



Based on data produced by the  
Palestinian Central Bureau of Statistics

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# Socio-Economic and Food Security (SEFSec) Monitoring System in the West Bank and Gaza Strip

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## Working Paper Series No. 1 - 2009

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### Household Food Security Profiling in the West Bank

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**Socio-Economic and Food Security (SEFSec) Monitoring System**  
**Working Paper Series 2009**  
**WP 1 – Household Food Security Profiling**

## **1. Introduction**

The following Working Paper is part of a broader “Socio-Economic and Food Security Survey Report” initiated by the World Food Programme and the Food and Agriculture Organisation in partnership with the Palestinian Central Bureau for Statistics. The aim of the report is to improve the detail and availability of information related to food security in the occupied Palestinian territory (oPt). The survey report is based on data collected during January and February in the West Bank. The survey report reflects the socio-economic and food security situation of households during the second half of 2008. This working paper however, aims to analyze the profiles of the food insecure in comparison to the food secure and the Remaining West Bank (RWB) specifically with respect to gender (male as compared with female) and age (adults as compared with children), as well as other socio-economic aspects.

## **2. Assessment Methodology**

Data was extracted through a quantitative survey of the West Bank over a sample size of 4,791 households. The large sample size provided an accurate profile of the most vulnerable groups stratified across sex, age, governorate, refugee status, livelihood group and locality. The methodology used for the survey is largely consistent with the methodology used in the May 2008 *Joint Rapid Food Security Survey in the Occupied Palestinian Territory* conducted by WFP, FAO and UNRWA. Considering that the dataset is cross-sectional, the analysis is static, using only income and consumption. A third variable reflecting the changing socio-economic impact of Israeli measures was added to make the model more dynamic. These variables were used to cluster the data into three clusters of households that are homogeneous with respect to how they were impacted during the past 6 months by the Israeli measures. The households within the clusters were then classified according to their consumption and income levels (3 way crosstabs) based on which the food insecurity levels were determined (for detailed procedures and methodology please see the SEFSec Report 1 available at: [www.apis.ps](http://www.apis.ps)).

## **3. Profiling of the Food Insecure**

### **3.1. Typical Household Composition and Household Demographics among Food Insecure Families**

The analysis conducted on the data set shows that food insecure households typically display a slightly different profile compared with the RWB average households<sup>1</sup>. Consistent with previous research conducted by FAO, it was found that food insecure households are more likely to compose of a large number of members, have a greater number of female and child component and display a lower level of education.

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<sup>1</sup> It measures the number of inactive population members (including those who are out of labour force due to sickness, elderliness, etc. and the population of youth (under 15), dependant on each working member.

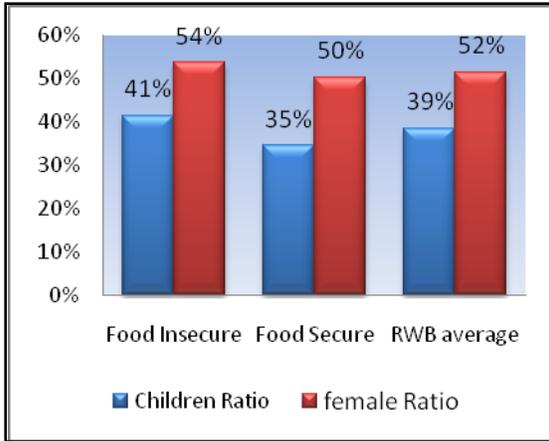


Figure 1: Ratio of Child and Female within Food Insecure Households compared with RWB Average

As Figure 1 shows, the child ratio<sup>2</sup> in a food insecure household is 41 percent compared with 35 percent among the food secure households and 39 percent in an average family in the RWB, indicating that a higher number of children increases the likelihood of a household to fall into the food insecure category. Similarly, the average share of female household members is 4 percent higher among food insecure households than among food secure households and 2 percent higher than among RWB average family. This could be due to the fact that the lower employment rate among women leads to a household with a higher female component to rely on lower family incomes.

