

Indicator Report

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Developments of Women's Contribution in Agricultural Sector



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The 2007 Agricultural Census collected important statistics about primary production in Jordan. It covered land use, animal farming (livestock), horticulture, and arable crop growing and forestry in Jordan, and provides a snapshot of primary production. The Agricultural Production Census was conducted by Department of Statistics.

Background

The 2007 Agricultural Census was the six censuses in the current agricultural statistics programme. The 2007 Census involved approximately 80,000 farmers and foresters. This census updated data that is used for monitoring, planning and forecasting by central and local government, business, researchers, agricultural sector organizations, and the farming and rural communities.

Importance of the Census

The aim of the Agricultural Census was to produce up-to-date statistics relating to agriculture, horticulture and forestry. Statistics from the 2007 Census give valuable information to individuals, businesses, and government. The statistics provide a current snapshot of the primary industry.

Use of Agricultural Census Statistics

Agricultural statistics are widely available and are used by the farming and industrial sectors, government, researchers and other community groups. The private sector uses statistics in the planning of processing requirements, transportation and other agricultural infrastructure issues. Government uses statistics in the national accounts, trade negotiations and in the investigation of current agricultural concerns.

Women and Agricultural Holding

Analyzing the manner in which women can access their individual economic resources requires the understanding of many relationships (such as the interaction between the production process and the social and political structure) as well as the role played by one's various individual characteristics like age, social status and social role. Data indicates that it is mainly women who are deprived from accessing and controlling resources in general and economic resources in particular.

Jordan social structure, particularly in rural areas, plays a large role in preventing females from controlling and accessing economic resources in the same way men do. This is especially true with regards to landownership, as

data obtained from the Agricultural Census 2007 indicates that only 4.5% of Agricultural holdings are held by females. This undoubtedly indicates the inferior economic status that women occupied in relation to men.

The findings of the most recent agricultural census in 2007 revealed that the number of agricultural holders amounted to (79800) with an increase of (11%) over the previous census (1997). Figure 7.1 shows that male holders percentage is (95.5%) while the female holders percentage is (4.5%) with an increase of (66.7%) over the previous census (1997). Furthermore, the total average holding area reached (2331853) sq/m for males and (53690) sq/m for females and there was (229533) sq/m unspecified.

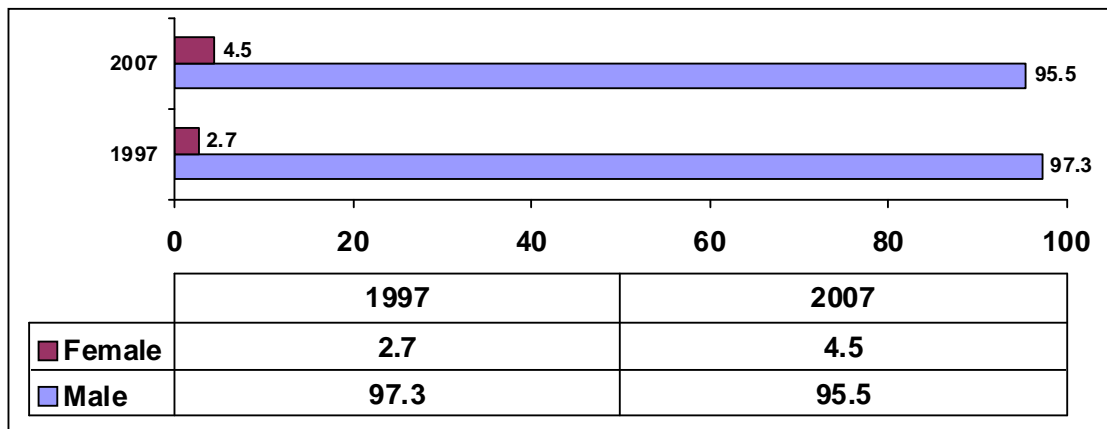


Figure 7.1: Percentage Distributions of Agricultural Holdings by Sex of Holders and Year of Agricultural Census

Source: Department of Statistics “Agricultural Census, 1997, 2007.

In addition to the above, the census results indicates that 41.1% of Agricultural holdings areas are concentrated in the north region while one third are located in the central region and about 16.6% only of these areas are located in the south region.

Its worthy to mention that the percentages shown in Figure 2 indicates that the percentage distribution of the areas held by females is coincide with the general pattern of the total holdings where 58.7% of the total females holdings are held by females in the north region. It is notable to mention that the topography of land in the north region is characterized with plain terrains and intensive rainfall which helped concentration of Agriculture activities in it.

Table 7.1 illustrates percentage distribution of agricultural holdings by sex of holders, land area and governorate. It is observed that more than half of holders and (41%) of agricultural holdings are concentrated in the governorates of the north region. On the other hand, the south region with its four governorates is the least in number of holders and holdings. Moreover, the results indicate that the highest percentage of holders, whether males or

females are from Irbid governorates. Meanwhile, Aqaba governorate in the south region is the least in percentage of holding area and the number of holders, whether for males or females. The reason is attributed to the fact that Aqaba is the only sea port of Jordan at the Red sea.

