



مشروع المنار
Al-Manar Project



هيئة تنمية وتطوير المهارات المهنية والتقنية
*Technical and Vocational Skills Development
Commission*



المركز الوطني لتنمية الموارد البشرية
*National Center for Human
Resources Development*

The gap between the supply and demand sides of the Agricultural sector

Supervisor

Prof. Dr. Abdalla Yousef Ababneh

August 2022

Supported by *Technical and Vocational Skills Development Commission*

| | |
|--|---|
| National Center for Human Resources Development | المركز الوطني لتنمية الموارد البشرية |
| Phone : +962 - 6 – 5331451 | هاتف : +962 - 6 - 5331451 |
| Fax : +962 - 6 – 5340356 | فاكس : +962 - 6 - 5340356 |
| P.O. Box: 560 Al-Jubaiha | ص.ب : 560 الجبيهة |
| Postal Code : 11941 Jordan | الرمز البريدي: 11941 الأردن |
| www.nchrd.gov.jo | |
| www.almanar.jo | |

The Hashemite Kingdom of Jordan

Deposit number at the National Library Department

(2022/8/4129)

The author bears full legal responsibility for the content of his work and this work does not express the opinion of the National Library Department or any other government agency



مشروع المنار
Al-Manar Project



هيئة تنمية وتطوير المهارات المهنية والتقنية
Technical and Vocational Skills Development
Commission



المركز الوطني لتنمية الموارد البشرية
National Center for Human
Resources Development

This study was carried out by the Al-Manar project managed by the National Center for Human Resources Development

Supervised by
Prof. Dr. Abdalla Yousef Ababneh

Prepared by researcher
Engineer Mohammed Khair Al-Hiyari

Technical work team

Mrs. Manal Al-Ziq
(Programming and database
design)

Engineer Maryam Sheikh Yassin
(Research Assistant)

The National Center for Human Resources Development extends its thanks and gratitude to the Council of the Technical and Vocational Skills Development Commission for its continuous support in the completion of this study, and for the active role of the Authority in maintaining coordination and exchange of opinion with the Center in the sustainability of such studies and participation in the work of advisory committees through sectoral skills councils, and thanks to the Department of Statistics that carried out the survey according to the drawn plan.

The National Center for Human Resources Development thanks the Advisory Committee for their participation and guidance to make this work a success

| | |
|---------------------------------|---|
| Prof. Amal Al-Abbadi | Al Balqa applied University |
| Dr. Eng. Abdul Hamid Kharabsheh | Jordan Cooperative Corporation |
| Dr. Mervat Mhairat | Amman Municipality |
| Eng. Rami Al-Hababah | Ministry Of Agriculture |
| Eng. Emad Ayesh | Vocational Training Corporation |
| Eng. Mohammed Al-Hiyari | Agricultural Engineers Association |
| Eng. Umama Al Hadidi | National Center for Agricultural Research |
| Eng. Mohammed Al-Dhalain | Jordan Farmers Union |
| Eng. Mohammad Tawalbeh | Department of Statistics |
| Eng. Wael Haddadin | Jordan Exporters and Producers Association for Fruit and Vegetables |

Preface

It is a pleasure for me and the family of the National Center for Human Resources Development to put in your hands the study of the gap between the supply and demand sides in the agricultural sector, a study consistent with the premises of the project to reform the employment sector, training and vocational and technical education supported by the European Union, whose implementation was supervised at that time by the Council for Employment, Training and Education Professional and technical participation with the participation of many concerned government institutions and the private sector, and focused on the need for sectoral surveys of the labor market, and the development of plans for the development of human resources within these sectors; This is for the purpose of assisting in identifying the quantitative and qualitative sectoral needs of qualifications and skills, and at the level of each profession required of the target sector, and then working on developing these capabilities among job seekers; Which will undoubtedly contribute to the optimal use of human resources, whether through the planning process, or the development of strategies and decision-making for effective labor market programs, especially in the employment, training and vocational and technical education sector.

This study is divided into six main chapters. The first chapter includes the theoretical framework of the study in terms of: its problem, objectives, importance, and questions of the study, in addition to data sources and the methodology followed. The second chapter includes the analysis of the demand side, and the third chapter deals with the analysis of the supply side in the target sector, then the fourth chapter is extracted, which estimates the supply and demand gap, and based on the results of the fourth chapter, the fifth chapter shows the plans that have been put in place to bridge this gap, and for the development of human resources working in sector referred to above. Finally, the sixth chapter, which presents the most important findings and recommendations.

As we put this study in your hands, we hope that it will be utilized properly, and that it will serve the Center's directions in strengthening Jordan's pioneering and tireless efforts in the areas of human resource development. We ask God Almighty to take our hands to serve Jordan the most precious.

President of the National Center for Human Resource Development

Prof. Dr. Abdalla Yousef Ababneh

Table of contents

| | |
|---|----|
| EXECUTIVE SUMMARY..... | 12 |
| CHAPTER I..... | 15 |
| THE GENERAL FRAMEWORK OF THE STUDY | 15 |
| 1.1 INTRODUCTION..... | 16 |
| 1.2 IMPORTANCE OF THE STUDY..... | 17 |
| 1.3 OBJECTIVES OF THE STUDY..... | 17 |
| 1.4 STUDY QUESTIONS..... | 18 |
| 1.5 STUDY METHODOLOGY..... | 18 |
| 1.5.1 Study population and sample..... | 18 |
| 1.5.2 Study Tools..... | 20 |
| 1.6 DATA COLLECTION AND PROCESSING..... | 20 |
| 1.6.1 Survey of holdings (demand side)..... | 20 |
| 1.6.2 Education and Training Providers Survey (supply side)..... | 21 |
| 1.7 LIMITATIONS OF THE STUDY..... | 21 |
| 1.8 DATA TABULATION AND DISSEMINATION..... | 21 |
| CHAPTER II..... | 22 |
| DEMAND-SIDE ANALYSIS IN THE AGRICULTURAL SECTOR..... | 22 |
| 2.1 HOLDINGS OF THE AGRICULTURAL SECTOR..... | 23 |
| 2.1.1 Number of holdings and their geographical distribution..... | 23 |
| 2.1.2 Economic activity and legal entity of holdings..... | 24 |
| 2.1.3 Number of workers in holdings..... | 25 |
| 2.1.4 Challenges of making holdings..... | 28 |
| 2.1.5 Services of holdings..... | 30 |
| 2.1.6 Job opportunities for Jordanians in holdings..... | 31 |
| 2.1.7 Availability of training facilities and accounting records..... | 33 |
| 2.1.8 Employment of people with disabilities..... | 33 |
| 2.2 EMPLOYMENT IN THE AGRICULTURAL SECTOR..... | 35 |
| 2.2.1 Occupations in the sector..... | 35 |

| | | |
|---|--|----|
| 2.2.2 | <i>Number of workers in professions at the level of the specialist and the level of technician / technician</i> | 37 |
| 2.2.3 | <i>Distribution of agricultural labor, family, non-family and non-Jordanian</i> | 39 |
| 2.2.4 | <i>Distribution of workers in the sector by gender</i> | 40 |
| 2.2.5 | <i>Distribution of workers in the sector by nationality</i> | 40 |
| 2.2.6 | <i>Distribution of workers in the sector by educational level and type of work</i> | 41 |
| 2.2.7 | <i>Distribution of workers in the sector by sub-sector - type of activity</i> | 43 |
| 2.2.8 | <i>Distribution of workers in the sector by region and type of work</i> | 44 |
| 2.2.9 | <i>Distribution of workers in the sector by legal entity of tenure and type of work</i> | 46 |
| 2.3 | TRAINING NEEDS IN THE SECTOR | 48 |
| 2.3.1 | <i>Training needs in the sector by profession</i> | 48 |
| 2.3.2 | <i>Training needs in the sector according to the training program</i> | 49 |
| 2.3.3 | <i>Training needs in the sector by educational level</i> | 53 |
| 2.3.4 | <i>Preferred entities by holdings to train their employees</i> | 66 |
| 2.4 | FUTURE EMPLOYMENT OPPORTUNITIES | 66 |
| 2.4.1 | <i>Expected job opportunities for the years 2022-2024</i> | 66 |
| 2.4.2 | <i>Expected job opportunities broken down by profession and gender</i> | 69 |
| 2.4.3 | <i>Expected job opportunities broken down by educational level</i> | 71 |
| 2.4.4 | <i>Expected job opportunities broken down by minimum experience</i> | 73 |
| 2.4.5 | <i>Expected job opportunities distributed according to the nature of the form of demand (job turnover, expansion, or both)</i> | 75 |
| 2.4.6 | <i>Skills Required for Expected Job Opportunities</i> | 75 |
| 2.5 | EMPLOYMENT OF PEOPLE WITH DISABILITIES IN THE AGRICULTURAL SECTOR | 81 |
| 2.5.1 | <i>Workers with disabilities in agricultural holdings</i> | 81 |
| 2.5.2 | <i>Future employment opportunities for people with disabilities in the agricultural sector holdings</i> | 82 |
| 2.5.3 | <i>Employment difficulties in general</i> | 84 |
| 2.6 | <i>Benefits offered by holdings to employees</i> | 85 |
| 2.7 | <i>Methods of hiring workers for holdings</i> | 85 |
| CHAPTER III | | 87 |
| SUPPLY-SIDE ANALYSIS IN THE AGRICULTURAL SECTOR | | 87 |

| | |
|--|-----|
| 3.1 TRAINING PROGRAMS APPLIED IN THE AGRICULTURAL SECTOR..... | 87 |
| 3.2 THE MOST IMPORTANT TRAINING PROVIDERS IN THE AGRICULTURAL SECTOR | 89 |
| 3.3 SKILLS IN EMPLOYEE PREPARATION PROGRAMS | 96 |
| CHAPTER IV | 104 |
| ESTIMATING THE SUPPLY AND DEMAND GAP IN THE AGRICULTURAL SECTOR | 104 |
| 4.1 THE GAP BETWEEN EXPECTED JOB OPPORTUNITIES AND THE NUMBER OF GRADUATES OF EDUCATIONAL PROGRAMS | 106 |
| | |
| 4.1.1 <i>The gap at the specialist level</i> | 106 |
| 4.1.2 <i>The technical/technical level gap</i> | 107 |
| 4.1.3 <i>Skilled worker gap</i> | 108 |
| 4.1.4 <i>The gap at the level a specific skilled worker</i> | 109 |
| 4.2 THE GAP BETWEEN THE REQUIRED TRAINING NEEDS AND THE TRAINING PROGRAMS OFFERED..... | 110 |
| 4.3 THE GAP BETWEEN SUPPLY AND DEMAND FOR FEMALE LABOR | 111 |
| CHAPTER V..... | 113 |
| HUMAN RESOURCE DEVELOPMENT PLAN IN THE AGRICULTURAL SECTOR..... | 113 |
| CHAPTER SIX | 131 |
| THE RESULTS AND RECOMMENDATIONS..... | 131 |
| 6.1 RESULTS | 132 |
| 6.2 RECOMMENDATIONS | 136 |

LIST of TABLES

| | |
|---|----|
| TABLE 1 : ECONOMIC HOLDINGS IN THE AGRICULTURAL SECTOR BY GOVERNORATE 2021..... | 19 |
| TABLE 2 : DISTRIBUTION OF HOLDINGS IN THE AGRICULTURAL SECTOR BY REGION AND GOVERNORATE..... | 23 |
| TABLE 3 : DISTRIBUTION OF HOLDINGS BY ECONOMIC ACTIVITY..... | 24 |
| TABLE 4 : NUMBER OF HOLDINGS IN THE AGRICULTURAL SECTOR BY YEAR OF SERVICE COMMENCEMENT..... | 24 |
| TABLE 5: DISTRIBUTION OF HOLDINGS BY LEGAL ENTITY OF HOLDING | 25 |
| TABLE 6: NUMBER OF WORKERS IN THE AGRICULTURAL SECTOR..... | 26 |
| TABLE 7: NUMBER OF WORKERS IN HOLDINGS BY GENDER | 26 |
| TABLE 8: DISTRIBUTION OF WORKERS ON HOLDINGS BY SIZE OF EMPLOYMENT AND GENDER | 27 |
| TABLE 9: DISTRIBUTION OF HOLDINGS BY NUMBER OF EMPLOYEES AND REGION | 27 |
| TABLE 10: DISTRIBUTION OF HOLDINGS ACCORDING TO THE IMPACT OF THE CORONA PANDEMIC..... | 31 |
| TABLE 11: ANSWERS TO HOLDINGS REGARDING DIFFICULTIES IN HIRING JORDANIAN WORKERS..... | 32 |
| TABLE 12 : DISTRIBUTION OF HOLDINGS BY AVAILABILITY OF TRAINING FACILITIES AND ACCOUNTING RECORDS | 33 |
| TABLE 13: DISTRIBUTION OF HOLDINGS ACCORDING TO SEVERAL CRITERIA | 34 |
| TABLE 14: DISTRIBUTION OF EMPLOYEES BY PROFESSION AND TYPE OF EMPLOYMENT | 35 |
| TABLE 15: NUMBER OF WORKERS IN PROFESSIONS AT THE LEVEL OF SPECIALIST. | 38 |
| TABLE 16 : NUMBER OF WORKERS IN PROFESSIONS AT THE TECHNICAL/TECHNICAL LEVEL. | 38 |
| TABLE 17 : DISTRIBUTION OF EMPLOYMENT BY ITS TYPE AND THE RATIO OF NON-JORDANIAN WORKERS TO WORKERS OTHER THAN THE HOLDER'S FAMILY..... | 39 |
| TABLE 18 : NUMBER OF WORKERS IN THE SECTOR BY GENDER AND TYPE OF WORK | 40 |
| TABLE 19: NUMBER OF WORKERS IN THE SECTOR BY NATIONALITY AND TYPE OF WORK | 41 |
| TABLE 20: NUMBER OF EMPLOYEES BY EDUCATIONAL LEVEL AND TYPE OF WORK | 42 |
| TABLE 21: NUMBER OF WORKERS IN THE SECTOR BY EDUCATIONAL LEVEL AND GENDER..... | 43 |
| TABLE 22: NUMBER OF EMPLOYEES BY SUB-SECTOR - TYPE OF ACTIVITY | 43 |
| TABLE 23: NUMBER OF WORKERS IN THE SECTOR BY REGION, GOVERNORATE AND TYPE OF WORK..... | 45 |
| TABLE 24: NUMBER OF WORKERS IN THE SECTOR LEGAL ENTITY FORM OF HOLDING AND TYPE OF WORK..... | 46 |
| TABLE 25: NUMBER OF EMPLOYEES BY CATEGORIES OF NUMBER OF EMPLOYEES AND TYPE OF WORK..... | 46 |
| TABLE 26: NUMBER OF EMPLOYEES BY CATEGORIES OF EMPLOYEE NUMBERS AND GENDER..... | 47 |
| TABLE 27 : NEEDS OF HOLDINGS FOR TRAINING WORKERS BY PROFESSION FOR THE YEARS 2022-2024 | 48 |
| TABLE 28 : NEEDS OF HOLDINGS FOR TRAINING WORKERS ACCORDING TO THE TRAINING PROGRAM FOR THE YEARS 2022-2024..... | 49 |
| TABLE 29: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL / ILLITERATE FOR THE YEARS (2022-2024) | 53 |
| TABLE 30: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL / LESS THAN SECONDARY FOR THE YEARS(2024-2022) | 54 |
| TABLE 31 : DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL /VOCATIONAL APPRENTICESHIP FOR THE YEARS(2024-2022) | 56 |
| TABLE 32: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL / SECONDARY SCHOOL (TAWJIHI) FOR THE YEARS(2024-2022) | 57 |
| TABLE 33: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL /ASSOCIATE DEGREE FOR THE YEARS(2024-2022) | 58 |
| TABLE 34: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT REQUIRED SKILL AND EDUCATIONAL LEVEL / BACHELOR'S DEGREE FOR THE YEARS(2024-2022) | 58 |
| TABLE 35: DISTRIBUTION OF JOB OPPORTUNITIES ACCORDING TO THE MOST IMPORTANT SKILL REQUIRED AND EDUCATIONAL LEVEL / POSTGRADUATE DEGREE FOR THE YEARS(2024-2022) | 59 |
| TABLE 36: HOLDINGS NEEDS FOR TRAINING WORKERS ACCORDING TO THE TRAINING PROGRAM FOR EACH PROFESSION FOR THE YEARS 2022-2024..... | 59 |
| TABLE 37: PREFERRED TRAINING BODY FOR HOLDINGS TO TRAIN WORKERS..... | 66 |