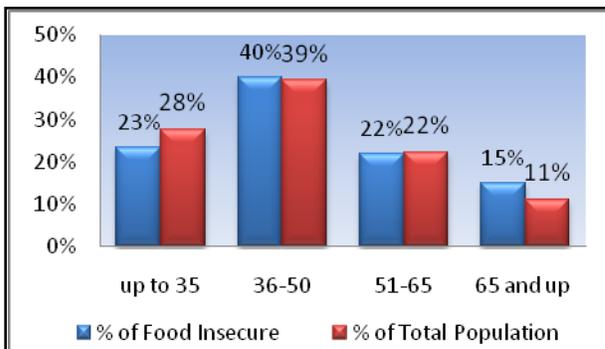


Figure 2: Household by Age Group of Head of Household

Furthermore, the average household size of a food **insecure family is 6.3 members, compared with only 4.7 members** in a food secure family and 5.5 in an average RWB family. This is further confirmed by the fact that 24 percent of food insecure families are above 8 members, compared with 11 percent of the food secure families and 22 percent of the total RWB households. By contrast, out of all food insecure families 29 percent are

composed of 0 to 4 members, compared to 48 percent of food secure families and 36 percent of RWB families.

It is also worth noting that food insecurity is prominent among families whose household head is older than 65 years of age. Fifteen percent of food insecure households are headed by people aged 65 or over despite representing 11 percent of the overall RWB household. In general, the average age of the food insecure household was found to be 28.2 years compared with the RWB average of 27.7 years.

Finally, refugee households are slightly more likely to be food insecure than non-refugee households. Twenty seven percent of refugee families are found to be food insecure compared with 24 percent of the non refugee families. However, due to a higher percentage of non refugees in the RWB population, 67 percent of the total food insecure families are non refugees.

### 3.2. Geographical Distribution of Food Insecure Households

Households residing in urban areas are slightly less likely to be food insecure than households in rural areas or refugee camps. Sixty one percent of food insecure households are currently living in urban centres; while as many as 66 percent of the overall RWB population lives in cities. Conversely, 32 percent of food insecure

households are concentrated in rural areas compared to 28 percent of the total RWB households, and 7 percent of food insecure households live in camps, compared with 6 percent of the RWB population living in camps..

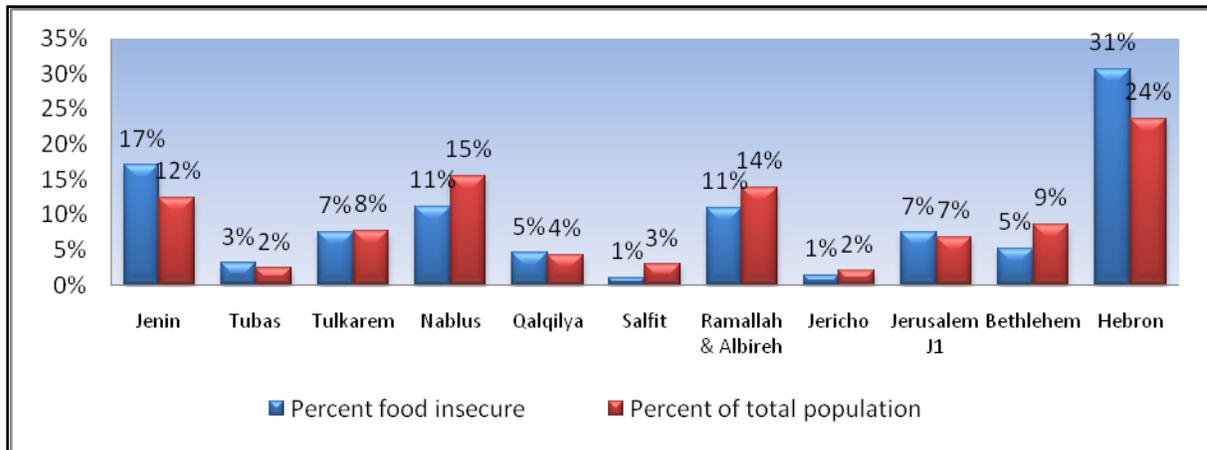


Figure 3: Distribution of Food Insecure Household by Locality Type

As show in Figure 4, governorate level analysis shows a concentration of the food insecure in Hebron (31%) and Jenin (17 %) at a rate that exceeds the proportion of the population for these areas of the RWB population (24 percent and 12 percent respectively). On the other hand, Nablus, Bethlehem, Ramallah and Al-bireh show the opposite trend with a concentration of food insecure households that is less than the proportion of the population for these areas of the RWB population.