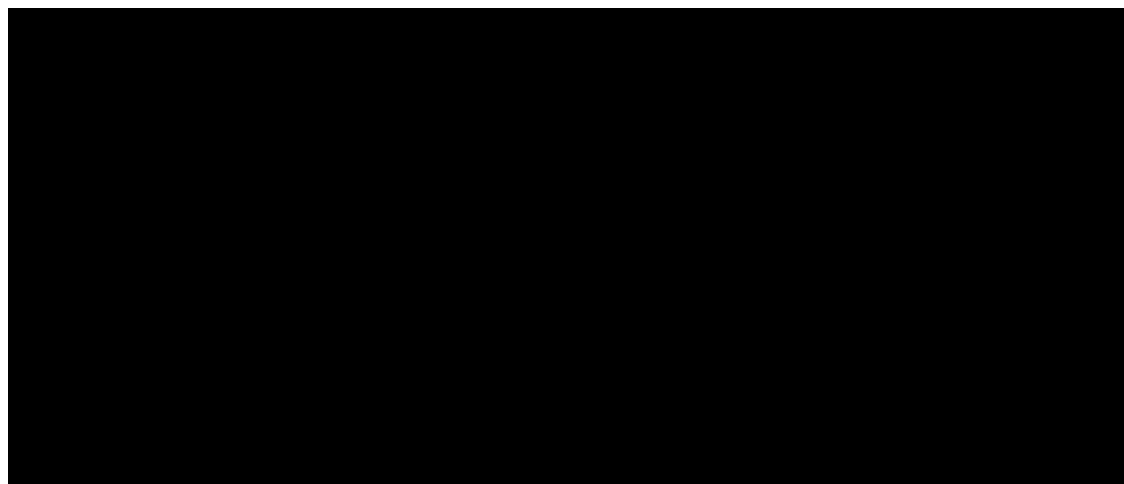


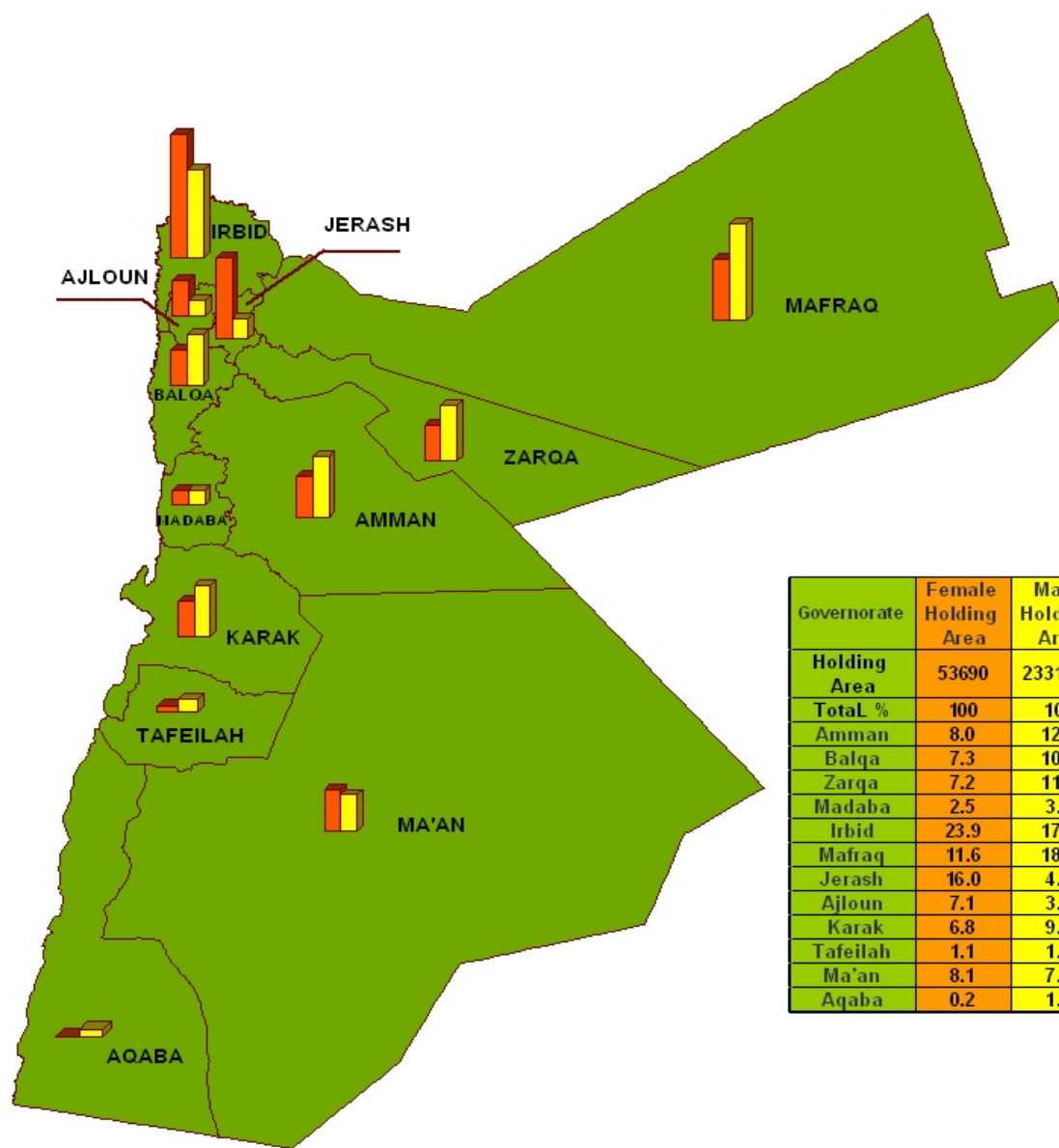
Figure 7.2: Percentage Distribution of Agricultural Holdings by Area of Holdings and Sex, 2007

Table 7.1: Percentage Distribution of Agricultural Holdings by Sex of Holders Land Area and Governorate