| | |
|---|-----|
| TABLE 38 : THE NUMBER OF EXPECTED JOB OPPORTUNITIES DISTRIBUTED BY PROFESSION FOR THE YEARS 2022-2024 | 67 |
| TABLE 39: DISTRIBUTION OF THE NUMBER OF EXPECTED JOB OPPORTUNITIES, BROKEN DOWN BY GENDER, FOR THE YEARS 2022-2024 | 69 |
| TABLE 40: THE NUMBER OF EXPECTED JOB OPPORTUNITIES DISTRIBUTED BY PROFESSION AND GENDER FOR THE YEARS 2022-2024 | 70 |
| TABLE 41 : THE NUMBER OF EXPECTED JOB OPPORTUNITIES, DISTRIBUTED BY EDUCATIONAL LEVEL, FOR THE YEARS 2022-2024..... | 72 |
| TABLE 42: DISTRIBUTION OF JOB OPPORTUNITIES BY LEVEL OF EDUCATION AND GENDER FOR THE YEARS(2024-2022) | 73 |
| TABLE 43: THE NUMBER OF EXPECTED JOB OPPORTUNITIES, DISTRIBUTED ACCORDING TO THE MINIMUM REQUIRED EXPERIENCE (FOR THE YEARS 2022-2024)..... | 74 |
| TABLE 44: THE NUMBER OF EXPECTED JOB OPPORTUNITIES, DISTRIBUTED ACCORDING TO THE MINIMUM REQUIRED EXPERIENCE (FOR THE YEARS 2022-2024)..... | 74 |
| TABLE 45 : THE NUMBER OF EXPECTED JOB OPPORTUNITIES DISTRIBUTED ACCORDING TO THE FORM OF DEMAND (FOR THE YEARS 2022-2024) | 75 |
| TABLE 46: SKILLS REQUIRED ACCORDING TO EXPECTED JOB OPPORTUNITIES FOR THE YEARS 2022-2024 | 75 |
| TABLE 47: NECESSARY SKILLS FOR OCCUPATIONS..... | 80 |
| TABLE 48: DISTRIBUTION OF WORKERS WITH DISABILITIES BY OCCUPATION | 81 |
| TABLE 49: NUMBER OF EMPLOYEES WITH DISABILITIES BY TYPE OF DISABILITY | 82 |
| TABLE 50: DISTRIBUTION OF FUTURE JOB OPPORTUNITIES (2022-2024) FOR PEOPLE WITH DISABILITIES BY TYPE OF DISABILITY | 83 |
| TABLE 51: DISTRIBUTION OF FUTURE JOB OPPORTUNITIES FOR PEOPLE WITH DISABILITIES BY GENDER FOR THE YEARS (2024-2022). | 83 |
| TABLE 52 : DISTRIBUTION OF FUTURE JOB OPPORTUNITIES (2022-2024) FOR PEOPLE WITH DISABILITIES BY PROFESSION, GENDER AND REGION..... | 84 |
| TABLE 53 : TRAINING PROVIDERS BY YEAR OF STARTING PROVIDE TRAINING/VOCATIONAL EDUCATION SERVICES.. | 90 |
| TABLE 54 : DISTRIBUTION OF GRADUATES OF TRAINING PROVIDERS ACCORDING TO THE NATURE OF THE TRAINING PROVIDER (PREPARATION OF EMPLOYEES AND COURSES TO RAISE COMPETENCY)..... | 91 |
| TABLE 55 : DISTRIBUTION OF GRADUATES BY TRAINING PROVIDER FOR THE YEARS 2019-2020-2021 (PREPARATION OF EMPLOYEES) | 92 |
| TABLE 56 : DISTRIBUTION OF GRADUATES OF TRAINING PROVIDERS BY EDUCATIONAL PROGRAM AND BY GENDER FOR THE YEARS 2019-2020-2021. | 93 |
| TABLE 57 : DISTRIBUTION OF GRADUATES BY PROFESSION AND TRAINING PROVIDER FOR THE YEARS 2019-2020-2021 (NUMBER OF EMPLOYEES)..... | 94 |
| TABLE 58: AVAILABILITY OF SKILLS IN EMPLOYEE PREPARATION PROGRAMS | 97 |
| TABLE 59: DISTRIBUTION OF GRADUATES OF COMPETENCY RAISING COURSES BY TRAINING PROVIDER FOR THE YEARS 2019-2020-2021 | 98 |
| TABLE 60 : DISTRIBUTION OF GRADUATES OF QUALIFICATION COURSES BY REGION FOR THE YEARS 2019-2020-2021 | 98 |
| TABLE 61: DISTRIBUTION OF GRADUATES OF COMPETENCY-RAISING COURSES BY GENDER FOR THE YEARS 2019-2020-2021 | 99 |
| TABLE 62 : DISTRIBUTION OF GRADUATES OF QUALIFICATION COURSES FOR THE YEARS 2019-2020-2021 | 100 |
| TABLE 63: SUPPLY AND DEMAND GAP AT THE LEVEL OF SPECIALIST | 107 |
| TABLE 64: SUPPLY AND DEMAND GAP AT THE TECHNICAL LEVEL | 108 |
| TABLE 65: SUPPLY AND DEMAND GAP AT THE LEVEL OF SKILLED WORKERS | 108 |
| TABLE 66: SUPPLY AND DEMAND GAP AT THE LEVEL OF A SPECIFIC SKILLED WORKER | 110 |

TABLE OF FIGUERS:

| | |
|---|----|
| FIGURE NO. 1: PERCENTAGE DISTRIBUTION OF HOLDINGS IN THE AGRICULTURAL SECTOR BY GOVERNORATE | 23 |
| FIGURE NO. 2: PERCENTAGE DISTRIBUTION OF HOLDINGS BY TYPE OF ACTIVITY | 24 |
| FIGURE NO. 3: RELATIVE DISTRIBUTION OF HOLDINGS BY LEGAL ENTITY OF HOLDING | 25 |
| FIGURE NO. 4: RELATIVE DISTRIBUTION OF EMPLOYMENT IN THE AGRICULTURAL SECTOR..... | 26 |
| FIGURE NO. 5: RELATIVE DISTRIBUTION OF WORKERS IN HOLDINGS BY GENDER | 28 |
| FIGURE NO. 6: RELATIVE DISTRIBUTION OF EMPLOYEES ACCORDING TO THE NATURE OF THE LEGAL ENTITY FOR HOLDING..... | 28 |
| FIGURE NO. 7: RELATIVE DISTRIBUTION OF THE MOST IMPORTANT CHALLENGES AND DIFFICULTIES FACING THE SECTOR..... | 29 |
| FIGURE NO. 8: DEMAND TRENDS FOR TENURE SERVICES IN 2021..... | 30 |
| FIGURE NO. 9 : TRENDS IN THE DEMAND FOR TENURE SERVICES FOR THE YEARS SERIES 2021-2024 | 30 |
| FIGURE NO. 10: DEMAND FORECASTS FOR NEW PROFESSIONS FOR THE YEARS 2022-2024 | 31 |
| FIGURE NO. 11: MOTIVES FOR NOT SPECIFYING FEMALE HOLDINGS..... | 32 |
| FIGURE NO. 12: REASONS FOR NOT OPERATING HOLDINGS FOR PEOPLE WITH DISABILITIES | 33 |
| FIGURE NO. 13: DISTRIBUTION OF HOLDINGS ACCORDING TO SEVERAL CRITERIA | 34 |
| FIGURE NO. 14: RELATIVE DISTRIBUTION OF WORKERS AT THE LEVEL OF SPECIALIST AND THE LEVEL OF A TECHNICAL WORKER..... | 39 |
| FIGURE NO. 15: NUMBER OF EMPLOYEES BY GENDER AND TYPE OF WORK | 40 |
| FIGURE NO. 16: RELATIVE DISTRIBUTION OF TOTAL EMPLOYEES BY NATIONALITY..... | 41 |
| FIGURE NO. 17: RELATIVE DISTRIBUTION OF WORKERS BY EDUCATIONAL LEVEL..... | 42 |
| FIGURE NO. 18: RELATIVE DISTRIBUTION OF WORKERS IN THE SECTOR BY SUB-SECTOR - TYPE OF ACTIVITY | 44 |
| FIGURE NO. 19: RELATIVE DISTRIBUTION OF WORKERS IN THE SECTOR BY REGION | 45 |
| FIGURE NO. 20: RELATIVE DISTRIBUTION OF THE NUMBER OF EMPLOYEES BY AGE GROUP. | 47 |
| FIGURE NO. 21: RELATIVE DISTRIBUTION OF THE NUMBER OF EMPLOYEES BY CATEGORIES OF EMPLOYEE NUMBERS AND GENDER..... | 47 |
| FIGURE NO. 22: EXPECTED NUMBER OF JOB OPPORTUNITIES FOR THE YEARS 2022-2024 | 68 |
| FIGURE NO. 23: RELATIVE DISTRIBUTION OF EMPLOYMENT OPPORTUNITIES IN HOLDINGS BY GENDER FOR THE YEARS 2022-2024 | 69 |
| FIGURE NO. 24: EXPECTED NUMBER OF JOB OPPORTUNITIES DISTRIBUTED BY EDUCATIONAL LEVEL FOR THE YEARS 2022-2024 | 72 |
| FIGURE NO. 25: RELATIVE DISTRIBUTION OF THE NUMBER OF EXPECTED JOB OPPORTUNITIES, DISTRIBUTED BY EDUCATIONAL LEVEL, FOR THE YEARS 2022-2024..... | 73 |
| FIGURE NO. 26: RELATIVE DISTRIBUTION OF THE NUMBER OF EXPECTED JOB OPPORTUNITIES, DISTRIBUTED ACCORDING TO THE MINIMUM REQUIRED EXPERIENCE (FOR THE YEARS 2022-2024) | 74 |
| FIGURE NO. 27: RELATIVE DISTRIBUTION OF THE NUMBER OF WORKERS WITH DISABILITIES BY GENDER. | 82 |
| FIGURE NO. 28: RELATIVE DISTRIBUTION OF FUTURE JOB OPPORTUNITIES FOR PEOPLE WITH DISABILITIES BY GENDER. | 83 |
| FIGURE NO. 29: DIFFICULTIES FACING HOLDINGS WHEN HIRING WORKER..... | 84 |
| FIGURE NO. 30: BENEFITS OFFERED BY HOLDINGS TO EMPLOYEES. | 85 |
| FIGURE NO. 31: METHODS OF HIRING WORKERS IN HOLDINGS. | 86 |
| FIGURE NO. 32: RELATIVE DISTRIBUTION OF THE NUMBER OF BENEFICIARIES ACCORDING TO THE TRAINING PROVIDERS | 90 |
| FIGURE NO. 33: TRAINING PROVIDERS AND NUMBER OF GRADUATES FOR THE YEARS(2021-2019) | 91 |

| | |
|--|----|
| FIGURE NO. 34: RELATIVE DISTRIBUTION OF GRADUATES BY TRAINING PROVIDER FOR THE YEARS 2019-2020-2021 (PREPARATION OF EMPLOYEES) | 92 |
| FIGURE NO. 35: RELATIVE DISTRIBUTION OF THE NUMBER OF GRADUATES OF EMPLOYEE PREPARATION PROGRAMS BY GENDER FOR THE YEARS 2019-2020-2021 | 94 |
| FIGURE NO. 36: DISTRIBUTION OF GRADUATES OF COMPETENCY-RAISING COURSES BY REGION FOR THE YEARS 2019- 2020-2021 | 98 |
| FIGURE NO. 37: DISTRIBUTION OF GRADUATES OF COMPETENCY-RAISING COURSES BY REGION FOR THE YEARS 2019- 2020-2021 | 99 |

Executive summary

The number of graduates of the main training bodies, including programs to prepare workers and raise efficiency in the Kingdom for the years (2019-2021), reached (21344) graduates, and the study showed the availability of 26 fields for preparing workers in the sector.

All holdings in the sector include 423,728 workers, of whom 84% are males, 16% are females, and the individual enterprise is the largest employer for both genders with 81.5%, distributed by type of work with 46% permanent employment, 14% temporary employment, and 40% employment seasonality. Specialists and technical/technical workers are divided between permanent and temporary workers only. The total number of technical/technical workers in holdings reached 37,478 workers, representing 9% of the total workers in agricultural holdings, and the number of workers at the level of specialist reached 2,613 workers, which constitutes less than 1% of the total number of worlds in holdings.

Most of the holdings showed no change in the demand for their services in 2021, at a rate of 53%, while the holdings (41%) faced a decline, compared to 6% who faced an increase in demand. The Corona pandemic had a negative impact on 52.17% of the holdings, while 1,820 holdings (1.73%) were positively affected, and the rest of the holdings were not affected by the pandemic 48.1%.

Most holdings expected that there would be no need for new professions in general in the years 2022-2024, at a rate of 95%, which means a decrease in the demand for employment in the future. Despite this, 65,258 holdings answered that they prefer employing Jordanians, compared to 39,914 who did not, while 4,211 holdings reported that they face Difficulty in employing Jordanians, and its violation was 38051, while 62,910 possessions found that there are difficulties in employing Jordanians, albeit partially.

The total number of Jordanians working in the sector reached 322,910 workers, constituting 76% of the workforce in the sector, which is the largest at the level of permanent, temporary and seasonal employment. As for the Egyptian workforce, its number reached 51,608, compared to 41,192 of Syrian nationality, and 8019 of other nationalities. The number of workers within the holder and his family reached 255,422 workers, while the number of workers outside the holder's family reached 168,306 workers, including 100,818 non-Jordanian workers, who constitute nearly 60% of the total non-family agricultural employment.

The data showed the distribution of employment by educational level that the majority of those employed in agriculture hold a scientific qualification less than secondary 58%, 18% high school, 8% a bachelor, and 2% an intermediate diploma, although professions at the level of specialist (bachelor and postgraduate studies do not)

The holdings operating in the sector showed a need to rehabilitate 10,229 of its workers, and the priority was in terms of the numbers to be trained within 33 professions, foremost of which was training plant production technicians, an agricultural worker picking crops, an agricultural worker spraying pesticides, an agricultural worker for irrigation and fertilization, and an agricultural worker

for packaging, and farmers of fruit trees (tree horticulture), while in the category of specialization, priority was given to training veterinarians and plant production specialists

The expected total demand for employment for various professions for the years (2022-2024) amounted to 32,667 job opportunities, while the total supply volume for the years (2019-2021) according to education programs and efficiency-raising programs amounted to 21,344 male and female workers, including a numerical gap estimated at (11323) as a supply deficit (excess demand). The most prominent expected job opportunities for the years 2022-2024 are agricultural workers picking crops, agricultural workers packaging and plowing, and agricultural workers irrigation and fertilization. The expected job opportunities in the years 2022-2024 were distributed according to the responses of the holdings, about 19,988 jobs for males and 12,698 jobs for females, 61% and 39%, respectively.

A total surplus on the supply side was recorded at the specialist level, totaling 2298, and the surplus appeared in all professions except for the profession of veterinarian. A total surplus was recorded on the supply side at the technical level, totaling 2,963. On the supply side, the title of "Agricultural Technician" appeared without being met by demand (most likely, an agricultural technician could cover the profession of a plant production technician without covering the profession of animal production or a veterinary technician).

A total deficit on the supply side was recorded at the level of skilled workers totaling 1529, and the comparison showed the disappearance of supply in the professions of sheep and sheep breeders, livestock and dairy producers for commercial purposes, chicken/broiler breeders, mushroom farms, nursery farms, cut flower farms, and pruning farms. And grafting trees, on the other hand, there is an offer in the profession of a farmer in horticulture, nurseries and gardens for commercial purposes without the presence of demand.

A total deficit was recorded on the supply side at the level of the specific skilled worker, totaling 27,113. Only seven occupations that intersected with demand were provided, including three (the professions of an irrigation and fertilization worker, a crop picker, and a gardener and horticultural worker), while no direct demand appeared in comparison to four professions (a worker in field crops, a worker in mixed crop cultivation, a picking and flower grading worker, and a fish feeder) although these occupations can cover part of the demand for occupations (agricultural worker picking crops, agricultural worker picking crops, and forager). On the other hand, the demand side included 17 different professions, the most important of which were respectively: Agricultural worker harvesting crops, agricultural worker packaging and plowing, agricultural worker irrigation and fertilization.

A comparison between the data of female graduates of educational programs for the years 2019-2021 and the data of demand and job opportunities for females expected for the years 2022-2024 showed that the size of the gap between supply and demand amounted to 10,073 opportunities in favor of demand (12698 the volume of demand compared to 2,625 the volume of supply).

The surplus demand appeared mainly in the profession of agricultural worker picking crops, the profession of agricultural worker packing and packaging, the profession of fruit tree farmer (tree horticulture), and the profession of livestock milker. While the oversupply appeared in the profession of an agricultural extension specialist, a specialist in landscaping and landscape engineering, a

specialist in plant protection/integrated control, a plant production specialist, a tree horticultural specialist, an agronomist, and an agricultural technician, which are professions of the first two levels. Specialist and second level / technician - technical.

A total of 1,457 workers with disabilities work in 933 different holdings within 25 different professions. Future expectations also showed an increase in the number of workers with disabilities and an increasing demand for female employment over males, with the total expected opportunities reaching 1198 within 11 different professions.

The study showed that the future job opportunities in the sector, which were estimated at 32,667 opportunities, require 102 different skills, while the operators believe that there is a need for sixty-nine skills to rehabilitate the 10,229 workers currently working in the sector.

•

Chapter I

The General Framework of the Study

1.1 Introduction

The National Center for Human Resources (HRIS) Development has undertaken since 2001, through the Al-Manar project, the development of technical and operational systems and tools for building a human resources information system in Jordan. To identify challenges and opportunities for HRIS. Despite the significant progress and reforms that have taken place in the human resources information system so far, the subject of sectoral surveys that focus on collecting information on specific sectors to identify the quantitative needs of manpower and to identify the specific skills needed by workers in this sector is still weak, which may be reflected. This is due to the failure to develop effective human resource development plans for the important sectors in the labor market, and the absence of accurate data on these sectors, and this may weaken the effectiveness of the vocational guidance process, which may lead to imbalances in the adequacy of employment in the labor market.

Hence, the National Center for Human Resources Development, with the support of the Employment, Vocational and Technical Education and Training Council (formerly) and currently, with the support of the Vocational and Technical Skills Development Authority, has undertaken periodic studies of the priority sectors in the Jordanian economy, and this included a survey of the supply and demand sides of the workforce. Accordingly, the Council at the time identified three priority sectors as a first stage in the implementation of this initiative and their preparation was subsequently completed, then six other sectors were identified, followed by new sectors, totaling twenty economic sectors, and this was done in coordination with the Professional and Technical Skills Development Authority in cooperation with the Department of Statistics. In addition, representatives of the concerned authorities in the public and private sectors participated in the process of following up and supervising these studies through advisory committees formed for this purpose. These studies are consistent with what was stated in the national strategy for human resource development, the need to identify the extent to which education and training outputs are compatible with the renewable labor market requirements. these studies: In order to help identify quantitative and qualitative sectoral needs in terms of qualifications and skills, and then work on developing these capabilities among job seekers, Which will undoubtedly contribute to the optimal use of human resources, whether through the planning process, or the development of strategies and decision-making for effective labor market programs, especially in the employment, training and vocational and technical education sector.