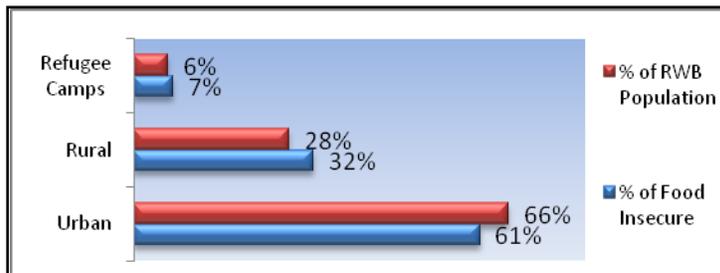


Figure 4: Geographical Distribution by Governorate

### 3.3. Socio-Economic Characteristics of Food Insecure Households

#### 3.3.1. Education level

Education levels can correlate to the food insecurity of households. The higher the education level of the head of household the more likely the household will be food secure. This is confirmed by the data which shows that the average years of education among members of food insecure households stands at 5.9 years compared with the food secure average of 8.2 years and a RWB average of 7.2 years of education. Also the highest level of education attained among food insecure showed differences with the RWB average. Figure 5 shows that only 17 percent of the heads of food insecure households have secondary education and above, compared with 45 percent of the food secure and 33 percent RWB average. In addition, 17 percent of the food insecure households are illiterate (compared to 9 percent RWB average) and 15 percent can only read and write (compared to 11 percent of the RWB average).

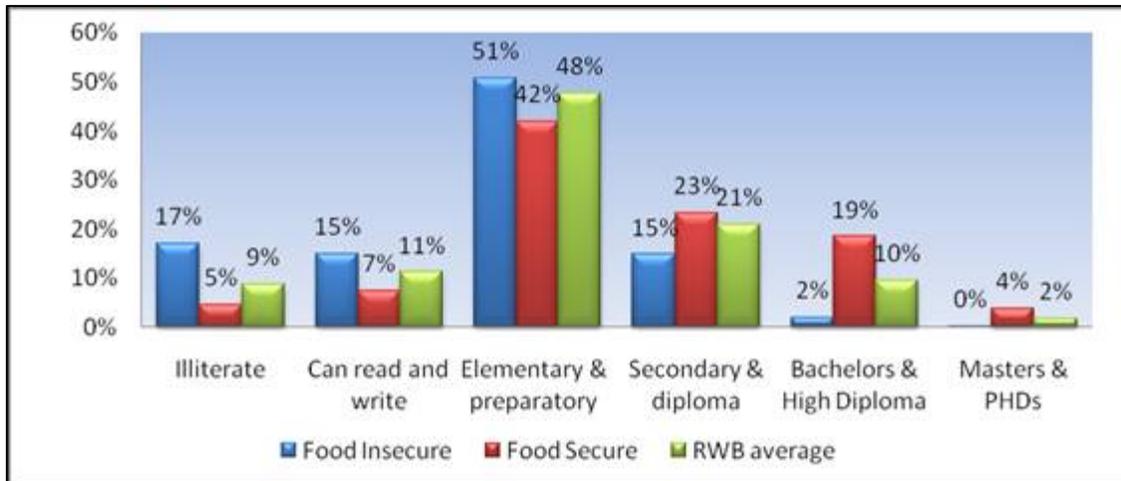


Figure 5: Food Secure and Food Insecure Household Heads Education Level versus RWB average

#### 4. Heads of households employment and unemployment levels, quality of jobs, and sectors of employment

##### 4.1. Unemployment, Employment, Job stability and Amount of Months Worked

Unemployment levels of head of households have always proved to be a key determinant of the food insecurity levels of households. As shown in Figure 6, 21 percent of food insecure household heads are unemployed compared to only 4 percent of food secure household heads while 10 percent of the RWB household heads are unemployed. When including discouraged workers, the unemployment levels are even higher. It increases to 24 percent among the food insecure households heads while remaining the same among the food secure and increasing by 1 percent among the RWB household heads. This means that no discouraged workers existed among the food secure households heads. There is also a higher percentage of food insecure households heads who are underemployed compared to the RWB average (7 percent compared with 5 percent RWB average). The average months worked during the past year was examined as an indicator of the employment stability of the household head and its impact on food security levels. The percentage of time spent, within the calendar year, household heads worked stood at 65 percent of the year (7.8 months) of those who are food insecure compared with 87 percent (10.4 months) of those who are food secure and 78 percent (9.3 months) of the RWB average. In addition, the dependency ratio,<sup>2</sup> which was higher among food insecure households reaching 6.7 members, compared to 3.7 members among the food secure and 4.9 members RWB average, compounds to the vulnerability and worsening of household food insecurity.

