % of the price now) _____%(_____)

2.3.3.3.4 Source of these seeds _____(_____)

(1) Produce his seeds in the farm (2) Buying the seeds from the market

2.3.3.4 Fertilizer

2.3.3.4.1 Quantity of fertilizers (as % of the quantity now) _____%(_____)

2.3.3.4.2 Price / Kg. (as % of the price now) _____%(_____)

2.3.3.5 Pesticide and chemicals

2.3.3.5.1 Quantity of pesticides (as % of the quantity now) _____%(_____)

2.3.3.5.2 Price (as % of the price now) _____%(_____)

CHAPTER THREE: ENVIRONMENTAL CONCEPTS AND ECONOMICS OF FARMING STUDY

3.1 History and location of the farm

3.1.1 How long have you had this farm? _____(_____)

(1) Less than 5 years (2) Between 5-10 years (3) More than 20 years (4) others

3.1.2 How did you get this farm? _____(_____)

Bought (2) Inherited (3) Rented (4) Shared (5) others

3.1.3 If the answer in (3.1.2) is (3) how much did it cost? ____JD/dunum__(_____)

3.1.4 Why did you choose your farm in this location? _____(_____)

Good location (2) near water facility (3) good quality of water (4) The cost of water is low (5) Other _____

3.1.5 Did you have another farm before this one? _____(_____)(1) Yes (2) No

3.1.6 If the answer is yes, why did you change your farm? _____(_____)

(1). bad location (2) scarcity of water (3) low quality of waters (4) Other_____

3.2 Land use property

3.2.1 Land use change

3.2.1.1 What is the most important factor for changing your land use? _____(_____)

(1) Less quality of land,(2)less quantity of water (3) low quality of water (4) less Infrastructure, (4) less crop production (5) low quality of products (6) Government Policy, (7) other _____

3.2.1.2 Who told you to change your cultivation land? _____(_____)

(1)Yourself (2), Friends (3), Extension officer (4), Merchant, (5) Banker, (6) other

3.2.2 Crop rotations

3.2.2.1 Do you change the crops in one plot from year to another or between seasons

(1) YES (2) NO

3.2.2.2 In which order do you rotate the crops? _____

3.2.2.3 Time between crop change ----- month

3.3 Local seeds and organic products:

3.3.1 Local seeds and improved seeds.

3.3.1.1 Do you know the importance of local seeds for agriculture and the product's quality? (1) Yes (2) No

3.3.1.2 If yes Give an example

3.3.1.3 Do you produce your seeds in your farm (your self)?

(1) Yes (2) No

3.3.1.4 If NO, why

- 3.3.1.5 Which is more expensive the local seeds or the improved seeds?
 (1) Local seeds (2) improved seeds
- 3.3.1.6 Do you have any information about the name of local seeds?
 (1) Yes (2) No
- 3.3.1.7 If Yes, what it is ?
- 3.3.1.8 Do you know which seeds can be accommodated with the surrounding?
 (1) Local seeds (2) improved seeds
- 3.3.1.9 Which one can give more production?
 (1) Local seeds (2) improved seeds
- 3.3.1.10 Have you store any preservation and product of local seeds?
 (1) Yes (2) No
- 3.3.1.11 Do you know which kinds of seeds resist the disease?
 (1) Local seeds (2) improved seeds

3.3.2: organic produce (vegetables, fruits, olives and field crops)

- 3.3.2.1 The quality that you find in the market, is____ (1) excellent (2) very good
 (3) good (4) bad
- 3.3.2.2 Do you think that the organic manure or natural pesticides affect the organic
 produce ____ (1) yes (2) no
- 3.3.2.3 If the answer is yes how can you recognize it? from____(1)taste (2)color
 (3)Shape (4)softy (5)others
- 3.3.2.4 Do you prefer to buy organic vegetables over non organic for
 example?____(1)yes (2)no
- 3.3.2.5 If the answer is no, why? (1) High prices (2) accessibility to the organic
 vegetables products market (3) ethics (4) the supply and availability (5) others
- 3.3.2.6 can you recognize the organic produce_____(1) yes (2) no
- 3.3.2.7 Do you prefer the organic produce? (1) Yes (2) no_____
- 3.3.2.8 If the answer is YES, Why? (1) Health (2) ethic issues (3) taste (4) others

3.3.3 Prices

- 3.3.3.1 Where do you get the information about the prices of
 produce?_____(1) from the market (2) from my friends or neighbor (3)others
- 3.3.3.2 Are you aware of the fluctuation of prices during the year? (1) yes (2) no
- 3.3.3.3 Do you prefer to buy the imported produce?____(1) yes (2) no
- 3.3.3.4 Why do you have this preference?_____(1)the price is lower (2) the
 quality is better (3) others_____
- 3.3.3.5 Are you aware of the quality of the imported organic food produce?
 (1) Yes (2) No
- 3.3.3.6 If the price of the produce, which fertilized by organic manure is lower than
 the price of that fertilized by chemicals or others, and the quality of products is
 same, will you buy these products?
 . _____(1) yes, in all cases (2) yes, only if the price is less than 25% (3) yes,
 only if the price is less than 50% (3) no in all cases
- 3.3.3.7 In your opinion, what is the main problem that faces the organic
 agriculture?