The current study deals with the study of the gap between the supply and demand sides in the agricultural sector.

Important note: The demand monitored by the study is not an expression of the total demand for professions at the level of the specialist and technician, as the holdings operating in the sector in the field of supplying production inputs, trading agricultural materials, exporting agricultural products, seed production companies and agricultural service companies are not included in the sample framework, in addition To the failure to monitor job opportunities in the official institutions that provide extension and control services, care for public gardens and agricultural education, which is

the most important work site for graduates of agricultural professions despite what was previously mentioned.

1.2 Importance of the study

The importance of this study lies in that it is the first study that seeks to estimate the gap in the Jordanian labor market in the agricultural sector, by analyzing the quantitative and qualitative forces of the Jordanian labor market, and deducing the extent of homogeneity of supply represented by the quantitative and qualitative outputs of education and vocational and technical training providers with demand, represented in Quantitative and qualitative labor market needs through a field survey.

On the other hand, the importance of this study stems from the fact that it will outline plans for human resource development in the target sector, and it will also appoint the authorities responsible for the supply side to benefit from the results of the study in developing their academic and training programs, which would contribute to bridging the gap and responding to the requirements of the markets. Renewable work, which will reduce the amount of imbalances in the human resources development and investment system, and this in turn, will give a positive indication of the flexibility of the process of developing education and training programs and their harmony with the requirements of the labor market and the increase in the competitiveness of its outputs.

1.3 Objectives of the study

The current study seeks to achieve a set of objectives that can be summarized as follows:

1. Determining the titles of the required professions/businesses within the sector.
2. Assessment of the current and future demand for the sector's production.
3. Determining the future quantitative needs of labor for each of the professions in the sector.
4. Determining the current and future training needs for each of the professions required in the sector.
5. Determining the needs of the holdings working within the sector from training programs to raise the efficiency of workers.
6. Identifying employers' attitudes towards benefiting and cooperating with training providers in the public and private sectors in preparing the workforce within the sector.
7. Identifying the attitudes and willingness of employers towards employing females within their holdings.
8. Identifying the attitudes and willingness of employers towards employing people with disabilities within their holdings.
9. Verify the readiness and readiness of the training providers in the public and private sectors to prepare and train the required labor.
10. Determine the extent of the gap between supply and demand in the labor market and coordinate with the concerned authorities to bridge this gap.
11. Develop a plan and programs for the development of human resources in the sector to create efficient and effective human capital, as it is one of the most available elements in Jordan.

1.4 Study Questions

The study attempts to achieve the above-mentioned objectives by answering the following questions:

1. What are the characteristics of the current workers in the agricultural sector in terms of profession, gender and educational level?
2. What are the characteristics of the programs offered for professions in the agricultural sector in terms of duration, educational level of those enrolled, training sites and number of graduates?
3. What are the quantitative and qualitative needs of the labor market in the agricultural sector for the years (2022-2024)?
4. What are the skills needs of holdings in the agricultural sector in each of the sector's occupations?
5. What skills do the training providers offer in each of the training programs serving the agricultural sector?
6. What are the current and future opportunities for women's employment in the agricultural sector?
7. What are the current and future opportunities for training and empowering women in the agricultural sector?
8. What are the current and future opportunities for employing people with disabilities in the agricultural sector?
9. What are the current and future opportunities for training people with disabilities to enter the labor market in the agricultural sector?
10. What are the difficulties that holdings face in hiring in the agricultural sector?
11. What are the most important advantages that holdings provide to workers in the agricultural sector?

1.5 Study Methodology

The study covers the demand side of companies operating in the agricultural sector by surveying their current and future needs for the years (2022-2024) in terms of manpower and training, the supply side provided by graduate training providers, and training programs through a survey of the current capabilities of these entities and their future directions for training within the target sector.

1.5.1 Study population and sample

1.5.1.1 Survey of Holdings Needs (Demand Side)

The survey sample was designed to obtain reliable estimates of the main variables of the survey at the level of the three governorates and regions. The sample of this survey was designed based on the framework of the general census of holdings implemented by the Department of Statistics, which follows the fourth international industrial classification ISIC4 of the United Nations.

This sector includes a group of sub-sectors:

- ✓ Plant production / cultivation of non-permanent crops.
- ✓ Plant production / cultivation of perennial crops.
- ✓ Plant propagation (Nurseries)

- ✓ Holdings of sheep and goats
- ✓ Cow farms.
- ✓ Organized Livestock Production / Layering Chicken Farms.
- ✓ Organized animal production / broiler farms.
- ✓ Organized animal production / hatchery farms and broiler chickens.
- ✓ Beekeeping
- ✓ Fish farming
- ✓ sea fishing

For the purposes of this survey, the professions carried out by this sector were taken into consideration by dividing the study community into classes to ensure homogeneity and good representation of the community according to the governorates, professions, and the category of workers in the holding. Table 1 shows the distribution of the study population and its sample by governorates.

Table1 : Economic holdings in the agricultural sector by governorate 2021.

| Governorate | Study population | Study sample |
|-----------------|------------------|--------------|
| Amman (Capital) | 10,860 | 792 |
| Albalqa | 8,269 | 862 |
| Zarqa | 3,629 | 544 |
| Madaba | 4,840 | 375 |
| Irbid | 34,133 | 932 |
| Ma'raq | 8,576 | 632 |
| Jerash | 8,222 | 537 |
| Ajloun | 7,095 | 520 |
| Karak | 10,070 | 502 |
| Tafilah | 2,987 | 347 |
| Ma'an | 4,295 | 385 |
| Aqaba | 2,196 | 360 |
| Total | 105,172 | 6,788 |

1.5.1.2 Survey of Training Providers (supply side)

The study population for this survey consisted of all the main providers of vocational and technical education and training in the Kingdom, represented by the following:

- Al-Balqa Applied University/ community colleges in the public and private sectors.

- Jordanian public and private universities.
- Vocational Training Corporation.
- The National Company for Employment and Vocational Training.
- Company (Agricultural Consulting and Training).
- Agricultural Engineers Association.
- The National Center for Agricultural Research and Extension.
- Jordan University Consultation Center.
- Veterinarians Association.

Regarding the sample of the survey, it was a comprehensive sample of the most important training institutes / centers / sites from the public and private sectors

1.5.2 Study Tools

Two questionnaires were designed to achieve the objectives of the study; The first questionnaire covers the demand side (employers), and mainly provides data on the number of workers and their training needs, the institution's quantitative needs of workers in different professions, and the technical and general skills (supporting employment) required to practice different professions. The questionnaire also provides data on the employment of people with disabilities and the nature of the professions they can occupy, as well as data on the employment of women in any professions, then the difficulties faced by employers in hiring workers, the methods used in hiring and the benefits offered to workers.

As for the second questionnaire, it covers the supply side (training providers), as it mainly provides data on the training programs available to the training providers within the professions of the target sector, the numbers of enrolled and graduates and their characteristics, courses to raise the efficiency of practicing workers, and training opportunities available for people with disabilities and women, in addition to The orientations of training providers towards future expansions, whether in training programs or training target groups. It should be noted that the same questionnaire was used in studies of all priority sectors due to the similarity of the required data for each of them.

The two questionnaires were initially developed by researchers at the National Center for Human Resources Development and were subsequently presented to experts from the Department of Statistics and to members of the Advisory Committee, and the proposed amendments were taken, especially those amendments/observations that were unanimously approved by these experts. The appropriate modifications were made in the light of their observations.

1.6 Data collection and processing

1.6.1 Survey of holdings (demand side)

- The holdings survey data collection was carried out according to the following procedures:

- Preparing a guide to fill out the questionnaire for the field researcher (data collector) that includes the necessary clarifications for all the questions of the questionnaire.
- Preparing a guide with the terms and instructions for entering the survey data received through the questionnaires.
- Selecting and training a field research team to collect data, male and female, followed by a group of supervisors, who were trained to conduct the survey and fill out the questionnaire at the Statistical Training Center.
- Filling out survey questionnaires through personal interviews of field researchers (data collectors) with those concerned in the institutions/workshops covered by the survey.
- Checking and coding the completed questionnaires by the team assigned to do so among the employees of the Department of Statistics.
- Entering data into the computer and preparing raw data tables.

1.6.2 Education and Training Providers Survey (supply side)

- Training provider survey data collection was carried out according to the following procedures:
- Assigning a working group that included representatives of the main vocational and technical education and training agencies in Jordan to collect the necessary survey data.
- Holding a session for team members at the National Center for Human Resources Development, during which participants were introduced to the survey tool and the requirements for filling it out and trained on the mechanism for filling out the questionnaires.
- Filling out survey questionnaires through personal interviews of team members (data collectors) with the concerned employees of the training bodies covered by the survey.
- Checking and coding the filled-out questionnaires by the assigned team of employees of the National Center for Human Resources Development.
- Entering data into the computer and preparing raw data tables.

1.7 Limitations of the study

The study data were collected in the period (1/2/2022-1/5/2022).

1.8 Data tabulation and dissemination

The intersections, frequency tables, and graphs necessary to present the study were identified after it was approved by the members of the advisory committee, and the programming specialists processed the raw data tables to extract and display them in the appropriate manner, and they were included in this report, which also included a summary of the most important results of the study and the recommendations emanating from it.

Chapter II

Demand-side analysis in the agricultural sector

2.1 Holdings of the agricultural sector

2.1.1 Number of holdings and their geographical distribution

The number of holdings in the agricultural sector reached 105,172 holdings until the end of 2021, distributed by (55%) in the North region, about (26%) in the Central region, and (19%) in the South region (see Table 2 and Figure 1).

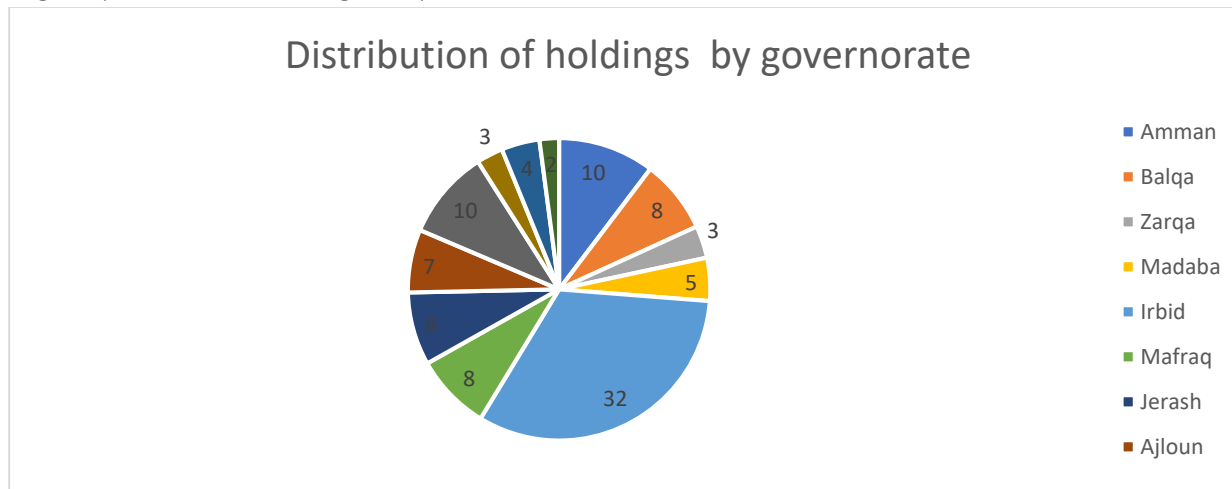


Figure No. 1: Percentage distribution of holdings in the agricultural sector by governorate

Table 2: Distribution of holdings in the agricultural sector by region and governorate

| Region/Governorate | Number of Holdings |
|---------------------------|--------------------|
| The Central Region | 27,598 |
| Amman | 10,860 |
| Balqa | 8,269 |
| Zarqa | 3,629 |
| Madaba | 4,840 |
| The North Region | 58,026 |
| Irbid | 34,133 |
| Mafraq | 8,576 |
| Jerash | 8,222 |
| Ajloun | 7,095 |
| The South Region | 19,548 |
| Karak | 10,070 |
| Tafielah | 2,987 |
| Ma'an | 4,295 |
| Aqaba | 2,196 |
| Total | 105,172 |

**Important note: There is a slight difference in the totals of some tables and in all chapters because of the weighting and rounding process.

2.1.2 Economic activity and legal entity of holdings

The holdings were distributed between the activity of plant and animal production as shown in Table No. (3) and Figure No. (2) The study showed that the number of sector holdings varied in terms of the year of service provision between 1950 and the time of preparing the study in 2022, as shown in Table (4) the study also did not show the date of establishment of the majority of holdings.

Table3 : Distribution of holdings by economic activity

| Economic Activity | Number of Holdings |
|-----------------------|--------------------|
| Plant | 75,657 |
| Animal | 23,016 |
| Mixed (Plant &Animal) | 6,499 |
| Total | 105,172 |

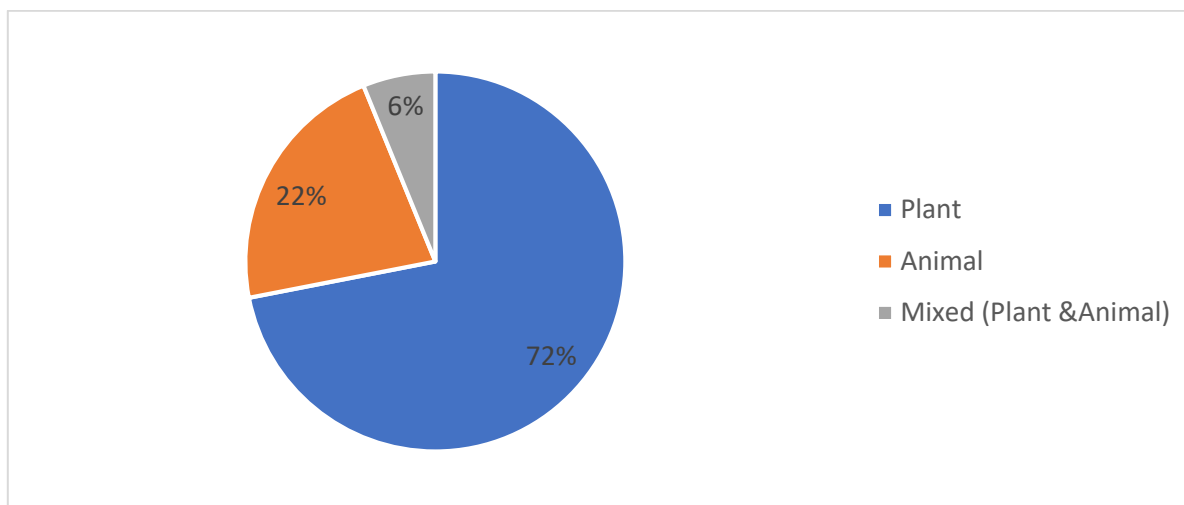


Figure No. 2: Percentage distribution of holdings by type of activity

Table 4 : Number of holdings in the agricultural sector by year of service commencement

| Interval | Number of Holdings |
|------------|--------------------|
| 1950-1970 | 646 |
| 1971-1980 | 2,059 |
| 1981-1990 | 4,532 |
| 1991- 2000 | 11,958 |
| 2001-2010 | 9,843 |
| 2011-2022 | 5319 |
| undefined | 70,815 |

Table (5) and Figure (3) indicate that most holdings operating in the agricultural sector are individual holdings according to their legal entity, followed by family holdings, and in small percentages come individuals, companies, and government companies.

Table 5: Distribution of holdings by legal entity of holding

| Type of Holding | Number of Holdings |
|-----------------------|--------------------|
| Individual Foundation | 91,031 |
| Government | 38 |
| Family | 13,132 |
| Personnel Companies | 797 |
| Company | 163 |
| Others | 11 |
| Total | 105,172 |

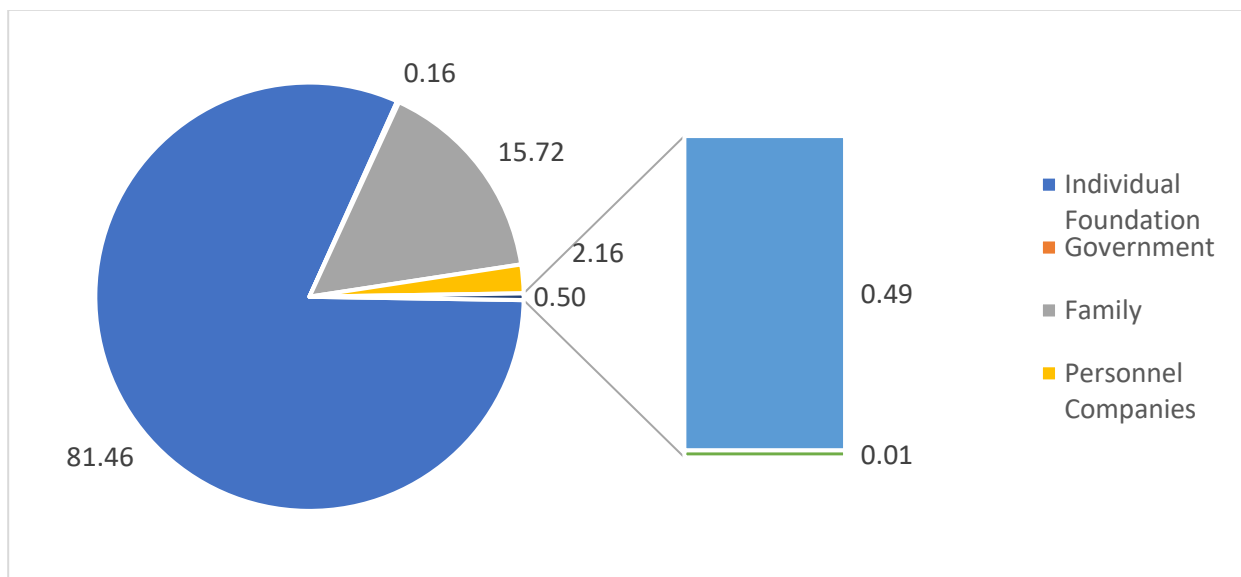


Figure No. 3: Relative distribution of holdings by legal entity of holding

2.1.3 Number of workers in holdings

Holdings in the sector include 423,728 workers distributed according to tables (5, 6, 7) and type of employment, tenure, gender, and number of workers in each holding, and males, Figure (4), constitute 84% of the number of workers, while females constitute 16%. Individuality is the largest employer of both genders with a total of 345,165 and a percentage of 81.5% (Figure 5).