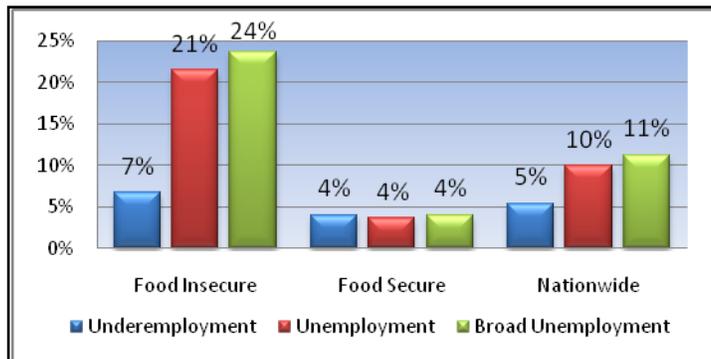


Figure 6: Unemployment Levels of Household Heads

<sup>2</sup> It measures the number of inactive population members (including those who are out of labour force due to sickness, elderliness, etc. and the population of youth (under 15), dependant on each working member.

### 4.2. Economic Activity

The highest percent of heads of food insecure households are employed in the construction sector (36%), followed by the wholesale and retail sector (20%) and agriculture and fishing sector (14%). However, looking at the sector of employment will not enable the drawing of solid conclusions because some sectors are considered major employers and have a large concentration of workers from all income levels; examples are the construction, wholesale and retail sectors..

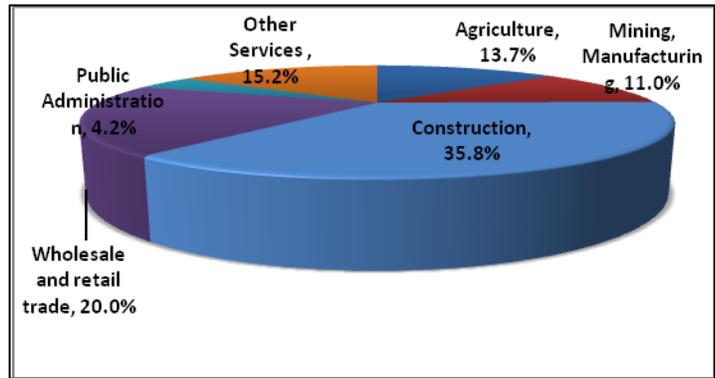


Figure 7: Occupation of Heads of Food Insecure Households

Table 1 below represents the percentage distribution of those employed in each sector by their family’s food insecurity level. It is apparent that the agriculture and construction sectors provide more food insecure jobs than all the other sectors. While across all the other sectors, generally there are a high percentage of those who are food secure out of the total employed household heads. Food insecurity among the households of those employed in the public administration and defence, finance insurance, electricity gas and water supplies, education and health sector are extremely low.

	Food Insecure	Vulnerable	Marginally Secure	Food Secure	Total
Agriculture and fishing	37%	10%	33%	20%	100%
Mining and manufacturing	19%	11%	31%	38%	100%
Electricity, gas, and water supplies	7%	9%	16%	68%	100%
Construction	30%	13%	30%	27%	100%
Wholesale and retail trade	23%	11%	29%	37%	100%
Restaurants and hotels	14%	10%	30%	46%	100%
Transport, storage and communication	21%	16%	33%	30%	100%
Finance and insurance	3%	9%	23%	65%	100%
Properties, rents and business	18%	5%	26%	50%	100%
Public administration and defence	10%	9%	29%	52%	100%
Education	9%	8%	28%	54%	100%
Health and social work	8%	9%	20%	63%	100%
Other social and personal care	16%	10%	30%	44%	100%
International organizations	18%	12%	20%	51%	100%

Table 1: Percentage of employment in each sector by food security level

### 4.3. Sector of employment

The major sector employing the greatest number of food insecure heads of households is the private national sector at 76 percent. The private foreign sector employs 17 percent of the food insecure heads of households and the national government employs only 5 percent of them. Similarly, these figures can be better understood when looking at a detailed composition of those employed within each sector.