3.3.4 Type of marketing

3.3.4.1 How do you sell your products?

(1) By middle merchant (2) at market (3) at farm (5) for exporting

3.3.4.2 If you sell your products at market, where is the market?

(1) Near the farm (2) in the village near the farm (3) in the city near the market (4) in one of main market in Palestine (5) in the foreign market (6) others

CHAPTER FOUR: Problems and opinions

4.1 Problems in livestock

4.1.1 What kind of problems do you have? _____(_____)

(1) Lack of Drinking water (2) Bad quality of Drinking water (3) Lack of extension service (4) Lack of vet services (5) Low price of livestock (6) High price of fodder (7) the fodder is not available (8) others

4.1.2 Do you have an extended range land to feed the animal? (1) Yes (2) No _____(_____)

4.1.3 Do your castles have any diseases? (1) Yes (2) no _____(_____)

4.1.4 Is the medicine available? (1) Yes (2) no _____(_____)

4.1.5 Is the price of medicine expensive? (1) Yes (2) no _____(_____)

4.2 water resources problems

4.2.1 Do you get the water in any time you need it? (1) Yes (2) no, __ (_____)

4.2.2 Is the water available during the day? (1) Yes (2) no, _____(_____)

4.2.3 Is the water available throughout the year? (1) Yes (2) no, _____(_____)

4.2.4 If the answer in 4.2.3 is no, which month it is not available? ____ (_____)

4.2.5 Is there any problem in the Water price? (1) Yes (2) No _____(_____)

4.2.6 did you experience any problems in water resources in the past?

(1) Quantity of water (2) bad quality of water (3) high price of water (4) can't use the ground water (5) others

4.2.7 Is there any problem in water resources now?

(1) Quantity of water (2) bad quality of water (3) high price of water (4) can't use the ground water (5) others

4.2.8 Do you expected problems in water resources in the future?

(1) Quantity of water (2) bad quality of water (3) high price of water (4) can't use the ground water (5) others

4.3 Problems in other resources like land (land ownership, land rent etc.)

4.3.1 Is land rental high? (1) Yes (2) no, _____(_____)

4.3.2 Is it easy to rent a land here? (1) Yes (2) no, _____(_____)

4.3.3 Is it easy to buy a land here? (1) Yes (2) no, _____(_____)

4.3.4 Can you buy a land here? (1) Yes (2) no, _____(_____)

4.3.5 If the answer in 4.3.4 is no, why? _____(_____)

The Owners refuse to sell (2) It is not allowed by the rule (3) the cost is high (4) more than One ownership (5) others

- 4.3.6 The quality of soil is (relating to the productivity of the land) _____(_____)
 (1) Very bad (2) bad (3) good (4) very good
- 4.3.7 The problem in the soil is _____(_____)
 High salinity (2) low organic or element (3) deep percolation (4) others
- 4.3.8 Have you improved or conserved your land? (1) Yes (2) no
- 4.3.9 If the answer is yes, what did you do?
- 4.3.10 Is there any difference in the yield from one year to another? (1) Yes (2) no _____(_____)
- 4.3.11 If the answer is yes, give your reasons?
- 4.3.12 the main problem you face in the land is _____(_____)
 (1) In title deed (2) In heritage rules (3) legal issues (4) the cost of investment (5) no. of ownership (6) others _____

4.4 Problems in marketing

- 4.4.1 The main problem you face in marketing is _____(_____)
 (1) The change of prices from one season to another (2) the cost is high and the price of the product is low (3) the merchant doesn't pay immediately (4) market fees is high payment (5) others _____
- 4.4.2 Is there any problem in transportation?(1)yes (2)no _____(_____)
- 4.4.3 If the answer in 4.4.2 is yes, what is it? _____(_____)
 The cost of transporting is high (2) the market is far from here (3) others _____
- 4.4.4 How long is the market channel (how many times is the products be sold from the farm to the market)? _____(_____)
- 4.4.5 Do you sell your produce through _____(_____)
 (1)Private trader (2) co-operatives (3) middle trader (4) your self