Table 6: Number of workers in the agricultural sector

| Type of Labor | Number of Employees |
|----------------------|---------------------|
| Permanent Employment | 192,826 |
| Casual Employment | 59,767 |
| Seasonal Employment | 171,135 |
| Total | 423,728 |

The study showed that the total number of workers in the sector amounted to 423.728 workers, distributed according to Figure (4) about 46% permanent employment, 14% temporary employment, and 40% seasonal employment.

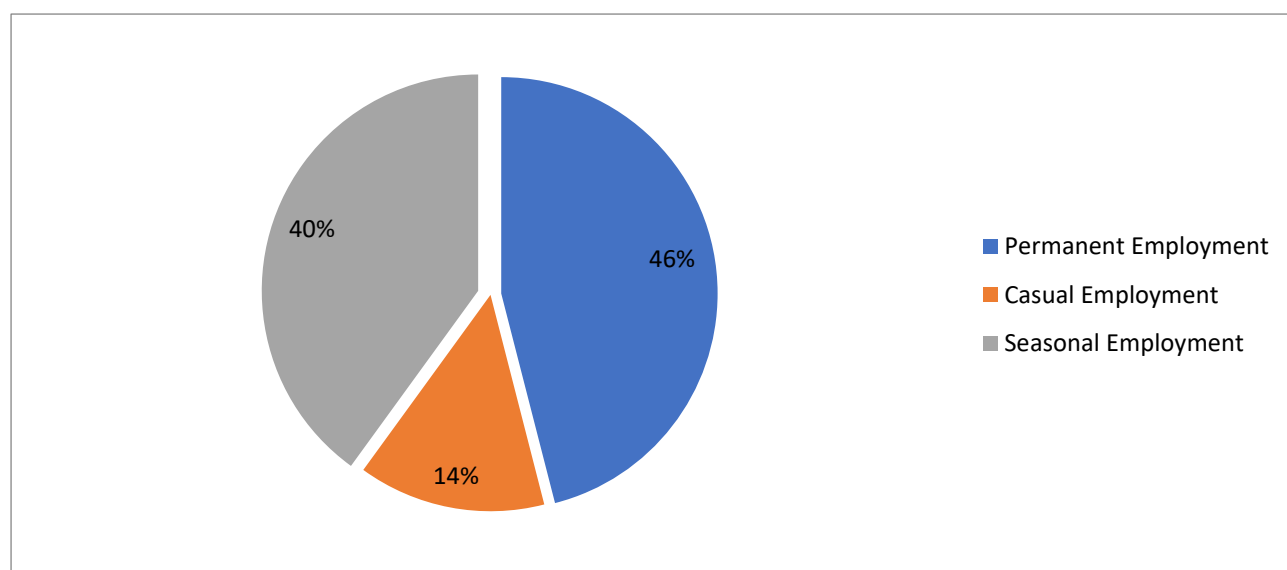


Figure No. 4: Relative distribution of employment in the agricultural sector

Table 7: Number of workers in holdings by gender

| Type of Holding | Males | Females | Total |
|-----------------------|---------|---------|---------|
| Individual Foundation | 295,725 | 49,440 | 345,165 |
| Government | 610 | 60 | 669 |
| Family | 52,804 | 13,812 | 66,616 |
| Personnel Companies | 6,077 | 3,082 | 9,159 |
| Company | 1,779 | 293 | 2,073 |
| Others | 46 | 0 | 46 |
| Total | 357,041 | 66,687 | 423,728 |

Table 8: Distribution of workers on holdings by size of employment and gender

| Average number of employees | The number of male employees | The number of female employees | Number of Holdings |
|-----------------------------|------------------------------|--------------------------------|--------------------|
| 1 - 4 | 147,662 | 16,558 | 77,226 |
| 5 - 9 | 108,990 | 19,950 | 20,598 |
| 10 - 19 | 58,524 | 14,762 | 5,790 |
| 20 - 49 | 30,373 | 9,891 | 1,379 |
| 50 - 99 | 5,140 | 2,560 | 124 |
| 100+ | 6,352 | 2,966 | 55 |
| Total | 357,041 | 66,687 | 105,172 |

Table 9: Distribution of holdings by number of employees and region

| Type of Holding | Average number of employees | Central Region | North Region | South Region | Number of Holdings |
|-----------------|-----------------------------|----------------|--------------|--------------|--------------------|
| Small | 1 - 4 | 21,261 | 39,310 | 16,655 | 77,226 |
| Medium | 5 - 9 | 3,922 | 14,689 | 1,987 | 20,598 |
| | 10 - 19 | 1,848 | 3,127 | 815 | 5,790 |
| Large | | 5,770 | 17,816 | 2,802 | 26,388 |
| | 20 - 49 | 528 | 777 | 74 | 1,379 |
| | 50 - 99 | 36 | 81 | 8 | 124 |
| | 100+ | 3 | 43 | 9 | 55 |
| | | 567 | 901 | 91 | 1,558 |
| Total | | 27,598 | 58,026 | 19,548 | 105,172 |

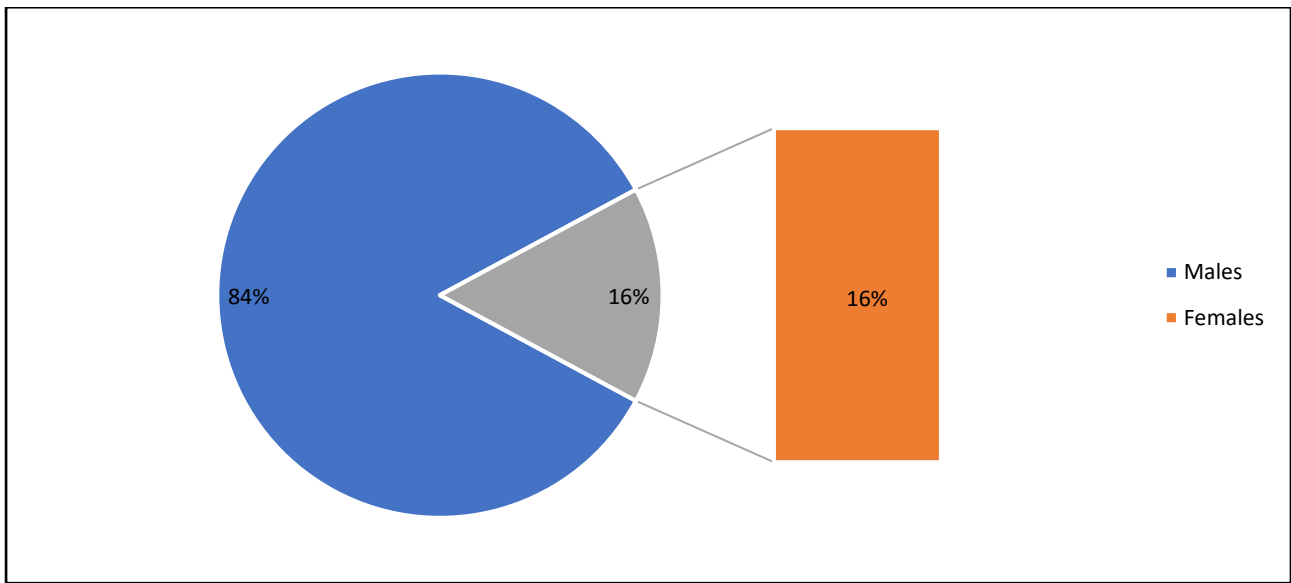


Figure No. 5: Relative distribution of workers in holdings by gender

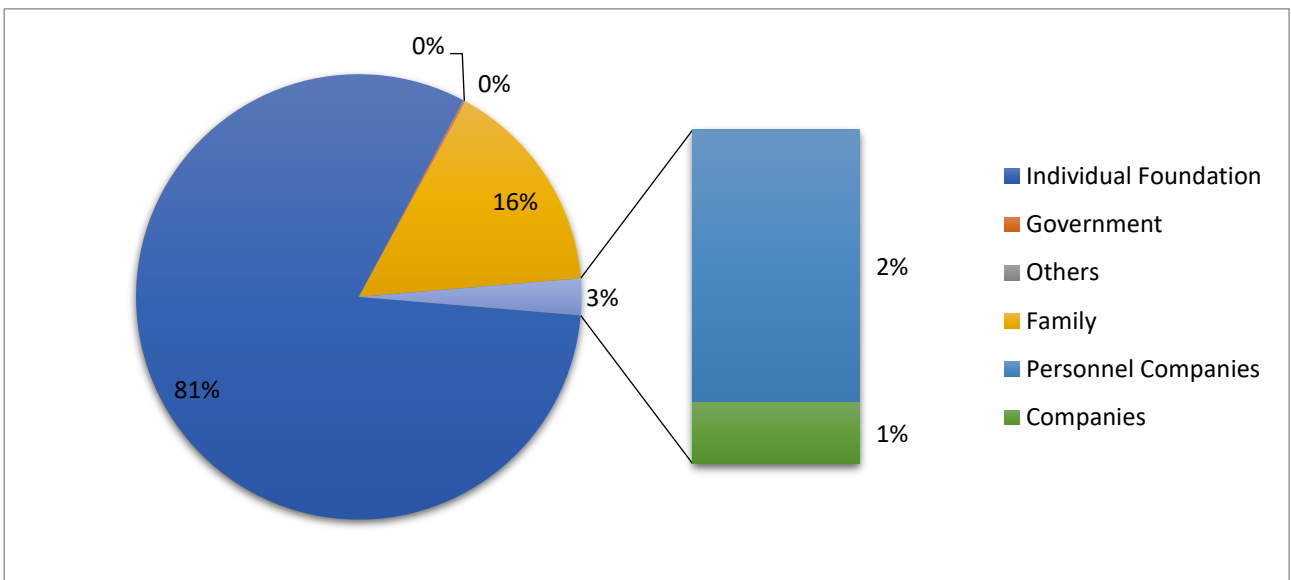


Figure No. 6: Relative distribution of employees according to the nature of the legal entity for holding

2.1.4 Challenges of making holdings

The study showed that the high costs of production inputs (rent, workers' wages, water, electricity and fuel, primary raw materials) occupy the ladder of work challenges and difficulties in the sector, respectively; Climatic conditions (weather conditions and water scarcity), diseases, lack of medicines and vaccinations, high taxes, laws and regulations regulating work, and weak investment promotion.

The holdings presented a number of proposals and demands to improve working conditions, as shown in Figure (7), led by the reduction in production and energy input costs by nearly 50%, followed by

the need to save water by 16.5%, then to reduce taxes by 9.6%, and then provide treatment, medicines, vaccinations, fodder and fertilizers for the agricultural sector. 6.4%, support for the local product and its marketing, opening foreign markets and controlling import and export 6%, another 5%, and material incentives for employers 4%, while the requirement to work on issuing laws facilitating the issuance of work permits for expatriate workers came late by 0.95% despite the magnitude of this challenge In light of the adopted policies that increased the costs of labor recruitment, limited the number of work permits for expatriates, and obligated agricultural labor to be covered by social security.

The study also showed that the demands represented in providing and supporting smallholders, reconsidering laws, regulations and instructions, giving investors soft loans to advance investment, reducing procedures that impede investment, reviving economic stagnation, unifying the reference for laws and procedures and facilitating them, and the participation of the private sector in setting Laws, and standardization of prices in the market are not priorities for the holdings, and in total they constituted less than 2% of the relative weight of all demands.

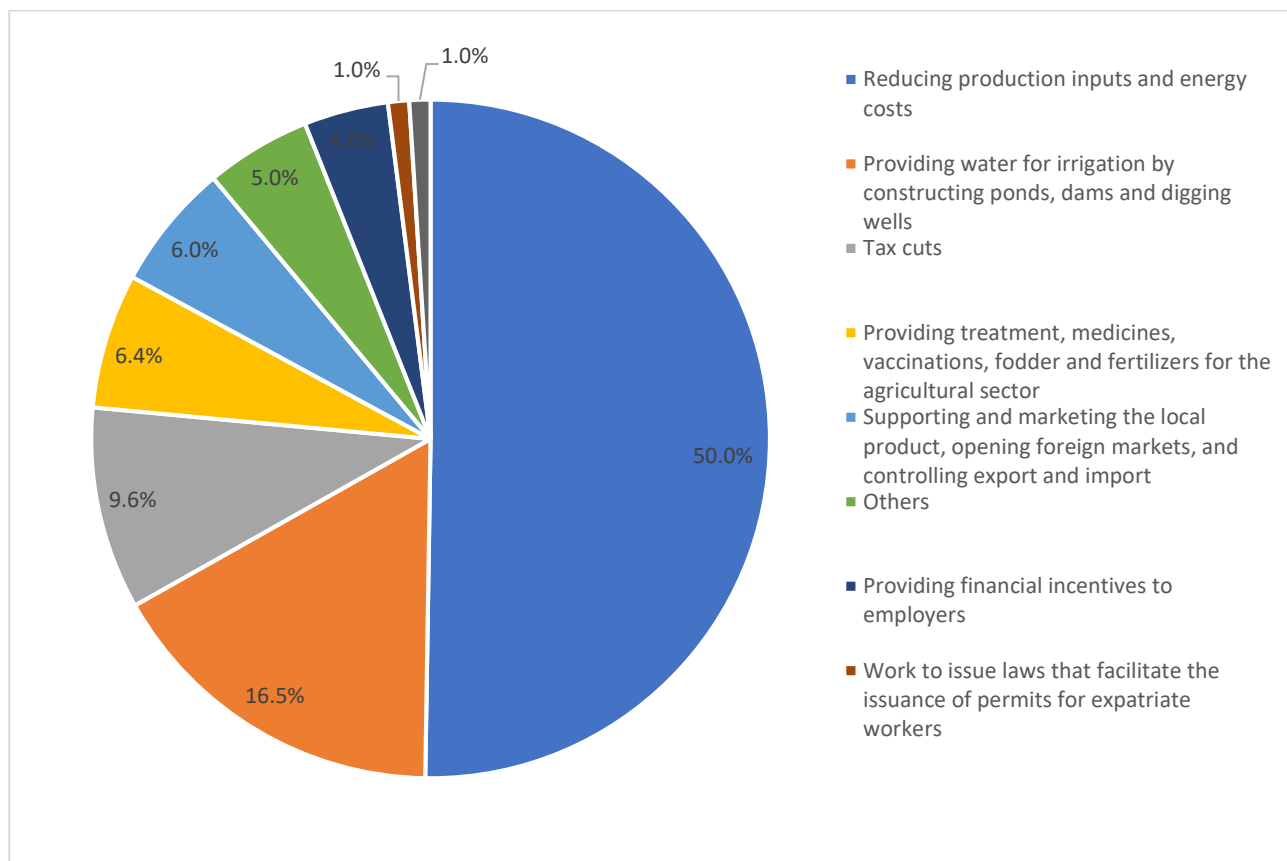


Figure No. 7: Relative distribution of the most important challenges and difficulties facing the sector

2.1.5 Services of holdings

2.1.5.1 Demand trends for services holdings

The responses of the holdings about the expectations of demand in the years 2021-2024 showed several features. Most of the holdings, as shown in Figure 8, reported that there was no change in the demand for their services in the year 2021, at a rate of 53%, while the holdings (41%) faced a decrease, compared to 6% who faced a rise in demand. When asked about expectations of demand trends in the coming years, eleven thousand holdings expected an increase in demand for their services compared to 2021, while nearly ten thousand holdings saw demand almost constant, but a number equal to their sum expected a decrease in demand than it was in 2021. , then the curve of rise, stability and decline stabilized as shown in Figure 9 in the years 2023 and 2024.