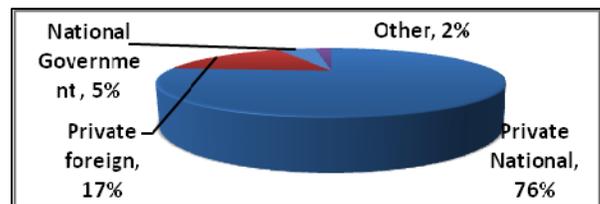


Figure 8: Source of employment of food insecure households

As seen on the table below, a relatively large proportion of the private sector employees are food insecure (25 and 21 percent). The majority of the national government jobs are food secure (54%). In the section below we will shed some light on the type of employment and occupation in order to better explain the differences in the quality of jobs within each sector.

	Food Insecure	Vulnerable	Marginally Secure	Food Secure	Total
Private National	25%	11%	30%	34%	100%
Private foreign	21%	11%	32%	36%	100%
National Government	8%	11%	28%	54%	100%
Other	20%	14%	19%	47%	100%

Table 2: The distribution of total employed in each sector by food security status

#### 4.4. Type of employment

Table 3 shows the distribution of employed household heads by food insecurity status and type of employment. A large proportion of the food insecure heads of households are employed as irregular wage workers (40.7%), followed by regular wage work (28.3%) and the self employment (24.6%). However, comparing the food insecure with the food secure heads of households indicates that it is more likely for a household to be food insecure if the head of the household was an irregular wage worker or self employed, and food secure if the head of the household was an employer or a regular wage worker.

	Food Insecure	Vulnerable	Marginally Secure	Food Secure	RWB
Employer	6%	8%	11%	15%	11%
Self Employed	25%	18%	23%	17%	21%
Regular wage worker	28%	44%	36%	51%	41%
Irregular wage worker	41%	30%	30%	16%	27%
Unpaid family member	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%

Table 3: Distribution of employed heads of households by food insecurity level and type of employment

#### 4.5. Occupation

A better understanding of the link between food insecurity and type of employment is demonstrated in this section. Exploring the sector of employment and the economic activity has given some insights to the areas of employment of food insecure households. However, as aforementioned some sectors and employers are major sources of employment for both food secure and the food insecure households. This means that the data does not provide a

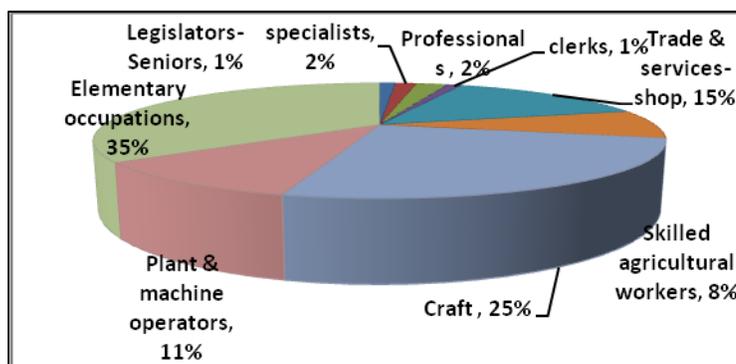


Figure 9: Breakdown of employment of food insecure households

clear picture of the quality of jobs within the sectors that determine household food security levels. An examination of the type of occupation households are employed in provides a clearer understanding of the profile of food insecure households. For example, the majority of heads of food insecure households are engaged in elementary forms of employment<sup>3</sup> (35%), crafts (25%) and trade and services shops (15%).

Figure 10 below shows that food secure household are employed in all types of jobs but their distribution is skewed toward the higher pay occupations. The opposite applies to the food insecure household heads.