4.5 Problems in household and family

- 4.5.1 Are there any positive impacts of current situation (e.g. more cohesive community and family, more equal distribution of goods, new skills acquisitions from taking on new jobs, etc.)?
-
-

- 4.5.2 Are there any negative community impacts (increasing conflicts in the community, increased household conflict / violence?)
-
-

4.6 Opinions on future

- 4.6.1 What do you think about your future income? _____(_____)
 Better than today (2) like today (3) worse than today
- 4.6.2 Do you like to change your work in the farm? (1) Yes (2) no _____(_____)
- 4.6.3 If the answer in 4.6.2 is yes, why? _____(_____)
 (1) because the income is decreasing (2) because the resources is not enough (3) because of legal issues (4) the work is hard (5) others
- 4.6.4 How do you expect to see your children or your village in the future?

(1) Full education (2) Full irrigation system (3) more knowledge of agricultural

4.6.5 The living standard in the future? _____(_____) (1) better than today (2) like today (3) worse than today

4.6.6 Do you think the resources in the future will be better than today?

(1) Yes (2) no _____(_____)

4.6.7 Please, state problems of Agriculture especially that resulted from the wall construction (Minimum 3 topics)

4.6.8 What can local agencies do to help the local community, NGOs, etc..?

ملخص الدراسة

لقد تمثلت السياسة الإسرائيلية اتجاه القطاع الزراعي الفلسطيني خلال الفترة الماضية من 1967-2000 بمصادرة الأراضي الزراعية حيث تم مصادرة 15165 دونم من أصل 938028 دونم مساحة محافظة جنين بهدف الإستيطان، ونهب الموارد المائية والاعلاقات المتكررة ووضع العراقيل أمام حركة البضائع والأشخاص، كون القطاع الزراعي يمثل العصب الرئيسي للحياه في فلسطين لمساهمته في الدخل المحلي الإجمالي،توفير نسبة كبيرة من احتياجات المواطنين من الغذاء ،تشغيل المرأة الفلسطينية في الريف و يستوعب جزءاً كبيراً من الأيدي العاملة التي لم يسمح لها العمل في إسرائيل خلال فترات الإغلاق المتكررة .

لذلك نشأ الصراع العربي الإسرائيلي و أصبحت فكرة الجدار العنصري حاضرة للفصل بين 48 و 67 لحماية أمن إسرائيل و السيطرة على هذه المصادر و الذي يمثل أهم أنواع المصادرة و أخطرها، ومنذ قيام الانتفاضة الفلسطينية بتاريخ 2000/9/29 اتبعت إسرائيل سياسات استهداف الأراضي الزراعية بالتجريف والتدمير ،منع المزارعين من الوصول إلى أراضيهم، ردم آبار المياه ،و تقطيع أوصال العلاقات الإجتماعية بين المواطنين على جانبي الجدار و الحواجز العسكرية بحجة بناء الجدار العنصري.

إن مصادرة الأراضي بالقوة للأسباب المذكوره أعلاه تمت بعدة طرق و هي المصادرة لدواعي أمنية ، مصادرة أملاك الدولة (الغائب)، و المصادرة بهدف بناء المستوطنات أو توسيعها و أخيراً من أخطر أنواع المصادرة هي تلك التي تخص بناء جدار الفصل العنصري و إنشاء الطرق الإنفاقية .

إن الهدف الرئيسي من الدراسة التي أجريت في الفترة الواقعة ما بين أيار 2004 و حزيران 2005 هو معرفة تأثير مصادرة المصادر الطبيعية على إدارة أنظمة المزرعة التي تم تحليلها في محافظة جنين حيث تكمن أهمية الدراسة من خلال معرفة الأوضاع الإقتصادية و الإجتماعية في ظل محدودية المصادر ومعرفة أساليب التأقلم عند الفئة المستهدفة من الدراسة وهي التي تقع ضمن تجمعات كانت الأكثر تضرراً من الجدار و الإحتلال خلال فترة الإنتفاضة المباركة لأول مره في محافظة جنين ، و هذه التجمعات تقع ضمن منطقتين هما زوبيا، عانين و الطيبة من جهة و طوره الشرقية، طوره الغربية، يعبد، نزلة الشيخ زيد، زبدة، ام دار، الخلجان، و ظهر العبد من جهة أخرى.

استخدم الباحث في إنجاز هذه الرسالة المنهج الوصفي التحليلي من حيث جمع البيانات و اختيار الفرضيات من خلال الإستبيان و تلك الثانوية من الأدبيات السابقة ، و تم تحليل و معالجة مخرجات الإستبانة بواسطة البرنامج الإحصائي SPSS و تم تمثيل نتائج التحليل بالجداول و الأشكال البيانية.