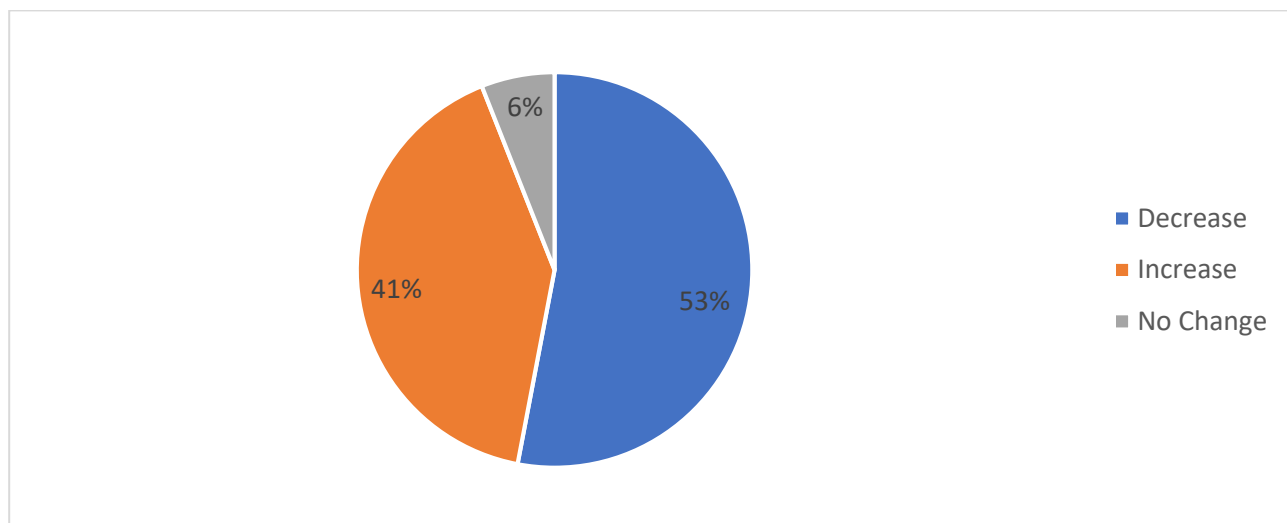


Figure No. 8: Demand trends for tenure services in 2021

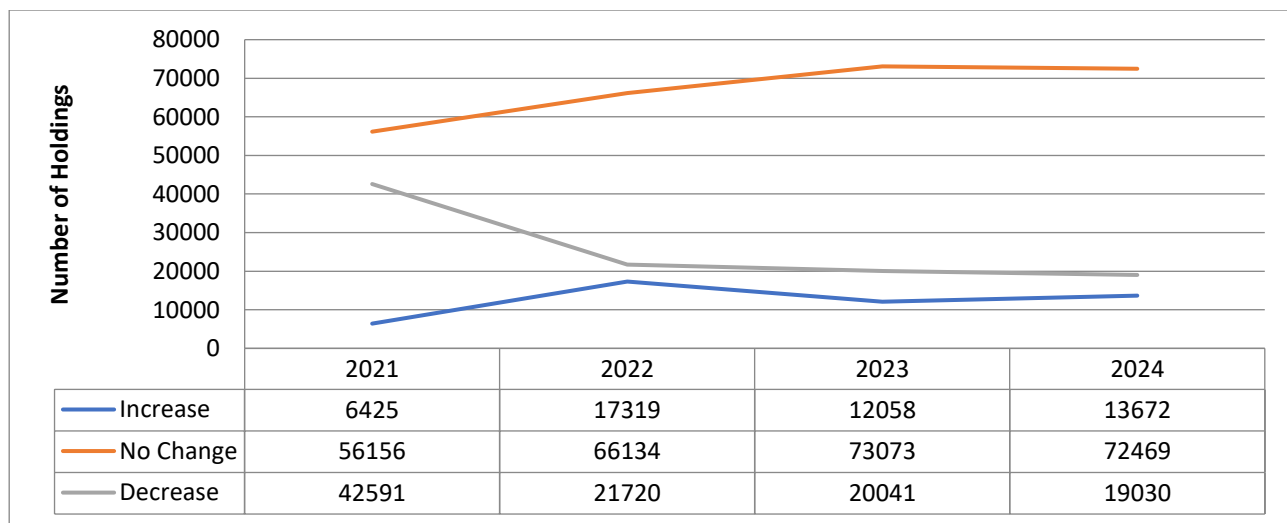


Figure No. 9 : Trends in the demand for tenure services for the years series 2021-2024

2.1.5.2 Work challenges considering the Corona pandemic

The results of the study, according to Table (10), showed that the Corona pandemic had a negative impact on 52.17% of the holdings, while 1,820 holdings (1.73%) were positively affected, and the rest of the holdings were not affected by the pandemic 48.1%.

Table 10: Distribution of holdings according to the impact of the Corona pandemic On its activity.

| Type of Impact | | Number of Holdings |
|----------------------------|--------|--------------------|
| Positive Impact | %1.73 | 1,820 |
| Neutral Impact (No Impact) | %46.10 | 48,487 |
| Negative Impact | %52.17 | 54,865 |
| Total | | 105,172 |

2.1.6 Job opportunities for Jordanians in holdings

2.1.6.1 Forecasting future demand

Most holdings expected that there would be no need for new professions in general in the years 2022-2024, at a rate of 95%, as shown in Figure 10, which means a decrease in the demand for employment in the future. Despite this, 65,258 holdings answered that they prefer employing Jordanians compared to 39,914 who did not. 4211 holdings reported that they face difficulty in employing Jordanians, and 38051 disagreed with them, while 62,910 holdings found that there are difficulties in hiring Jordanians, albeit partially / Table 11.

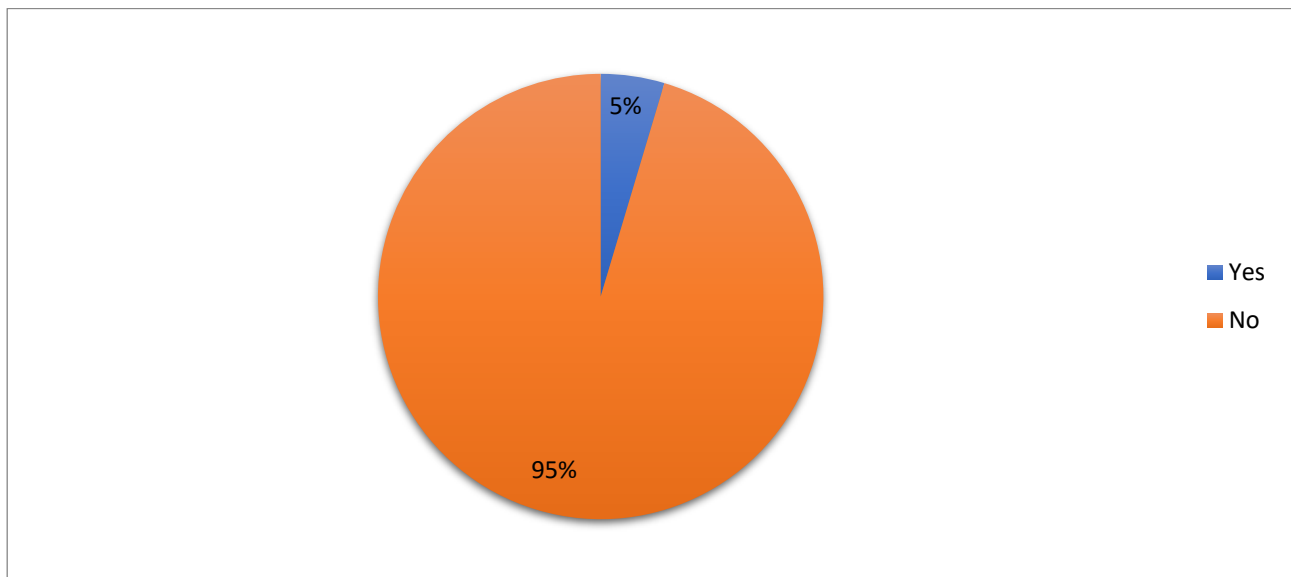


Figure No. 10: Demand forecasts for new professions for the years 2022-2024

Table 11: Answers to holdings regarding difficulties in hiring Jordanian workers

| Answer | Number of Holdings |
|----------------------------------|--------------------|
| There are difficulties | 4,211 |
| There are no difficulties | 38,051 |
| Partially there are difficulties | 62,910 |
| | 105,172 |

2.1.6.2 Challenges of Jordanian Labor Employment

On the challenges of employing Jordanian workers, 13.5% of the study sample (only) presented an explanation of the reasons for not preferring to employ Jordanians, which were represented by lack of commitment to work, lack of pressure, lack of experience, low wages, inappropriate nature of work, difficulty of movement, and low worker productivity. Jordanian compared to expatriate worker.

2.1.6.3 Challenges of Employing Female Workers in Holdings

The study did not show a desire among the holdings to employ female workers, as 102419 answered that they did not intend to hire females, compared to 2753 who had the desire to do so, and lack of need was the most important reasons 71%, followed by the nature of work 21%, then the desire of the employer came 3%, while traditions and customs represented 1% of the justifications as religious beliefs 1%. Figure 11. The holdings wishing to employ females reported that they do not differentiate between married and single women (89%), while 10% of the holdings wishing to employ females preferred to be married.

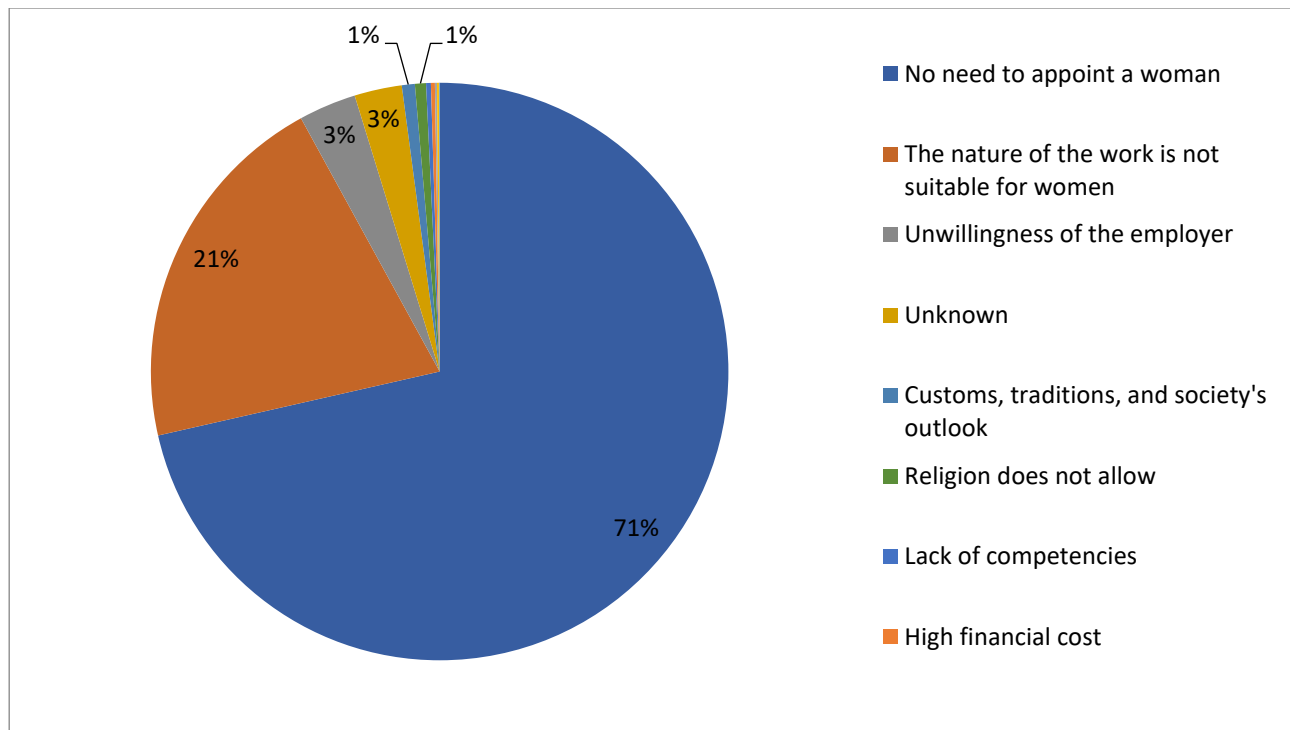


Figure No. 11: Motives for not specifying female holdings

2.1.7 Availability of training facilities and accounting records

Table 12 shows the number of holdings that own training facilities to raise the capabilities of workers by 293 holdings, and those that have accounting records, numbering 2393, which in both cases exceeded the number of holdings registered as companies (163) Table 5.

Table 12 : Distribution of holdings by availability of training facilities and accounting records

| Training Facilities | Number of Holdings | Available Records |
|---------------------|--------------------|-------------------|
| Available | 293 | 2,393 |
| Un-available | 1,247 | 102,779 |
| Partially available | 55 | |
| Unknown | 103,577 | |

2.1.8 Employment of people with disabilities

857 holdings employ people with disabilities, and other holdings want to employ people with disabilities. The study showed that the total holdings interested in employing people with disabilities are 933 out of the total number of 105172 working holdings. The holdings attributed the lack of employment of persons with disabilities to several reasons, the most important of which was the lack of hiring 66%, the inappropriate nature of work 31%, and other less important reasons, such as the employer's unwillingness to employ persons with disabilities, the difficulty of dealing and communicating between persons with disabilities and customers, stagnation and market weakness, The company is under liquidation.

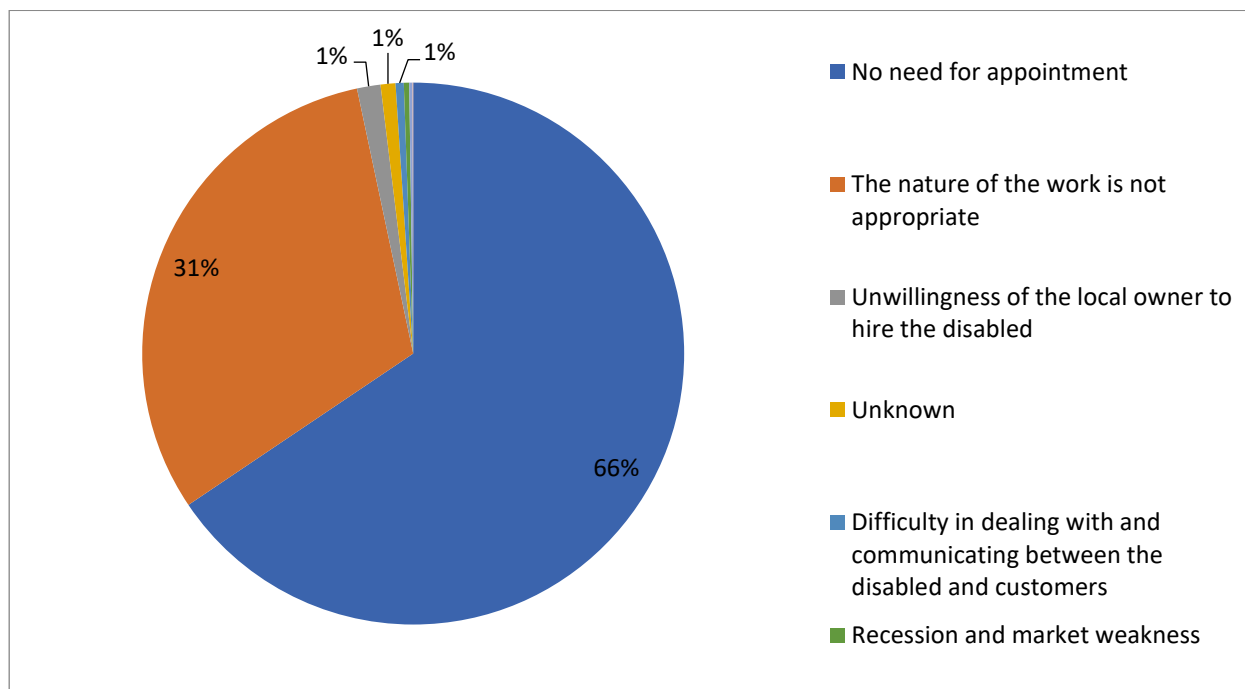


Figure No. 12: Reasons for not operating holdings for people with disabilities

The study categorized the holdings within different criteria that included their distribution according to the benefit of the Agricultural Risk Management Fund, providing additional benefits to workers,

applying the flexible work system, the possibility of replacing local workers with expatriate workers, and receiving assistance from relevant institutions to address problems related to their economic activity, as well as enabling them to From participating in the preparation of the National Strategy for Agricultural Development 2020-2025, and Table 13 and Figure 13 showed that most of the holdings tended to be negative, with the exception of what was related to the replacement of local labor, where the answer was divided between the possibility and not.

Table 13: Distribution of holdings according to several criteria

| | Take benefit from Agricultural Risk Management Fund | There are additional benefits that holding provides to employees | Implementation of the flexible system of holding | Replacement of local workers instead of expatriates | Obtaining assistance from relevant institutions to address problems related to economic activity of the holding | Participation in the preparation of the national strategy for agricultural development 2020-2025 |
|-----------|---|--|--|---|---|--|
| Yes | 1367 | 9054 | 36173 | 52540 | 986 | 840 |
| No | 103805 | 96117 | 68996 | 52632 | 104186 | 104329 |
| Partially | | | 3 | | | 3 |
| Total | 105172 | 105172 | 105172 | 105172 | 105172 | 105172 |

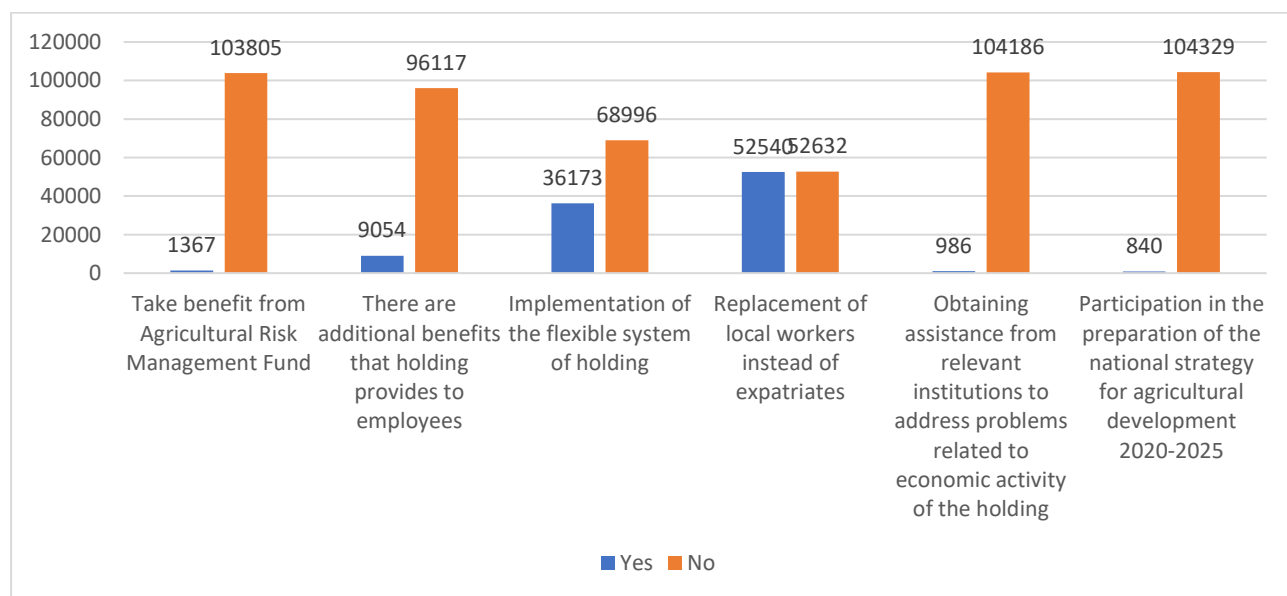


Figure No. 13: Distribution of holdings according to several criteria

2.2 Employment in the agricultural sector

2.2.1 Occupations in the sector

Table 14 shows the occupations working in the sector and their distribution by type. The following occupations, respectively, topped the order in terms of preparing their workers; Agricultural worker picking crops, farmers of fruit trees, sheep and sheep breeders, plant production technician, plowers, farmers of field crops and fodder, vegetable farmers, milker of livestock, agricultural worker irrigation and fertilization, agricultural worker hoeing, harvesting, agricultural worker packing and packaging, cow breeders, Agricultural worker spraying pesticides, animal production technician, director of vegetable production department, chicken/broiler breeder, forager, tree pruning and grafting farmers, barn cleaning worker, field crop workers, nursery farmers, field crop and vegetable farmers, and beekeepers

The security guard profession also emerged as the most active non-agricultural profession in the sector, followed by the driver, the loading and unloading worker and the accountant.