Governorate	Total		Male		Female		Unspecified	
	Holders	Area	Holders	Are	Holders	Area	Holders	Area
Amman	6.8	11.3	6.8	12.2	6.8	8.0	8.6	3.6
Balqa	10.3	9.3	10.5	10.1	6.9	7.3	13.4	1.6
Zarqa	4.3	11.3	4.1	11.1	5.5	7.2	19.1	14.4
Madaba	3.9	2.7	4.0	3.0	2.8	2.5	2.0	0.1
Irbid	32.6	16.3	32.6	17.3	35.8	23.9	4.0	4.7
Mafraq	10.0	17.7	10.0	18.6	7.9	11.6	10.9	9.9
Jarash	7.6	4.2	7.4	4.3	10.9	16.0	4.3	0.1
Ajlon	7.9	3.0	7.8	3.2	12.0	7.1	1.1	0.0
Karak	7.8	9.0	8.0	9.9	4.0	6.8	6.6	0.6
Tafiela	2.5	1.8	2.5	1.9	1.7	1.1	2.9	0.7
Ma'an	5.2	10.1	5.1	7.5	4.8	8.1	22.0	36.6
Aqaba	1.1	3.3	1.1	1.0	0.9	0.2	5.1	27.7
Total	80152	2615	76226	233	3576	5369	350	22953

Source: Department of Statistics "Agricultural Census, 2007.

Area of Agricultural Holdings by Sex of Holder & Governorate, 2007
 (Percentage Distribution)



Governorate	Female Holding Area	Male Holding Area
Holding Area	53690	2331853
Total %	100	100
Amman	8.0	12.2
Balqa	7.3	10.1
Zarqa	7.2	11.1
Madaba	2.5	3.0
Irbid	23.9	17.3
Mafraq	11.6	18.6
Jerash	16.0	4.3
Ajloun	7.1	3.2
Karak	6.8	9.9
Tafailah	1.1	1.9
Ma'an	8.1	7.5
Aqaba	0.2	1.0

Class of Agricultural Holding Area

The data in Table 7.2 presents the percentage distribution of Agriculture holders by class of holding area. The results of 1997 census indicate that the percentage of female holders holding areas less than 5 dunums represent 40% of the total female holders . This percentage as shown in 2007 Agriculture census increased to become 50.6% of the total females Agricultural holders while the percentage of male holder for the same category of area is amounted to 28% in 1997, reaching 44.5% for 2007 .

Furthermore, the data presented in Table No 7.2 indicate that the larger the agricultural holding's area is, the percentage of female holders becomes less and less. This is clearly concluded when comparing percentage of male and female holders in small areas of two (dunm) or less. It is observed that there is no significant variation in percentages. While, a percentage of male holders is as twice as of that for female holders in large areas starting 100 (dunm) and above.

Table 7.2: Percentage Distribution of Agricultural Holders by Class of Holding Area and Sex

Class of Holding Area (Dunm)	Sex of Holder			
	1997		2007	
	Male	Female	Male	Female
Total	69841	1940	76226	3576
Percentage	100.0	100.0	100.0	100.0
2 Dunm and less	9.0	14.1	26.1	27.0
2<5	18.6	25.9	18.4	23.6
5<10	15.2	17.1	14.0	17.5
10<20	19.9	18.7	14.9	14.9
20<50	20.1	14.9	16.9	11.8
50<100	9.2	6.0	5.0	3.2
More than 100	8.0	3.3	4.7	2.0

Source: Department of Statistics "Agricultural Census 1997, 2007"

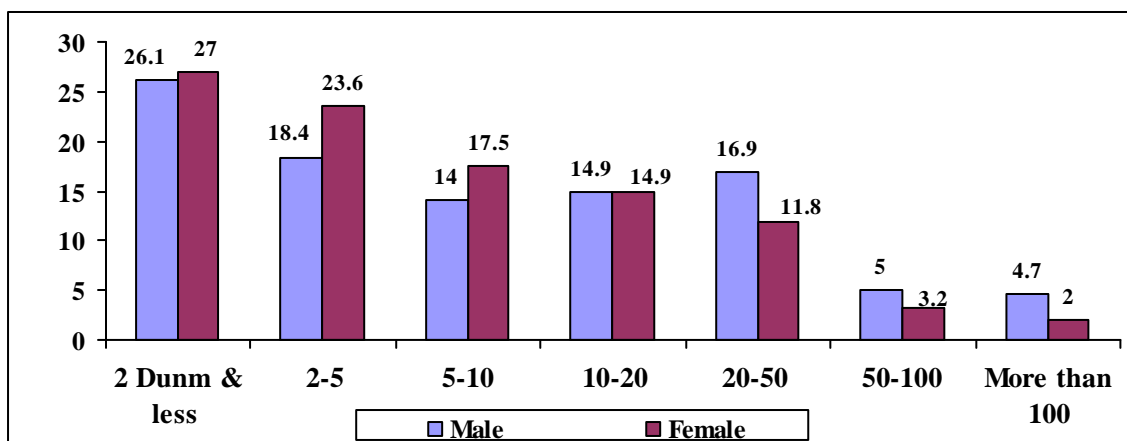


Figure 7.3: Percentage Distribution of Agricultural Holders by Class of Holding Area and Sex of Holder, 2007

Source: Department of Statistics "Agricultural Census, 2007"