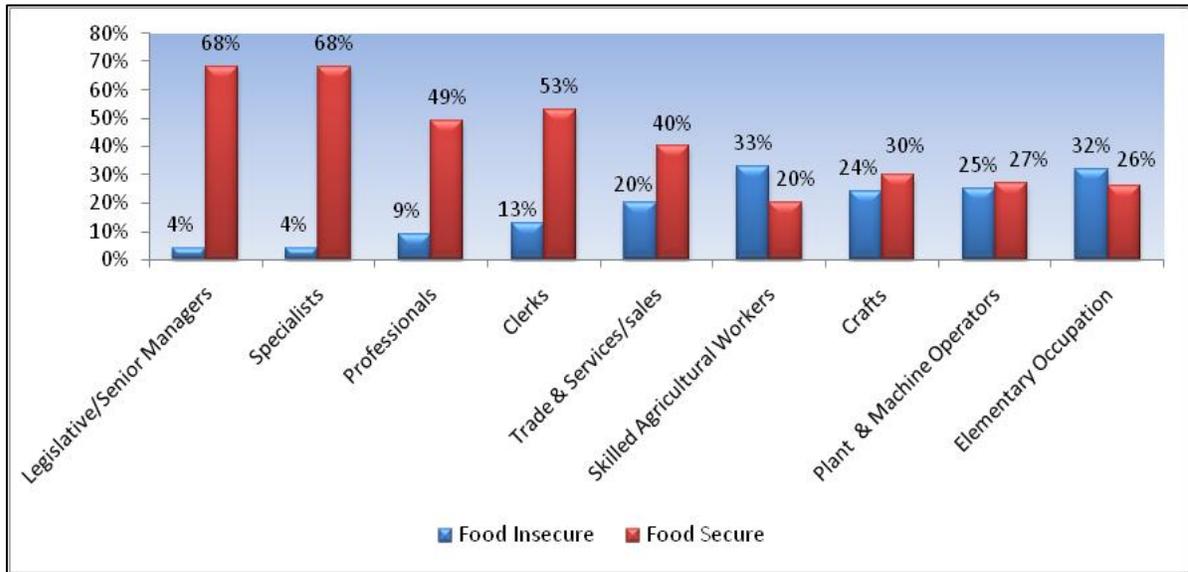


Figure 10: Comparison of food secure and food insecure household and types of employment

#### 4.6. Place of employment

Distribution of food insecure heads of households by place of work is relatively similar to the average RWB distribution of workers. The only exception is work within same community, which in the case of the food insecure heads of households, exceeds the average (43 percent compared to 38 percent) which might suggest that better work opportunities are offered outside the community.

	Food Insecure	RWB
Within dwelling	2%	1%
Within Community	43%	38%
Within Governorate	31%	33%
In another governorate	6%	10%
In Israel	16%	15%
In settlements	3%	3%
Abroad	0%	1%
Total	100%	100%

Table 4: Distribution of employed Heads of Households by place of work among the Food insecure and RWB average

#### 4.7. Second Job

It is apparent that having a second job could lead the household to a safer food security levels. The data indicates that only 4.8 percent of the RWB household heads have second jobs. This percentage increases among the food insecure to 7.5 percent and decrease to 2.4 percent among food insecure households.

However cross variable analysis of the various employment indicators show that:

- 36 percent of food insecure household heads are employed in construction. However, 69 percent of those are irregular wage workers.
- 76 percent of the food insecure heads of households are employed in the private national sector. However, 72 percent of those food insecure households are self employed or irregular wage workers.
- 28 percent of the food insecure household heads are regular wage workers. However, 72 percent of them are working as craftsmen, in elementary occupations or as machine operators.
- 6 percent of food insecure household heads are employers However 70 percent of them are small shop owners, or farmers with large families (average household size among this group is size 7 members).

In conclusion the analysis done across the various employment related variables above, indicates that food insecure heads of households are those who are employed in the private sector as self employed irregular wage workers, or those who are regular wage workers in low paid occupation such as crafts, machine operators and elementary occupations, and finally, those employers who are small shop owners and farmers heading large households.

### 5. Sources of Income, Consumption of Own Production, Land and Livestock

#### 5.1. Households Sources of Income

In general, the majority of the RWB households have one source of income (73%), 22 percent reported two sources of income and 3 percent reported three sources of income. However, looking at the households by their food insecurity level shows that 32 percent of the food secure households have two or more incomes compared with 1 percent of the food insecure stressing the importance of the diversity of income sources in determining food security levels of households.

	Food Insecure	Food Secure	RWB average
No source of income	3%	0%	2%
One source of income	79%	67%	73%
Two and more sources on income	18%	33%	25%

Table 5: Food insecure and food secure households by number of sources of income

Households with one source of income represent the majority of food insecure households. Close examination of these households reveal that the source of income for 57 percent of them is wage

employment. In comparison, 69 percent of the food secure and 64 percent of the RWB average have one source of income. The source of income for 14 percent of these families is self employment (compared to 9 percent for food secure households and 12 percent for the RWB average). The source of income for 12 percent of households is transfers from family and friends (compared with 6 percent among the food secure and 10 percent RWB average), and the source of income for 8 percent of them is cash assistance (compared with 8 percent of them compared with 1 percent for the food secure and 2 percent RWB average).