Table 14: Distribution of employees by profession and type of employment

| | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|--|----------------------|-------------------|---------------------|---------|
| Worker, agriculture/crop harvesting | 19,001 | 5,647 | 126,582 | 151,230 |
| Farmer, horticulture | 45,462 | 14,698 | | 60,160 |
| Breeder, sheep & goat | 36,752 | 3,732 | | 40,484 |
| Technician, Plant Production | 22,184 | 11,078 | | 33,262 |
| Ploughman | 2,309 | | 17,353 | 19,662 |
| Farmer, field & forage crops | 9,969 | 5,025 | | 14,993 |
| Farmer, vegetables / general | 9,000 | 5,847 | | 14,847 |
| Livestock Milking Worker | 6,590 | | 3,905 | 10,496 |
| Farmhand, irrigation, and fertilization | 4,999 | 4,276 | | 9,274 |
| Farmhand, hoeing | 1,538 | | 6,660 | 8,198 |
| Harvester | 938 | | 7,133 | 8,071 |
| Farmhand, packing and packaging | 1,282 | | 6,560 | 7,842 |
| Breeder, cattle | 4,491 | 746 | | 5,237 |
| Farmhand, pesticide spraying | 1,379 | | 2,942 | 4,321 |
| Technician, Animal Production | 4,024 | 142 | | 4,165 |
| Director, the plant wealth production department | 3,102 | 738 | | 3,839 |
| Breeder, chicken / meat | 2,681 | 266 | | 2,946 |

| | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|---|-------------------------|----------------------|------------------------|-------|
| Non-agricultural professions (support professions) * | 1,765 | 771 | | 2,536 |
| fodder provider | 2,317 | 190 | | 2,507 |
| Tree grafting and pruning worker | 641 | 1,636 | | 2,277 |
| worker, barn cleaning | 1,460 | 507 | | 1,967 |
| Farmer, field crops / general | 1,421 | 396 | | 1,816 |
| Farmer. seedlings | 948 | 787 | | 1,735 |
| Farmer, field crops & vegetables / general | 1,157 | 339 | | 1,495 |
| Apiarists | 1,096 | 283 | | 1,379 |
| Specialist, parks | 917 | 20 | | 937 |
| Farmer, palm growing | 250 | 631 | | 881 |
| Agricultural Engineer | 730 | 143 | | 873 |
| Worker, mixed crop cultivation | 644 | 139 | | 782 |
| Workers in protection services / not classified elsewhere | 624 | 4 | | 628 |
| Breeder, chicken / egg | 559 | 22 | | 581 |
| Director, the animal wealth production department | 568 | | | 568 |
| Specialist, breeder/poultry mothers and grandma | 525 | 20 | | 545 |
| Veterinarian, general | 48 | 339 | | 387 |
| Farmer, flower plucking | 8 | 363 | | 371 |
| Worker, livestock fields | 210 | 78 | | 288 |
| Breeder, poultry / incubators | 209 | 2 | | 211 |
| Butcher, livestock | 54 | 148 | | 202 |
| Specialist, seeds | 12 | 189 | | 201 |
| Specialist / field & forage crops | 1 | 195 | | 196 |
| Market-oriented cattle breeder and dairy products | 101 | 80 | | 180 |
| Apiarists, royal jelly production | 111 | 15 | | 126 |
| Specialist, horticulture | 3 | 120 | | 123 |
| Worker, Fishing in coastal and inland waters | 109 | 3 | | 112 |
| Specialist, General Animal Production (cattle, sheep, poultry) | 82 | 3 | | 84 |
| Specialist, nursery management | 67 | 11 | | 78 |
| Worker, flower plucking and arranging | 28 | 39 | | 67 |
| Operators, agricultural Machines | 4 | 57 | | 61 |

| | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|---|-------------------------|----------------------|------------------------|---------|
| Specialist, Plant Production | 60 | | | 60 |
| Worker, ornamental plant serving | 36 | 21 | | 57 |
| Piscicultures, general | 53 | | | 53 |
| Market-oriented, agriculture / pruning and planting trees | 44 | | | 44 |
| Collector, egg | 36 | 2 | | 38 |
| Specialist, agriculture/ vegetables | 35 | 1 | | 36 |
| Technician, Agriculture | 29 | | | 29 |
| Maker, dairy product | 26 | | | 26 |
| Cleaning worker, fishery | 25 | | | 25 |
| fodder provider, fish | 23 | | | 23 |
| Veterinary, Technician & Assistants | 16 | 6 | | 22 |
| Market-oriented poultry breeders | 22 | | | 22 |
| Worker, garden and flat area serving | 10 | 9 | | 19 |
| Market-oriented, agriculture / horticulture, nursery and barks | 12 | 7 | | 19 |
| Demi Chef | 19 | | | 19 |
| Clipper, cow toenail | 10 | 5 | | 15 |
| Total | | | | 423,728 |

* All non-agricultural professions have been grouped into one box, such as (driver, accountant, loading and unloading worker, mechanic, etc.).

2.2.2 Number of workers in professions at the level of the specialist and the level of technician / technician

Professions were distributed at the specialized level between permanent and temporary workers, with a total number of 2613, which constitutes less than 1% of the total number of workers in holdings. The number of workers in them was ranked in descending order as seen in Table 15; Agronomist, maternal and grandmother chicken breeding specialist, veterinarians, seed specialist, field and forage crop production specialist, tree horticultural specialist, general animal production specialist (cows, sheep, poultry), nursery management specialist, vegetable production specialist, vegetable production specialist.

Table 15: Number of workers in professions at the level of specialist.

| | Permanent Employment | Casual Employment | Total |
|--|----------------------|-------------------|-------|
| Agricultural Engineer | 730 | 143 | 873 |
| Specialist, breeder/poultry mothers and grandma | 525 | 20 | 545 |
| Veterinary | 48 | 339 | 387 |
| Specialist. Seeds | 12 | 189 | 201 |
| Specialist, Field and forage crops production | 1 | 195 | 196 |
| Specialist, Horticulture | 3 | 120 | 123 |
| Specialist, Animal Production (cattle, sheep, poultry) | 82 | 3 | 84 |
| Specialist, Nursery management | 67 | 11 | 78 |
| Specialist, Plant Production | 60 | | 60 |
| Specialist, Vegetable Production | 35 | 1 | 36 |
| Specialist, irrigation and fertilization | 6 | 4 | 10 |
| Specialist, Beneficial insects breeding (Bees, ...etc.) | 9 | | 9 |
| Specialist, Garden and landscape engineering | 4 | | 4 |
| Specialist, Plant protection/Integrated pest management (IPM) | 1 | 1 | 2 |
| Specialist, Agriculture machines | 2 | | 2 |
| Specialist, agricultural/ Economics, extension and business management | 2 | | 2 |
| Specialist, Aquaculture (fish, etc.) | 1 | | 1 |
| Total | 1587 | 1026 | 2613 |

At the level of the technical worker, the total number of workers in holdings reached 37,478 workers, representing 9% of the total workers in agricultural holdings.

Table 16: Number of workers in professions at the technical/technical level.

| | Permanent Employment | Casual Employment | Total |
|-------------------------------------|----------------------|-------------------|--------|
| Technician, Plant Production | 22,184 | 11,078 | 33,262 |
| Technician, Animal Production | 4,024 | 142 | 4,165 |
| Veterinary, Technician & Assistants | 16 | 6 | 22 |
| Technician, Agriculture/General | 29 | | 29 |
| Total | | | 37,478 |

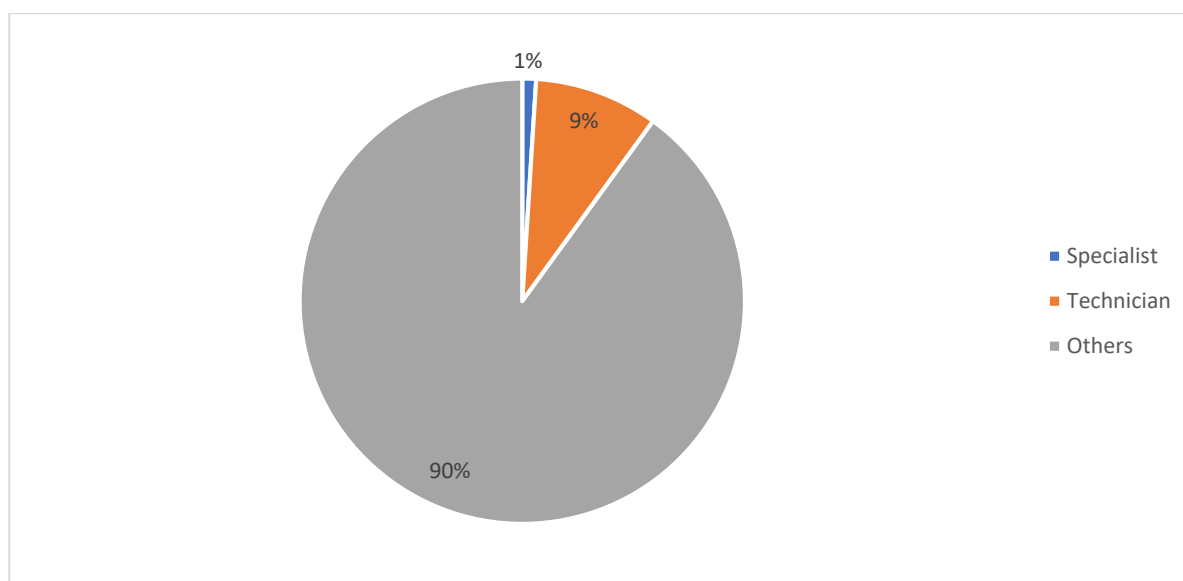


Figure No. 14: Relative distribution of workers at the level of specialist and the level of a technical worker

2.2.3 Distribution of agricultural labor, family, non-family and non-Jordanian

According to the data in the table below, the study showed that the sector's employment within the holder and his family amounted to 255,422 workers, while the number of non-family agricultural workers was 168,306 workers, of whom 100,818 were non-Jordanian workers, who constituted nearly 60% of the total non-family agricultural employment.

Table 17: Distribution of employment by its type and the ratio of non-Jordanian workers to workers other than the holder's family

| | Jordanian from the family of the holder | Net employment without the holder's family | Non-Jordanian | % Non-Jordanian |
|----------------------|---|--|---------------|-----------------|
| Permanent Employment | 127,460 | 65,365 | 31,688 | 48.50% |
| Casual Employment | 33,890 | 25,878 | 16,923 | 65.40% |
| Seasonal Employment | 94,072 | 77,063 | 52,207 | 67.70% |
| Total | 255,422 | 168,306 | 100,818 | 59.90% |

2.2.4 Distribution of workers in the sector by gender

The distribution of workers in the sector according to gender as shown in Table 18. Males constituted the largest percentage among the three types of employment, as shown in Figure 15, with a total of 357,041 workers compared to 66,687 female workers.

Table 18: Number of workers in the sector by gender and type of work

| | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|--------|----------------------|-------------------|---------------------|---------|
| Male | 175,190 | 49,235 | 132,616 | 357,041 |
| Female | 17,636 | 10,532 | 38,519 | 66,687 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

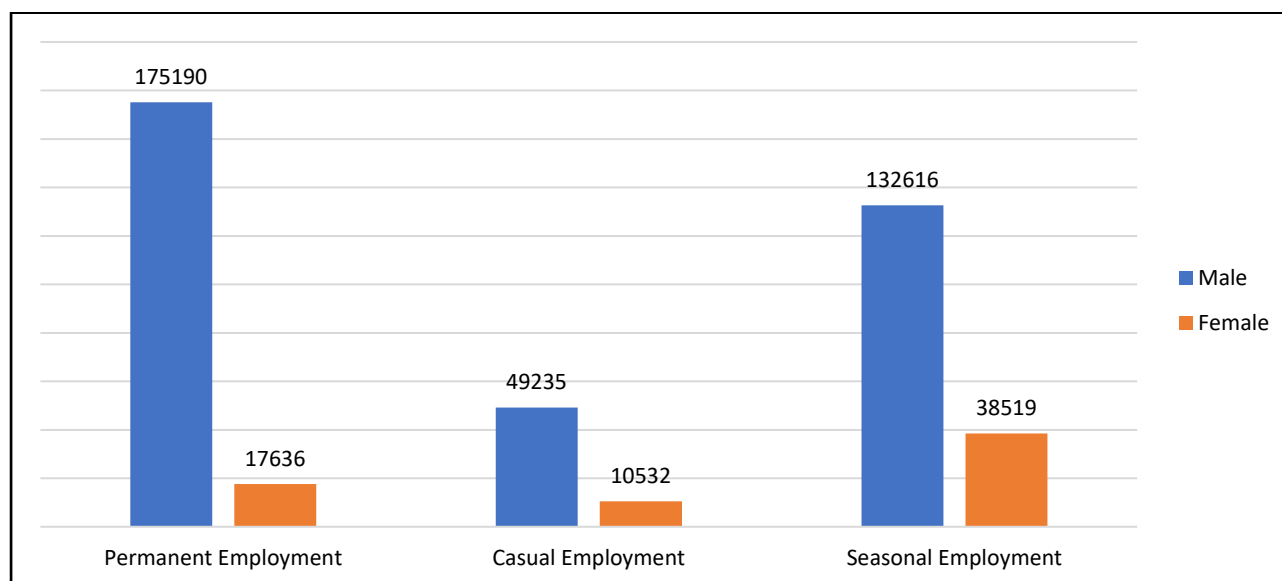


Figure No. 15: Number of employees by gender and type of work

2.2.5 Distribution of workers in the sector by nationality

The study showed that the agricultural sector depends on Jordanian labor at 76% of the total permanent, temporary, and seasonal employment, while 12% of Egyptian nationals and 10% of Syrian nationals work in it, as shown in Figure 16. Egyptian nationality came before Syrian in the category of temporary employment, while the Syrian nationality came before the Egyptian in the category of seasonal workers.

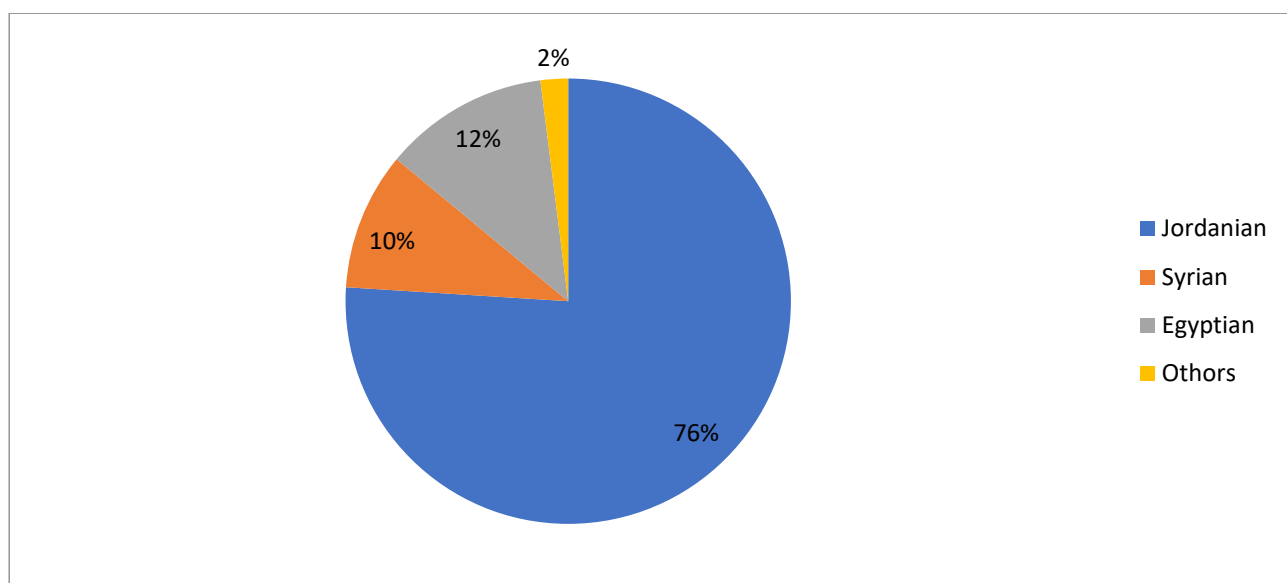


Figure No. 16: Relative distribution of total employees by nationality.