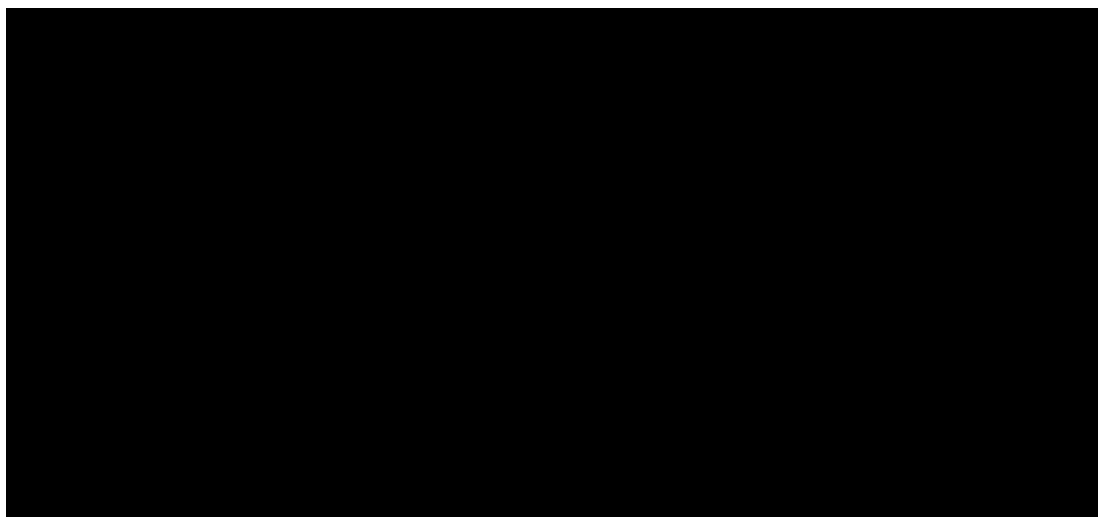


Figure 7.4: Percentage Distribution of Female Agricultural Holders by Class of Holding Area, 1997-2007

Source: Department of Statistics "Agricultural Censuses, 1997, 2007"

Agricultural Holding Management System

The results in Table 7.3 show that 83.2 of the female agricultural holders run their holdings by themselves and that 2.2% only run the holding by a paid manager. The results also indicated that a significant proportion (12.9%) of the holdings is managed by female family members. On the other hand, we find that a very high percentage of male holders (94.5%) run their own holdings, and that a small proportion of them rely on one of the family members or a paid manager.

Table 7.3: Percentage Distribution of Agricultural Holdings by Holding Management System and Sex of Holder

Holding Management System	Total	Male	Female
The holder himself	93.6	94.5	83.2
Member of the household	3.0	2.6	12.9
Paid manager	2.0	1.7	2.2
More than one method	1.3	1.3	1.7
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

Land Tenure of Agricultural Holdings

Table 7.4 illustrates the percentage distribution of agricultural holdings by Land Tenure and sex of holder. The results show that the majority of agricultural holdings are the property of their owners; the result was 95% for male holders and 97.5% for female holders. On the other hand, the proportions of rented agricultural holdings are very few for both sexes and did not exceed 2.5%.

Table 7.4: Percentage Distribution of Agricultural Holdings by Land Tenure and Sex of Holder

Land Tenure	Total	Male	Female
Owned	95.0	95.0	97.5
Rented	2.5	2.5	0.8
Other	0.1	0.1	0.4
More than One Land Tenure	2.4	2.5	1.3
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

Main Source of Income

The data shown in Table 7.5 indicate that the vast majority of the agricultural holders rely on other sources other than the agricultural holding by more than three-quarters percent. Meanwhile, a small proportion of agricultural holders (not exceeding 15.5% of the holders) relied on the agricultural holding as a source of income. It is worthy to mention that the percentage of female holders who rely on other sources of income other than the agricultural holding was higher than that of male holders by 11.3 points.

Table 7.5: Percentage Distribution of Individual Holder by Main Source of Income and Sex of Holder

Main Source of Income	Total	Male	Female
Agricultural holdings	15.5	15.8	9.7
Other sources	76.5	76.0	87.3
Unspecified	8.0	8.2	3.0
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

The reason for this is that more than two-thirds of female agricultural holders use production of the holding for domestic consumption. Furthermore, the results show the large discrepancy between the proportions of male and female holders for the purpose of using the production for sale. The proportions for males and females were (42.8%, 26.9) respectively, thus increasing male percentage over female percentages by 15.9 percentage points. (Table 7.6)

Table 7.6: Percentage Distribution of Agricultural Holdings by Main Purpose of Production and Sex of Holder

Main Purpose of production	Total	Male	Female
Domestic consumption	49.6	49.0	67.9
For Sale	42.3	42.8	26.9
Domestic consumption +	8.1	8.2	5.1
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

Financial Sources of Agricultural Holding

The data presented in Table 7.7 indicates that agricultural holders depend mainly on personnel sources for financing the agricultural holding with a percentage amounted to 86.3%. The data doesn't show significant variation between male and female holders. It is also noted that other recourses of finance other than commercial banks, Agricultural institutions, brokers, charitable association, development and employment funds, private agricultural companies and farmers' union occupied the second rank with a percentage amounted 9.3%.

Surprisingly, female holders don't go to brokers to obtain the required funding for their holding, they prefer borrowing from the agricultural credit institution with a percentage amounted to 1.5%. Furthermore, the data revealed that male holders go to commercial banks for obtaining loans with a percentage higher than of female (twice of that for females).

Table 7.7: Percentage Distribution of Agricultural Holding Reporting the Financial Sources by Sex of Holder

Financial Sources	Female	Male	Total
Personal sources	86.3	86.5	87.4
Commercial Banks	0.8	0.8	0.3
Agricultural Credit corporation	2.1	2.1	1.5
Intermediaries	0.1	0.1	0.0
Cooperation and charities	0.6	0.6	0.3
Development and employment	0.2	0.2	0.2
Farmer union	0.2	0.2	0.2
Private agricultural companies	0.3	0.3	0.1
Other Resources	9.3	9.2	9.9
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

Type of Agricultural Holdings

Figure 7.5 shows that the overwhelming majority of agricultural holding are of crop type (70%). Percentage of female holders is higher than that of males by 10.6 percentage points. On the other hand, the results indicate that livestock holding for males are more than for females by 6.1 percentage points.. it is worthy to mention that combined holdings (crop and livestock) are the least among holders and amounted to (10.6%) only.