Sources of income of households with one source of income	Food Insecure	Food Secure	RWB Average
Income from wage employment (including wages and salaries)	57%	69%	64%
Incomes from self-employment activities (including own produced goods)	14%	9%	12%
Income from private business (for owner-employers of enterprises other than agriculture)	4%	10%	7%
Property income (rents)	1%	2%	1%
Social insurance and pensions	1%	3%	2%
Cash assistance	8%	1%	4%
Unemployment subsidies, job opportunity	1%	0%	0%
Transfers from family and friends inside and outside Palestine	12%	6%	10%
Other sources	1%	1%	1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 6: Distribution the source of the first income of food secure, food insecure Households versus RWB average.

Further details on the type of wage employment each type of household is engaged in is crucial in understanding which type of wage employment becomes a factor for household food insecurity.

Wage employment for the food insecure households is mostly irregular. These households are in occupations such as crafts representing 52 percent of food insecure households, 25 percent in elementary occupations, 45 percent machines operators, 12 percent in service shops and 8 percent in construction and manufacturing sectors. These are jobs within the national private sector either within the community or governorate and/ or in Israel. The months worked for this group was an average of 7.7 months during the past year.

For food secure households however, wage employment was more spread among the various forms of employment. In addition to crafts (18%) and elementary employment (22%), another 20 percent were specialists, 9 percent professionals, 8 percent legislators and 6 percent machine operators.

The food secure groups were also more spread over several sectors of employment, including construction (23%), public sector (20%), manufacturing (12%), trade (11%) and education (10%). These jobs were also spread across the national (44.6%) and foreign (22.9%) private sector, the national government (29%). These groups are also mostly regular wage workers (72%) but with 24 percent of them in irregular wage employment. Of these jobs 24 percent were within the community, 38 percent within the governorate, 14 percent in another governorate and 18 percent on Israel. The months worked for this group was an average of 10.3 months during the past year.

## 5.2. Consumption of Own Production

Among the food insecure households, 34 percent consume an average per capita of NIS 39 per month from their own production. However, a higher percent of food secure households consume their own produced goods (42%), while the RWB average was 32 percent. Moreover, the food secure and RWB average consumption of their own production stood at NIS 49 per capita per month; 25 percent higher than the food insecure households.

Figure 11: Amount per capita per month of consumption of own production

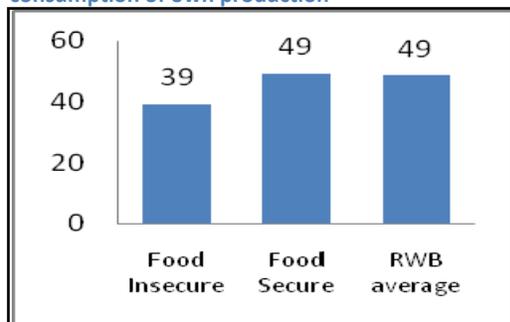
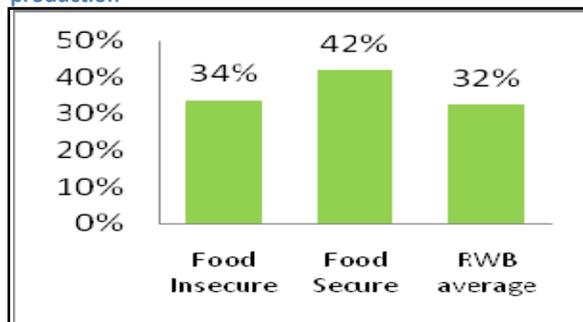


Figure 12: Percentage of those consuming their own production



## 5.3. Ownership of Land and Livestock

The survey results showed that 21 percent of the food insecure households own an average of 8 dunum of agricultural land and that 84.5 of these household cultivate their land. Comparisons to food secure households and the RWB average shows that despite the fact that average acquisition is less in the case of the food insecure (8 dunum compared to 15 and 13 dunum) a higher percent of the food insecure households tend their lands (see Table 2). Moreover, a higher percent of the food insecure households have livestock, compared with 4 percent and 5 percent among the food secure households and the RWB.

	Food Insecure	Food Secure	RWB average
Own Agricultural Land	21%	25%	25%
Average Acquisition (dunum)	8	15	13
Percent of Household with Cultivated Land	84%	77%	80%
Livestock Acquisition	7%	4%	5%

Table 7: Basic indicators on agriculture land ownership and planting