The total number of Jordanians working in the sector reached 322,910 workers, constituting 76% of the workforce in the sector. As for the Egyptian workforce, its number reached 51,608, compared to 41,192 of Syrian nationals, and 8019 of the above.

Table 19: Number of workers in the sector by nationality and type of work

| Nationality | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|-------------|----------------------|-------------------|---------------------|---------|
| Jordanian | 161,138 | 42,844 | 118,928 | 322,910 |
| Egyptian | 21,035 | 8,216 | 22,357 | 51,608 |
| Syrian | 5,581 | 7,738 | 27,872 | 41,192 |
| Others | 5,071 | 970 | 1,978 | 8,019 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

2.2.6 Distribution of workers in the sector by educational level and type of work

The data in Table 20 shows the distribution of employment by educational level and type of work, and they are relatively distributed according to Figure 17. As the majority of those working in agriculture hold a scientific qualification less than high school 58%, and 18% of general secondary education, 8% of a bachelor's degree, an intermediate diploma of 2%, while the table shows 21 Number of employees distributed by educational level and gender.

Table 20: Number of employees by educational level and type of work

| Educational Level | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|---------------------------|----------------------|-------------------|---------------------|---------|
| Illiterate | 24,640 | 5,204 | 23,913 | 53,757 |
| Less than secondary | 92,765 | 35,141 | 116,530 | 244,436 |
| Vocational apprenticeship | 3,161 | 381 | 1,426 | 4,968 |
| Secondary (Tawjihi) | 44,036 | 13,056 | 20,644 | 77,737 |
| Associate degree | 7,545 | 587 | 1,568 | 9,701 |
| Bachelor's degree | 19,771 | 5,209 | 7,049 | 32,028 |
| Post-graduate degree | 908 | 188 | 6 | 1,102 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

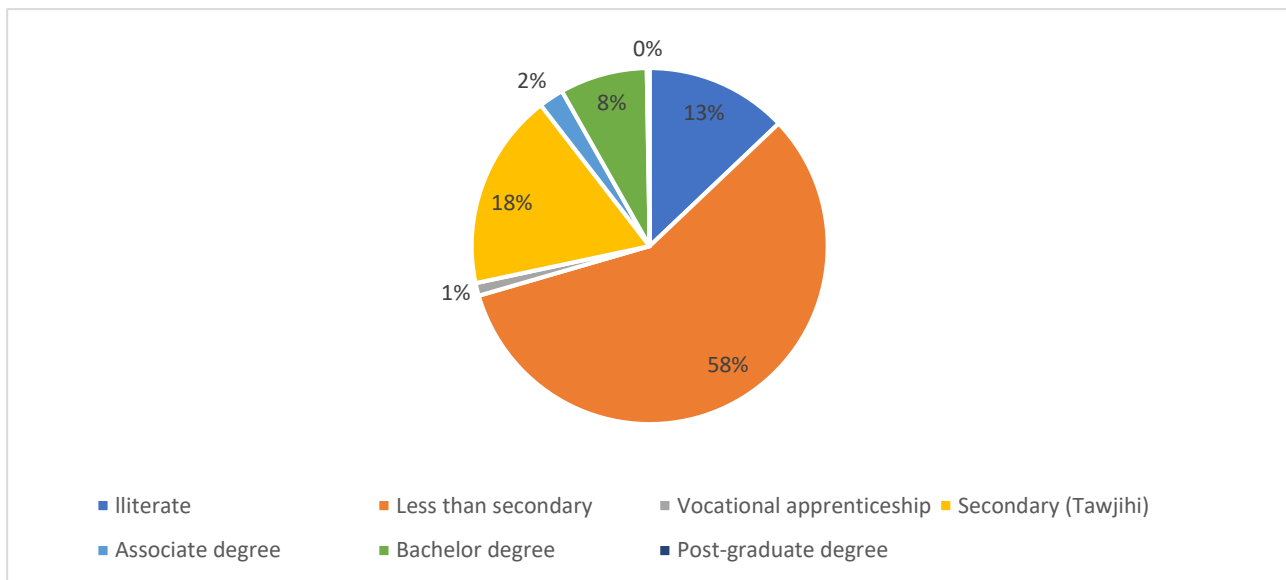


Figure No. 17: Relative distribution of workers by educational level.

Table 21: Number of workers in the sector by educational level and gender

| | Permanent Employment | | Casual Employment | | Seasonal Employment | | Total |
|---------------------------|----------------------|--------|-------------------|--------|---------------------|--------|---------|
| | Male | Female | Male | Female | Male | Female | |
| Illiterate | 20,903 | 3,736 | 4,146 | 1,059 | 18,166 | 5,747 | 53,757 |
| Less than secondary | 82,975 | 9,789 | 26,877 | 8,264 | 90,983 | 25,547 | 244,436 |
| Vocational apprenticeship | 3,131 | 30 | 374 | 6 | 1,334 | 92 | 4,968 |
| Secondary (Tawjihi) | 41,334 | 2,702 | 11,963 | 1,093 | 15,792 | 4,852 | 77,737 |
| Associate degree | 6,990 | 556 | 553 | 35 | 1,317 | 251 | 9,701 |
| Bachelor degree | 18,997 | 774 | 5,135 | 74 | 5,024 | 2,024 | 32,028 |
| Post-graduate degree | 859 | 49 | 187 | 2 | | 6 | 1,102 |
| Total | 175,190 | 17,636 | 49,235 | 10,532 | 132,616 | 38,519 | 423,728 |

2.2.7 Distribution of workers in the sector by sub-sector - type of activity

The study showed that the plant part is the main operator for workers in the sector, and it accounts for 78% of the volume of employment, and Figure 18 illustrates this, while Table 22 shows the number of workers in detail and by type of work.

Table 22: Number of employees by sub-sector - type of activity

| Number of employee | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|------------------------|----------------------|-------------------|---------------------|---------|
| Plant | 122,919 | 49,597 | 160,535 | 333,051 |
| Animal | 50,215 | 5,050 | 2,776 | 58,042 |
| Mixed (Plant & Animal) | 19,691 | 5,120 | 7,825 | 32,635 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

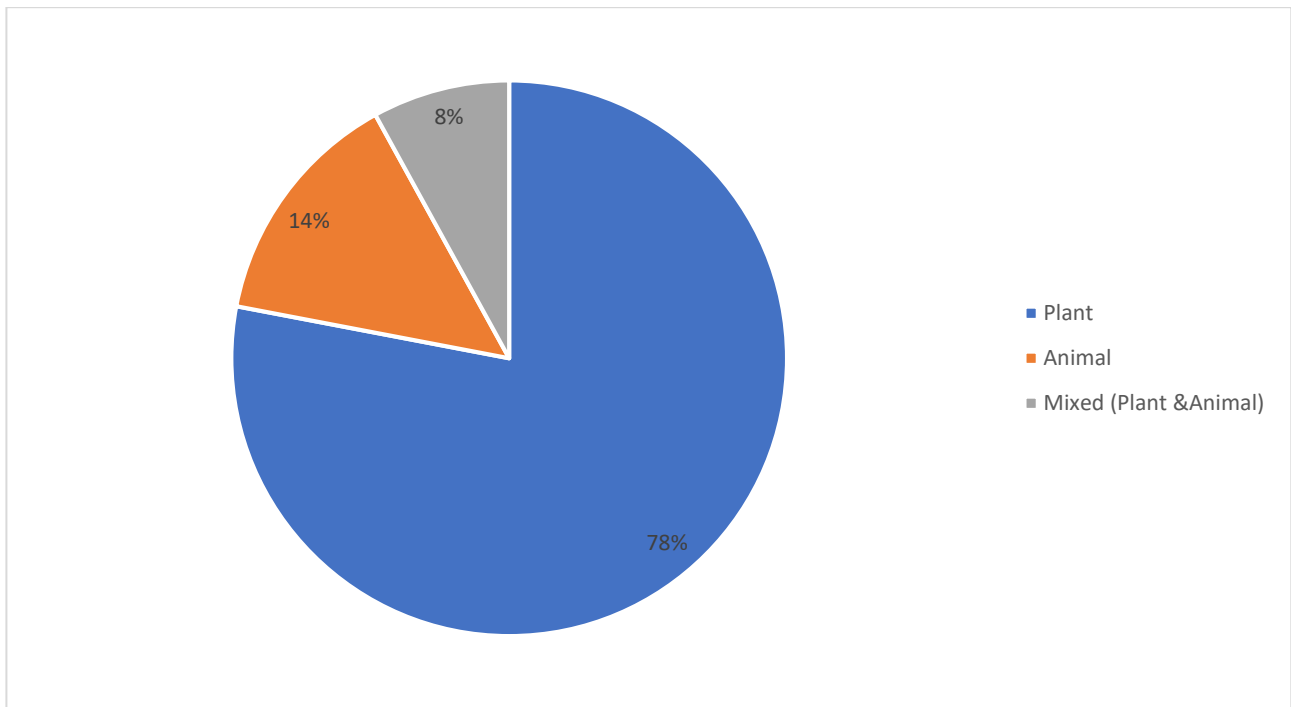


Figure No. 18: Relative distribution of workers in the sector by sub-sector - type of activity

2.2.8 Distribution of workers in the sector by region and type of work.

The distribution of workers in the sector is as shown in Table 23. Irbid governorate recorded the highest number of workers in agriculture with 140,493 workers, while Tafila governorate was the lowest in terms of the total number of workers in the sector, whose total was 7493 workers. The distribution of employment among the regions was not different from what is the case with the distribution of holdings, as the North region ranked first with 60.5%, and the center region came in second place with 25%, while the proportion of workers in the South region was 14.5% (Figure 19).

Table 23: Number of workers in the sector by region, governorate and type of work.

| Region Governorate | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|---------------------------|----------------------|-------------------|---------------------|----------------|
| The Central Region | 57,290 | 17,424 | 31,365 | 106,078 |
| Amman | 18,590 | 3,102 | 9,837 | 31,529 |
| Balqa | 22,714 | 12,090 | 13,512 | 48,316 |
| Zarqa | 9,028 | 474 | 4,546 | 14,048 |
| Madaba | 6,959 | 1,757 | 3,470 | 12,186 |
| The North Region | 98,636 | 37,215 | 120,544 | 256,395 |
| Irbid | 46,415 | 22,791 | 71,286 | 140,493 |
| Mafraq | 17,206 | 7,138 | 22,714 | 47,058 |
| Jerash | 18,621 | 5,399 | 12,910 | 36,930 |
| Ajloun | 16,394 | 1,887 | 13,634 | 31,914 |
| The South Region | 36,900 | 5,128 | 19,226 | 61,255 |
| Karak | 17,016 | 2,022 | 11,095 | 30,133 |
| Tafielah | 4,471 | 1,282 | 1,740 | 7,493 |
| Ma'an | 9,135 | 1,358 | 3,275 | 13,768 |
| Aqaba | 6,278 | 466 | 3,116 | 9,861 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

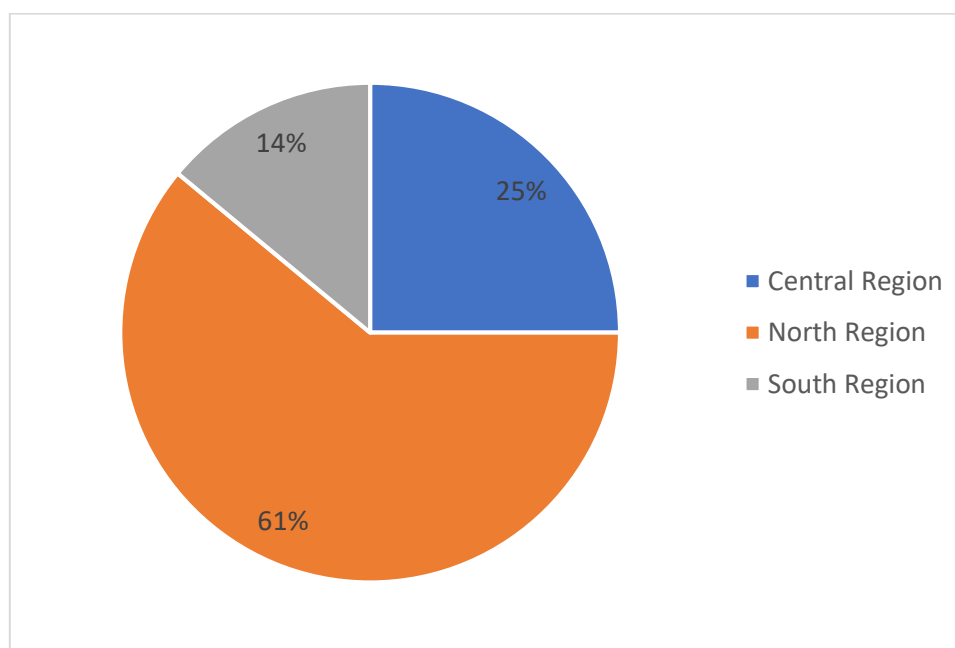


Figure No. 19: Relative distribution of workers in the sector by region

2.2.9 Distribution of workers in the sector by legal entity of tenure and type of work.

The number of employees was distributed according to the legal entity of the holdings as in Table 24, and the numbers of permanent, temporary, and seasonal workers in the individual institution appeared higher than in the other forms of the legal entity of holdings.

Table 24: Number of workers in the sector Legal entity form of holding and type of work.

| Type of Holding | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|-----------------------|----------------------|-------------------|---------------------|----------------|
| Individual Foundation | 157,193 | 42,202 | 145,770 | 345,165 |
| Government | 482 | 66 | 121 | 669 |
| Family | 29,999 | 16,549 | 20,068 | 66,616 |
| Personnel Companies | 3,548 | 900 | 4,711 | 9,159 |
| Company | 1,559 | 49 | 464 | 2,073 |
| Others | 46 | | | 46 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

2.2.10 Distribution of workers in the sector according to the categories of the number of workers and the type of work.

Table 25 shows that most of the holdings employ a number ranging from 1 to 9 workers, which constitutes about 70% of the number of workers in the sector.

Table 25: Number of employees by categories of number of employees and type of work.

| Number of Holding | Permanent Employment | Casual Employment | Seasonal Employment | Total |
|-------------------|----------------------|-------------------|---------------------|----------------|
| 1 - 4 | 105,914 | 19,566 | 38,740 | 164,220 |
| 5 - 9 | 48,195 | 18,730 | 62,015 | 128,939 |
| 10 - 19 | 25,780 | 8,043 | 39,463 | 73,286 |
| 20 - 49 | 9,845 | 12,666 | 17,752 | 40,264 |
| 50 - 99 | 1,593 | 306 | 5,802 | 7,701 |
| 100+ | 1,499 | 457 | 7,363 | 9,318 |
| Total | 192,826 | 59,767 | 171,135 | 423,728 |

2.2.11 Number of workers in the sector by age group and gender.

Table 26 shows that most of the holdings employ a number ranging from 1 to 9 workers, which constitutes about 70% of the number of workers in the sector, while 85% of workers fall within the age group greater than 24 Figure 20. On the other hand, the ratio of females to males within the age group 15 and even 24 higher for female workers in the age group over 24, Figure 23.

Table 26: Number of employees by categories of employee numbers and gender.

| Age | Male | Female | Total |
|---------|--------|--------|--------|
| 15 - 24 | 46008 | 16452 | 62460 |
| 24> | 311033 | 50235 | 361268 |
| Total | 357041 | 66687 | 423728 |

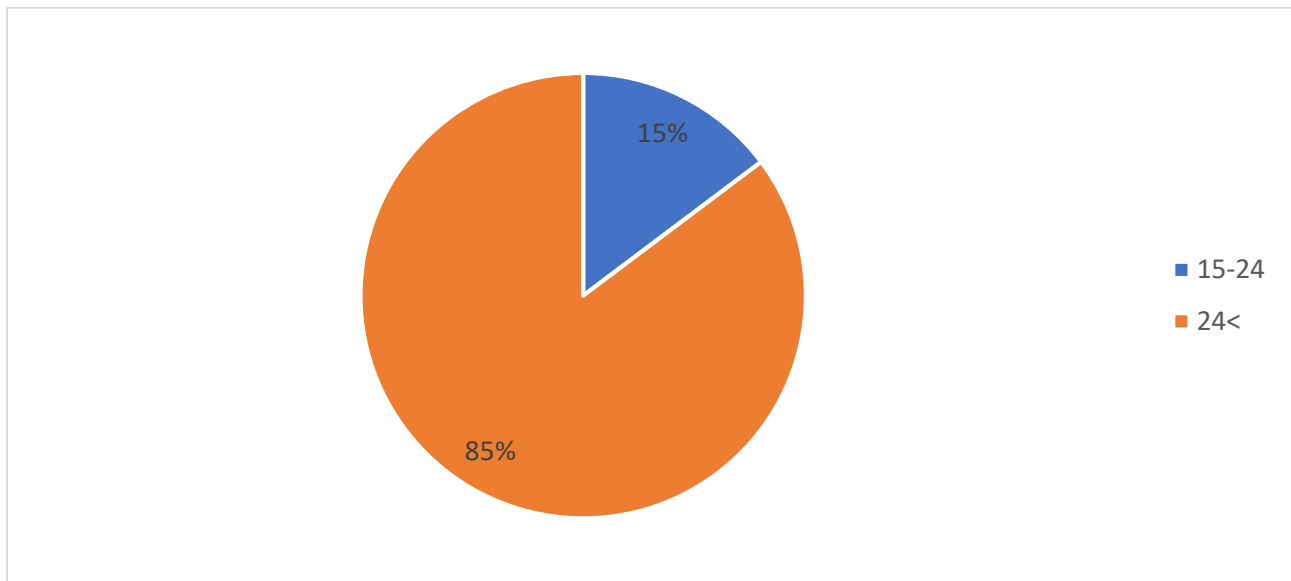


Figure No. 20: Relative distribution of the number of employees by age group.