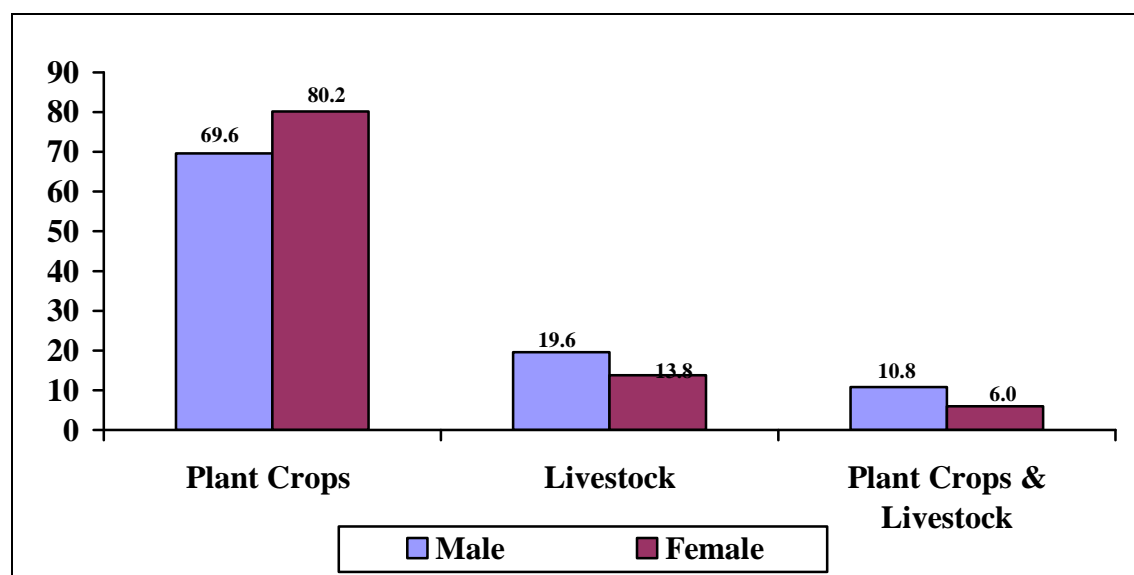


Figure 7.5: Percentage Distribution of Agricultural Holdings by Type of Holdings and Sex of Holder

Source: Department of Statistics "Agricultural Census, 2007"

Agricultural Machineries and Equipment

Unsurprisingly, Data displayed in Table 7.8 shows that more than one third of the equipment (36.8%) used in Agricultural holdings are Drip Irrigation Net, as the census results indicates that the overwhelming majority of holdings are of crop type which require such type of equipment. The results also indicate that 23.0% of equipment used in Agricultural holdings is transport equipments. It is worthy to mention that there is a significant variation between male and female holders in respect of using Miller, Milking Machine, Cooler Store Area, Threshing Machine and Water Pump. It is noted that the percentage of female holders using these equipments in their holdings is higher than those of males. Moreover, the results indicate that the holdings related to female holders do not use Motor (tractor) equipment.

Table 7.8: Percentage Distribution of Agricultural Holdings Reporting Machinery and Equipment by Type of Machine and Sex of Holder

Equipments	Sex		
	Total	Male	Female
Miller	2.9	2.8	4.0
Milking Machine	2.8	2.7	4.7
Cooler Store	3.0	2.8	6.5
Office and Furniture	0.2	0.2	0.2
Transport Equipments	23.0	23.2	15.5
Tractor	7.9	7.8	6.7
Harvester	0.2	0.1	0.2
Thresher	0.1	0.1	0.5
Combine	0.1	0.1	0.2
Plough	6.2	6.1	5.8
Motor	0.1	0.1	0.0
Pump	3.4	3.4	5.4
Drip Irrigation Net	36.8	36.9	40.6
Sprinkler Irrigation Net	0.8	0.8	0.5
Apiary Equipments	12.7	13.0	9.4
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

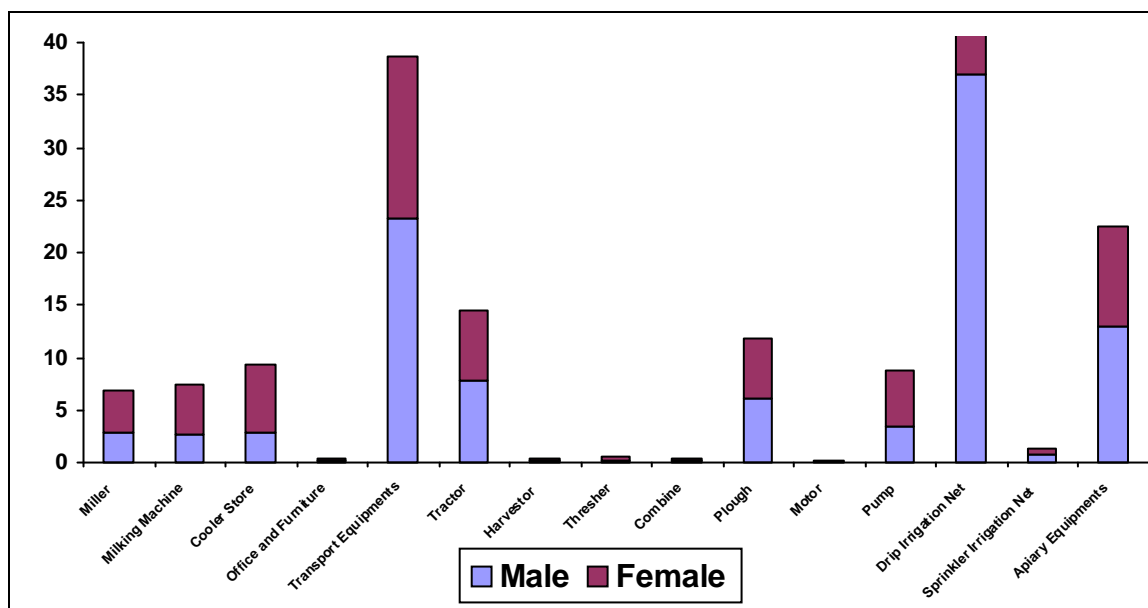


Figure 7.6: Percentage Distribution of Agricultural Holdings Reporting Machinery and Equipment by Type of Machine and Sex of Holder