ومن أهم نتائج الدراسة ، إن عملية بناء الجدار التي مرت على مراحل مختلفة و بأنواع متعددة لها الأثر الكبير على هذه التجمعات كل حسب خصوصيته والتي تتمثل في تدمير البنية التحتية لقطاع الخدمات العامة و الممتلكات و خاصة الزراعي منها و مصادرتها(حيث تم مصادرة 1094دونم من أصل 2068 دونم في منطقة الدراسة)و بالتالي قيمة دخل المزرعة قلت بنسبة 9.23% في منطقة 1 بسبب اعتمادهم على الأرض المصادرة ،بينما دخل المزرعة زاد بنسبة 4.96% في منطقة 2 بسبب اعتمادهم على تربية المواشي، بسبب عدم القدرة للوصول إلى ما تبقى من الأراضي المصادرة أو مصادر المياه أو الممتلكات بسبب الدواعي الأمنية العسكرية الإسرائيلية ، و وضع العراقيل و

الحواجز أمام حركة 67.68% في منطقة 1 و 66.67% في منطقة 2 من المواطنين المزارعين لتسويق بضائعهم و منتجاتهم مما يرفع من التكلفة و الحيرة و الخوف من المستقبل بنسبة 33.3% في منطقة 1 و 43.3% في منطقة 2، و عدم الإستقرار مما يقلل من فرص الإستثمار و العمل .

هذه السياسات الإسرائيلية و العقاب الجماعي أدت إلى وجود ظاهرة من إنعدام الأمن الغذائي لإنعدام مصدره و طريقة الحصول عليه، لذا لجأ المزارعين إلى إستراتيجيات التأقلم لمواكبة الوضع الراهن و تقييم قيمة مدخلاتهم بالمنتجات ، و من أهم هذه الإستراتيجيات المتبعة في منطقة 1 بنسبة 76.7% هي تقليل العلاقات الإجتماعية و ما يتبعها من تكلفة مادية و أيضاً نظراً لوجود الجدار و الذي يحرم الأقارب من التواصل بين شرقه و غربه ، ثم إعادة تنظيم الأسرة بنسبة 56% يليها بنسبة 73.3% الإعتماد على وسائل توفير الطاقة المنزلية بنسبة 53.3% . أما في منطقة 2 فأهمها الإعتماد على الأهل و الأقارب و المؤسسات في المساعدة و الإستدانة بنسبة 66.7% يليها الإعتماد على وسائل توفير الطاقة المنزلية بنسبة 53.3% .

و أهم توصيات الدراسة تكمن من خلال تحديد و تحليل الإحتياجات الأساسية للتجمعات المختلفة في محافظة جنين و ذلك من خلال التركيز على النواحي السلبية للجدار الفاصل و العمل على الحد منها و إن أمكن وقفها من حيث : تنمية الموارد البشرية و رفع مستوى التكافل و الدعم النفسي و الخدمات الاجتماعية للفئات المتضررة من خلال إنشاء و دعم التعاونيات الزراعية و الحيوانية و غيرها من أجل تحسين ورفع المستوى المعيشي، الاستفادة من المناسبات الدينية و الوطنية و العالمية و استغلالها في توعية المواطن الفلسطيني للقيام بواجباته الوطنية و الاجتماعية وبذلك نضمن حق التكافل الاجتماعي ، و هذه المناسبات مثل يوم الشجرة و عيد الأضحى المبارك و غيرها .

تطوير و تفعيل قدرات مؤسسات القطاع العام و الخاص لتواكب الأوضاع المتغيرة و التدريب المهني لذوي الدخل المحدود كل حسب اختصاصه و أهميته، تشجيع القطاعات المولدة لفرص العمل و خلق أسواق جديدة للعمالة الفلسطينية من خلال تطوير القطاع الإنتاجي الزراعي من خلال : شق الطرق الزراعية المساندة لوصول المزارعين إلى ما تبقى من أراضيهم الغير مصادرة و كذلك من أجل سهولة عملية التسويق ، استصلاح و تأهيل أراضي زراعية جديدة ، تأهيل الآبار القديمة و تأهيل الينابيع الصغيرة و ذلك لرفع كفاءة استخدام المياه و زيادة الرقعة الزراعية ، الحصاد المائي من البيوت البلاستيكية و الاستعمال المنزلي و إعادة استخدامها في الري الزراعي ، إنشاء عيادة للخدمات البيطرية لتنظيم تطعيم قطعان الماشية للقضاء على الأمراض السارية ، تأهيل الحراج و المراعي و خاصة في السفوح الشرقية من المحافظة.