Source: Department of Statistics “Agricultural Census, 2007”

Sources of Agricultural Extension

Table 7.9 illustrates the percentage distribution of agricultural holdings by sources of extension and sex of holder. Data shows that about two thirds of female agricultural holders don't seek external resources of agricultural guideness and depend on their personal experience with a percentage amounted to (60.1%). The same situation applies to male holders with a percentage amounted to (55%). The data also reveals that (15.5%) of male and female holders obtain agricultural guideness directly from other farmers. It is noted that male holders seek agricultural guideness from the Ministry of Agriculture with higher percentage than female holders by 3.5 percentage points.

Table 7.9: Percentage Distribution of Agricultural Holdings by Sources of Agricultural Extension and Sex of Holder

Sources of Extension	Total	Male	Female
Ministry of Agriculture	12.7	12.7	9.2
Other Official Institutions	1.7	1.7	0.8
Agricultural Shops & Companies	6.9	7.0	5.2
Other Farmers	15.5	15.5	16.9
Personal Experiences	55.0	55.0	60.1
Public Media	3.7	3.7	3.4
Other Sources	4.5	4.5	4.4
Total	100.0	100.0	100.0

Source: Department of Statistics “Agricultural Census, 2007”

Size of Agricultural Holder's Household

The results presented in Figure 7.7 indicate that the holder household size is characterized with its large size. A high percentage of those holders (43.9%) have household members ranging between 6-9 persons. This percentage has increased among male compared to female holders by 12 points. Moreover, the results indicate that there is a significant variation between male and female holders regarding the household size. Overwhelming majority of female holders tend to have 1-5 members in their households with a percentage amounted to 59.3%. On the other hand, this percentage doesn't exceed 31.9 percentages among male holders with 27.4 point's decrease.

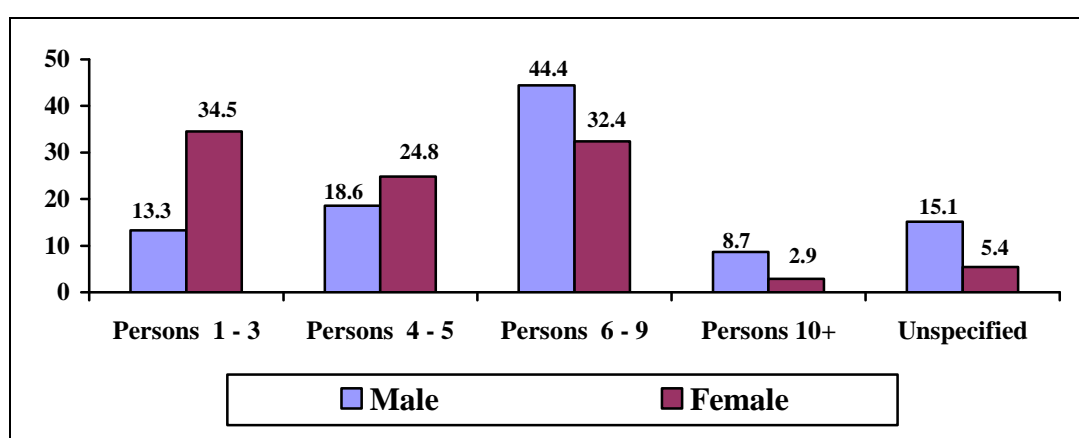


Figure 7.7: Percentage Distribution of Agricultural Holdings by Sex of Holder and Size of holder's Household

Source: Department of Statistics "Agricultural Census, 2007"

Age Groups of Agricultural Holders

The percentage of agricultural holdings decreases for young holders in the age group 18-34 years compared with other age groups and it is amounted to 9% and 3.9% for males and females, respectively. According to the results indicated in Figure 7.8 that this proportion is increasing with age, reached a peak among females in the age group 55-64 and was 29.1%. It was the highest among males in the age group 45-54 years by 23.3%. It is also noted that the percentage of agricultural holdings among females in the age groups beginning with 55 years and above were higher than males in the same age groups, with 17.3 percentage points difference.

The reason for this rise is due to the increasing proportion of female widows with age as the life expectancy at birth among females is higher than their male peers, where the agricultural holdings are transmitted from males to females (by inheritance) .

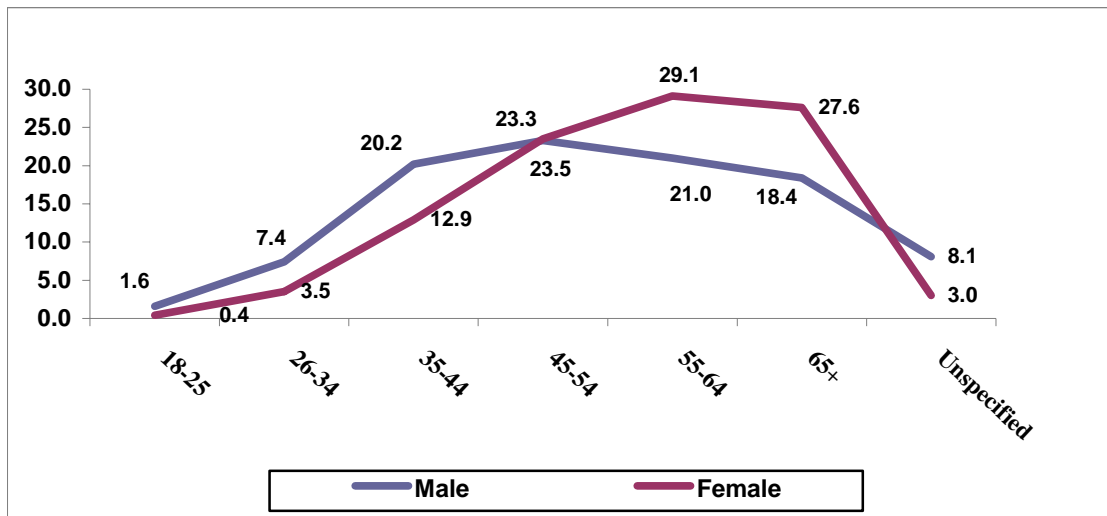


Figure 7.8: Percentage Distribution of Agricultural Holdings by Sex and Age Groups of Holders, 2007

Source: Department of Statistics "Agricultural Census, 2007"

Educational level of Agricultural Holders

In terms of educational level for those individual holders, the results show that the percentage of illiteracy was 12.6%, where the female illiterate holders represent 46.8% of the total female holders against 11% only for male holders of the total male holders. The reason for this high percentage illiteracy rate among female agricultural holders might be due to that the vast majority of them (80.2%) are over the age of 45 years. In addition, the results show that there is a significant variation between male and female holders in all levels of education in favor of males.

Interestingly, the percentage of individual holders with agricultural qualification regardless the educational levels (agricultural secondary, intermediate agricultural diploma or agricultural university degree) is very small and did not exceed 0.4% for both sexes.

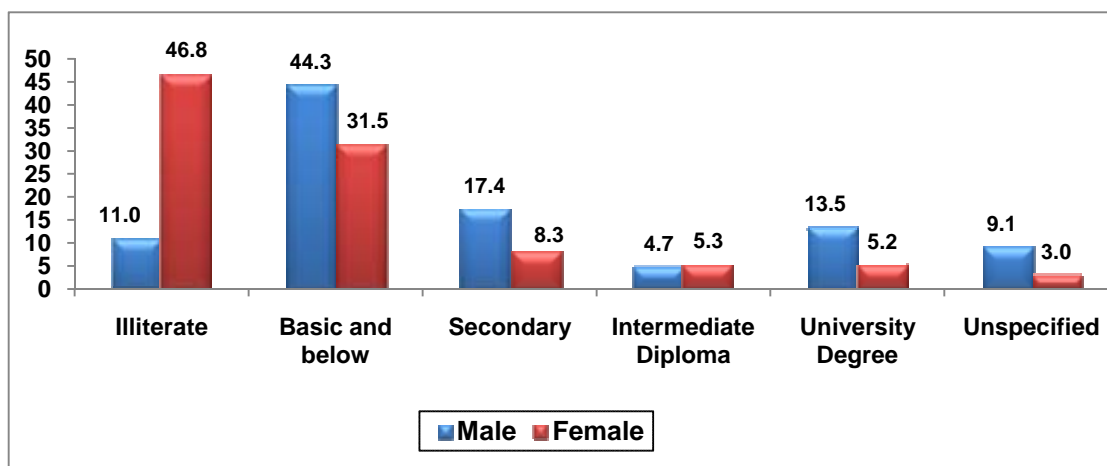


Figure 7.9: Percentage Distribution of Individual Holder By Educational Level and Sex of Holder

Source: Department of Statistics "Agricultural Census, 2007"

Agricultural Holder's Main Profession

The results of the Agricultural Census indicate that around three fourth of holders (males and females) profession is not related to Agriculture, and only a small proportion of holders (not exceeding 18.3%) take agriculture as their main profession.

Table 7.10: Percentage Distribution of Individual Holder by Sex and Main Occupation of Holder

Main Occupation of Holder	Total	Male	Female
Agriculture	18.3	18.5	14.8
Non- Agriculture	73.7	73.4	82.2
Unspecified	8.0	8.2	3.0
Total	100.0	100.0	100.0

Source: Department of Statistics "Agricultural Census, 2007"

Land Uses

The Census results show that 27.4% of the total area of agricultural holdings in Jordan has been used for growing field crops; the percentage of areas owned by males and used the land for the same purpose is 32.5%. On the other hand, this percentage reached 16.7% for females. It should be noted that the significant variation in the used areas of this type of agricultural activity between male and female holders is attributed to the fact that more than 63% of the total agricultural areas held by females is less than 100 dunms, while 60% of the total size of the holdings held by males is more than one hundred dunms, as such type of land use needs large agricultural areas of more than 100 dunms.

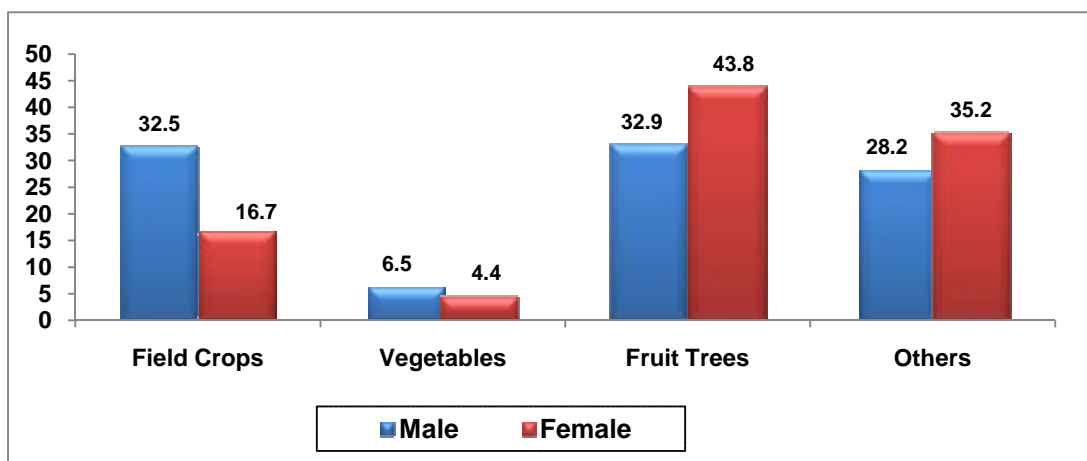


Figure 7.10: Percentage Distribution of Agricultural Holdings Areas by Land Use and Sex of Holder, 2007

Source: Department of Statistics "Agricultural Census, 2007"

In addition to the above, the results show that 10.7% of the total area of agricultural holdings used to grow vegetables without any significant difference in the used areas in this type of agricultural activity by the sex of the holder. The results indicate that about one third of the cultivated area of the total area of agricultural holdings in Jordan is being used to grow bearing trees, where the percentage of areas utilized for this type of agricultural activity by holders is 32.9% for males; it was 43.8% for female holders.

The reason for the high proportion of the used areas of bearing trees among female holders compared with male holders by 10.9 percentage points is attributed to that most of the holdings owned by female holders fall within the category of area ranging from 2 to 5 dunms. This represents in most cases domestic holdings (the dwelling of holder is located within the holding itself), which means that most of these trees are cultivated in areas nearby and around the dwelling of the female.

Sources of Irrigation

The agricultural census results show that the vast Majority of the agricultural holders (males and females) do not have a major source of irrigation and that 46.6% of the total area of plant holdings parcels held by males and 87.6% of the total area of plant holdings parcels held by females are non-irrigated.

The results also indicate that 5.6% of female holders depend on side valleys as main source of irrigation for 6.1% of the total area of plant holdings parcels held by female holders. On the other hand, results shown that 6.4% of male holders depend on wells as their main source of irrigation for 45.5% of the total area of plant holdings parcels held by them.

Table 7.11: Percentage Distribution of Area of Plant Holdings Parcels by Source of Irrigation and Sex of Holder, 2007

Source of Irrigation	Male	Female
Total	148844.5	2815.4
Percentage	100.0	100.0
Well	45.5	1.1
Springs	0.3	0.7
Dams	1.5	0
Public Networks	0.9	3.4
King Abdallah Canal	2.0	0.0
Side Valleys	2.5	6.1
Other Sources	0.7	1.1
No Source	46.6	87.6

Source: Department of Statistics "Agricultural Census, 2007"

Employment

Census results show that the parts of the agricultural holdings, which most of work done by members of the family is amounted to 84% of the total number of holdings, and 16% of the total number of the parts use paid workers for accomplishing most of the agricultural works. The percentage of non-Jordanian hired workers is amounted to 72.5% of the total number of permanent hired workers.

The number of workers from the holder family members of the Jordanian nationality is amounted to 107752 individuals, where females represent 7.5% of the total. The number of workers from the holder family members of non-Jordanian nationality is 1282 personnel of whom 10.8% are females. The census results also show that 590 children under the age of 15 of whom 76 female children, may have been hired in some agricultural holdings from outside the family of the holder.

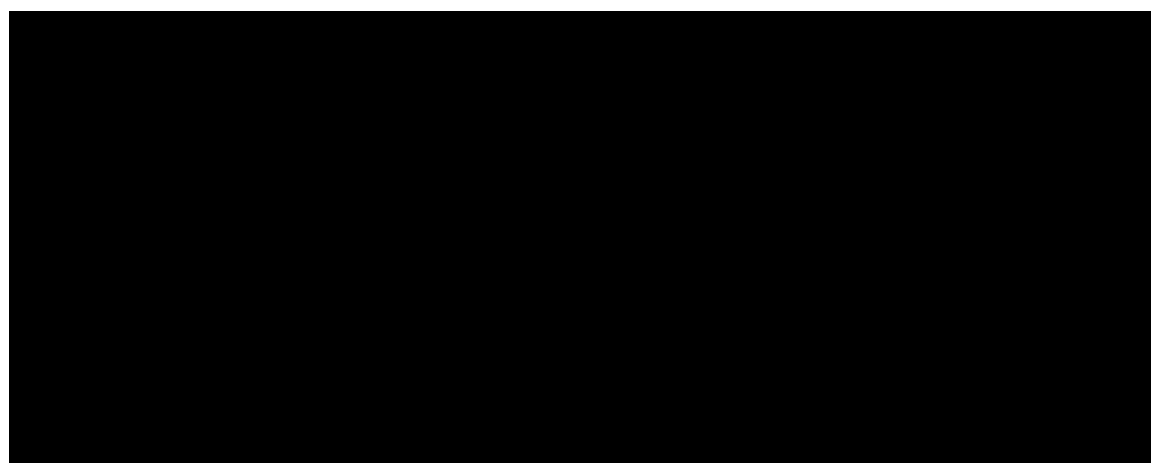


Figure 7.11: Percentage Distribution of Family Labor and Hired Permanent Labor in Agricultural Holdings by Sex, 2007

Source: Department of Statistics "Agricultural Census, 2007"