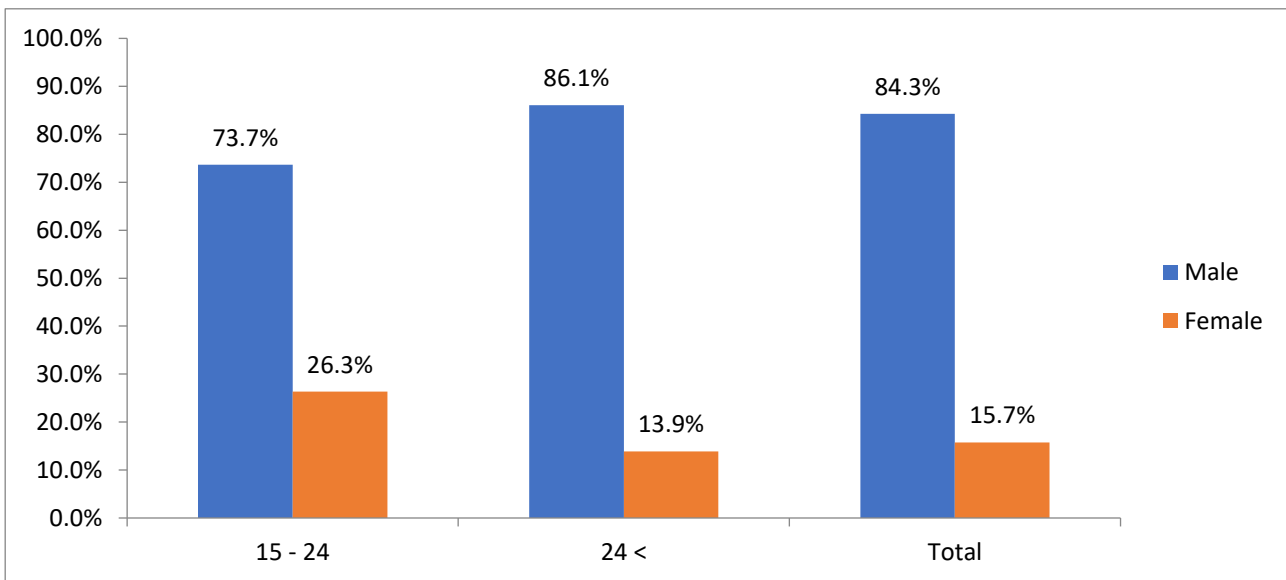


Figure No. 21: Relative distribution of the number of employees by categories of employee numbers and gender.

2.3 Training needs in the sector

2.3.1 Training needs in the sector by profession

The study showed that the holdings working in the sector need to rehabilitate their workers according to the numbers and professions listed in Table 27, and the priority was among 33 professions, topped by training plant production technicians, an agricultural worker picking crops, an agricultural worker spraying pesticides, an agricultural worker for irrigation and fertilization, and an agricultural worker Packaging, and fruit tree growers (tree horticulture), while in the specialist category, priority was given to training veterinarians and plant production specialists.

Table27 : Needs of holdings for training workers by profession for the years 2022-2024

| Occupation | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------------|
| Technician, Plant Production | 574 | 522 | 622 | 1717 |
| Farmhand, fruit picker | 548 | 544 | 548 | 1641 |
| Farmhand, pesticide spraying | 456 | 684 | 691 | 1831 |
| Farmhand, irrigation and fertilization | 455 | 684 | 688 | 1827 |
| Farmhand, packing and packaging | 393 | 392 | 393 | 1178 |
| Farmer, horticulture | 365 | 252 | 66 | 683 |
| Apiarists | 102 | 12 | 17 | 131 |
| Livestock Milking Worker | 82 | 82 | 82 | 247 |
| Breeder, sheep & goat | 48 | 52 | 36 | 136 |
| Veterinarian, general | 43 | 41 | 41 | 125 |
| Specialist, Plant Production | 27 | 0 | 0 | 27 |
| Ploughman | 25 | 25 | 25 | 75 |
| Technician, Animal Production | 16 | 2 | 4 | 21 |
| Breeder, cattle | 13 | 0 | 0 | 13 |
| Harvester | 11 | 10 | 11 | 32 |
| Specialist, irrigation, and fertilization | 8 | 6 | 8 | 21 |
| Specialist, Horticulture | 6 | 2 | 3 | 12 |
| Farmer, nursery / general | 6 | 1 | 1 | 8 |
| Breeder, chicken / egg | 6 | 6 | 6 | 18 |
| Tree grafting and pruning worker | 4 | 6 | 6 | 17 |
| Agricultural Engineer | 3 | 0 | 0 | 3 |
| Director, the plant wealth production department | 3 | 2 | 3 | 8 |
| Farmer, vegetables / general | 2 | 38 | 37 | 77 |

| Occupation | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total Numbers to be trained |
|---|-------------------------------|-------------------------------|-------------------------------|-----------------------------|
| Specialist, Plant protection/Integrated Pest Management | 1 | 1 | 1 | 3 |
| Veterinary, Technician & Assistants | 1 | 0 | 0 | 1 |
| Breeder, chicken / meat | 1 | 1 | 1 | 3 |
| Farmhand, hoeing | 0 | 148 | 151 | 299 |
| Worker, ornamental plant serving | 0 | 2 | 2 | 4 |
| Worker, agriculture / parks | 0 | 2 | 2 | 4 |
| fodder provider | 0 | 22 | 22 | 44 |
| Worker, garden and flat area serving | 0 | 4 | 4 | 8 |
| worker, pen cleaning | 0 | 5 | 5 | 10 |
| Clipper, cow toenail | 0 | 2 | 3 | 5 |
| Total | 3199 | 3550 | 3479 | 10229 |

2.3.2 Training needs in the sector according to the training program

The holdings showed interest in sixty-nine training programs, on top of which are adding pesticides in the required quantities, mixing, and preparing them, inspecting the readiness of fertilizers, adding organic and chemical fertilizers manually or automatically through fertilizers according to the instructions, applying the hydroponic technology, assembling packages, packaging and storing them in warehouses or refrigerators until marketed. Table 28 shows data on numbers and programs for the years 2022-2024.

Table28 : Needs of holdings for training workers according to the training program for the years 2022-2024

| Training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|---------------------|
| 1 Adding pesticides in the required quantities, mixing and preparing them | 413 | 452 | 455 | 1,319 |
| 2 Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 407 | 405 | 404 | 1,216 |
| 3 Hydroponic technology application | 396 | 390 | 393 | 1,179 |
| 4 Assembling and packaging the packages, and storing them in warehouses or refrigerators until they are marketed | 377 | 377 | 377 | 1,132 |
| 5 Fruit cleaning, sorting and grading | 235 | 234 | 235 | 705 |
| 6 Picking the fruits and products of vegetable crops or fruit trees manually, mechanically or chemically according to the instructions | 221 | 220 | 221 | 661 |

| | Training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total to be trained |
|----|--|-------------------------------|-------------------------------|-------------------------------|---------------------|
| 7 | Implementation of training and pruning programs for orchard trees | 205 | 190 | 2 | 397 |
| 8 | Preparing and managing agricultural pest control programs | 100 | 54 | 58 | 212 |
| 9 | Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation and storage of horticultural products | 97 | 5 | 5 | 107 |
| 10 | Crop storage | 63 | 61 | 63 | 187 |
| 11 | Management and implementation of tree and vegetable crop service programs, training, pruning and hilling operations | 57 | 57 | 148 | 262 |
| 12 | Implementation of irrigation and fertilization programs for orchard trees | 47 | 45 | 46 | 138 |
| 13 | Assisting in installing, laying and assembling irrigation pipes (hoses), inspecting them and ensuring their readiness for work | 46 | 198 | 200 | 444 |
| 14 | Diagnose the symptoms of disease infections and insect infestations in cooperation with specialists, and take preventive and curative measures | 46 | 1 | 1 | 48 |
| 15 | Determining and quantifying vaccines, treatments, and therapeutic materials for animal and common diseases | 42 | 41 | 41 | 124 |
| 16 | Cleaning and sterilizing the udders of livestock before milking | 41 | 41 | 41 | 123 |
| 17 | Transporting the milk to the places of preservation, preparing the milk, and keeping it by refrigeration until marketing | 41 | 41 | 41 | 123 |
| 18 | Spreading rodenticides, and getting rid of spray and bottle residues in safe ways and according to the instructions | 39 | 38 | 39 | 116 |
| 19 | Preparing fodder mixtures, providing fodder to sheep according to the instructions, and providing drinking water | 30 | | | 30 |
| 20 | Preparation and management of irrigation and fertilization programs | 28 | 25 | 28 | 82 |
| 21 | Determining the types of plants produced and their production conditions, including the type of tools used, the time and other matters | 27 | | | 27 |
| 22 | Plowing the land of agricultural orchards and gardens | 25 | 25 | 25 | 75 |
| 23 | Collect the fruits of fruit trees from the orchards using the appropriate packages | 25 | 25 | 25 | 75 |
| 24 | Preparing, placing, and receiving parcels | 19 | | | 19 |

| | Training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total to be trained |
|----|---|-------------------------------|-------------------------------|-------------------------------|---------------------|
| 25 | Propagation and separation (division) of beehives, separating and joining them as needed | 19 | | | 19 |
| 26 | Sheep milking and newborn care | 18 | 35 | 18 | 71 |
| 27 | Sorting the distorted, infected and small fruits from the healthy ones and classifying and grading the fruits according to the required specifications | 15 | 15 | 15 | 46 |
| 28 | Implementation of agricultural pest control programs in orchards and spraying of preventive and curative agricultural pesticides in accordance with environmental standards | 15 | 12 | 13 | 40 |
| 29 | Follow up the implementation of preventive and curative programs for farm animals | 14 | 1 | 2 | 17 |
| 30 | Implementation of newborn care programs and preventive measures | 13 | | | 13 |
| 31 | Preparing, servicing, maintaining, and preserving harvesting machinery, tools and supplies such as sickles, knives and scissors | 11 | 10 | 11 | 32 |
| 32 | Queen bee production and replacement | 9 | 4 | 6 | 19 |
| 33 | royal jelly production | 7 | 5 | 7 | 18 |
| 34 | Preparation of training and pruning programs for orchid trees and their management | 6 | 2 | 3 | 12 |
| 35 | Packing the fruits in suitable containers, wrapping the containers with the appropriate packaging tools, and transporting the packages .to freight cars or to farm stores | 4 | 4 | 4 | 13 |
| 36 | Spraying pesticides using manual or automatic equipment, and dusting crops with pesticides according to the instructions | 4 | 114 | 114 | 232 |
| 37 | Investigate the symptoms of diseased infections, and implement preventive and curative immunization programs in cooperation with the specialist | 4 | 4 | 4 | 12 |
| 38 | Choosing the appropriate types of fertilizers, supervising their preparation and addition, and evaluating the response of the plants to them | 3 | 2 | 3 | 8 |
| 39 | Selection, preparation, and preparation of vaccinations | 3 | 6 | 6 | 16 |
| 40 | Propagation of plants by different vegetative methods such as budding, grafting, installation, cuttings, leaves, and rhizomes | 3 | | | 3 |
| 41 | Honey harvesting, sorting, and packing | 3 | 2 | 3 | 8 |
| 42 | Implementation of agricultural pest control programs | 2 | 39 | 38 | 79 |

| | Training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total to be trained |
|----|---|-------------------------------|-------------------------------|-------------------------------|---------------------|
| 43 | Monitoring the growth, development, and evaluation of seedlings, hardening and removing seedlings, and transferring them to places of permanent cultivation | 2 | | | 2 |
| 44 | Cleaning and sterilizing the barns and preparing the egg hens to receive the chicks | 2 | 2 | 2 | 6 |
| 45 | Inspect, clean, and replace water filters and fertilizers drippers | 2 | 72 | 73 | 147 |
| 46 | Crisis management and emergency handling | 2 | 1 | 2 | 4 |
| 47 | Managing and implementing appropriate breeding programs | 2 | 1 | 2 | 4 |
| 48 | Pruning varieties of fruit trees in the right way, time, and types | 1 | | | 1 |
| 49 | Develop executive work programs for established policies and plans | 1 | 1 | 1 | 3 |
| 50 | Land planning, preparation of pits, planting and strengthening of seedlings, seedlings and cuttings of fruit trees, and distribution of pollinators | 1 | | | 1 |
| 51 | Diagnose cases that require surgical interventions, perform animal surgeries, and give birth to animals | 1 | | | 1 |
| 52 | Coordination with the various production parties to accomplish the required tasks | 1 | 1 | | 2 |
| 53 | Implementation of irrigation and fertilization programs according to the instructions and procedures | 1 | | | 1 |
| 54 | Monitoring symptoms of diseases, following up their treatment in coordination with the veterinarian, and giving veterinary vaccinations according to instructions | 1 | 1 | 1 | 3 |
| 55 | Implement occupational and public safety and hygiene procedures and instructions | 1 | 2 | 3 | 6 |
| 56 | Inspect and clean equipment and tools used for spraying, fogging, dusting, manually and automatically | | 75 | 78 | 153 |
| 57 | Opening and closing the valves of the irrigation network or irrigation channels on the different sections, and irrigating different crops according to the instructions | | 12 | 13 | 25 |
| 58 | Transporting organic and chemical fertilizers and keeping them in the farm stores according to the instructions | | | | |
| 59 | Mowing the orchards and gardens land and removing weeds using hand tools | | 70 | 71 | 141 |

| Training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Total to be trained |
|---|-------------------------------|-------------------------------|-------------------------------|---------------------|
| 60 Preparation of basins for plants and trees, and drainage of shrubs and trees to collect rainwater | | 77 | 79 | 156 |
| 61 Preparing packaging tools and accessories such as containers, scissors, and knives | | 1 | 2 | 3 |
| 62 Milking of female cows and sheep (automatic or manual) | | 17 | 18 | 35 |
| 63 Preparing the feed mixtures with their components according to the instructions | | 22 | 22 | 44 |
| 64 Prepare the disinfectant according to the instructions, and spray the barn with disinfectant | | 5 | 5 | 10 |
| 65 Clean the cow's mane, and trim it with the appropriate equipment | | 2 | 3 | 5 |
| 66 Planting ornamental plants, watering, and fertilizing garden plants | | 1 | 1 | 2 |
| 67 Pruning and shaping plants, trees, shrubs, and hedges, cutting landscapes, and picking flowers and roses | | 1 | 1 | 2 |
| 68 Cultivation of indoor ornamental plants from seedlings, bulbs and seeds in basins and containers | | 2 | 2 | 4 |
| 69 Grass cutting and hedges | | 4 | 4 | 8 |
| Total | 3,199 | 3,550 | 3,479 | 10,229 |

2.3.3 Training needs in the sector by educational level

Tables (29, 30, 31, 32, 33, 34, 35) show the most important skills required by educational level

Table 29: Distribution of job opportunities according to the most important required skill and educational level / illiterate for the years (2022-2024)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| illiterate | 1,978 | 1,650 | 1,545 | 5,173 |
| Fruit cleaning, sorting, and grading | 437 | 436 | 436 | 1,308 |
| Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products | 376 | | | 376 |
| Picking the fruits and products of vegetable crops or fruit trees manually, mechanically, or chemically according to the instructions | 295 | 248 | 163 | 706 |

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|--|----------------------------------|----------------------------------|----------------------------------|-------|
| Collect the fruits of fruit trees from the orchards using the packages prepared for this | 180 | 189 | 187 | 556 |
| Spraying pesticides using manual or automatic equipment, and dusting crops with pesticides according to the instructions | 162 | 162 | 162 | 487 |
| Managing and implementing tree and vegetable crop service programs, as well as their training, pruning and hilling operations | 117 | 117 | 117 | 351 |
| Inspect, clean, and replace water filters and fertilizers drippers | 86 | 106 | 125 | 317 |
| Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 79 | 79 | 79 | 236 |
| Preparation of basins for plants and trees, and drainage of shrubs and trees to collect rainwater | 75 | 78 | 78 | 231 |
| Sheep milking and newborn care | 41 | 41 | 41 | 124 |

Table 30: Distribution of job opportunities according to the most important required skill and educational level / less than secondary for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|--------|
| less than secondary | 10,417 | 6,848 | 6,002 | 23,267 |
| Picking the fruits of vegetable crops or fruit trees and their products manually, mechanically, or chemically according to the instructions | 4,534 | 2,106 | 1,823 | 8,463 |
| Packing the fruits in suitable containers, wrapping the containers with the appropriate packaging tools, and transporting the packages to .freight cars or to farm stores | 1,934 | 66 | 82 | 2,083 |
| Plowing the land of agricultural orchards and gardens | 815 | 815 | 627 | 2,257 |
| Collect the fruits of fruit trees from the orchards using the packages prepared for this | 436 | 253 | 76 | 765 |

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|--|----------------------------------|----------------------------------|----------------------------------|-------|
| Plowing the land between fruit trees in orchards and gardens to remove weeds, and prepare it to receive rainwater | 323 | 325 | 136 | 784 |
| undefined | 222 | 33 | 35 | 290 |
| Implementation of vaccination in various ways and follow-up vaccinations and ensure their success | 188 | | | 188 |
| Install tools such as the yoke, and the plow stick, and ensure that the rails .are ready | 188 | 188 | 188 | 565 |
| Transporting milk to storage places, preparing it and keeping it by refrigeration until marketing | 181 | 125 | 125 | 431 |
| Sorting the distorted, infected, and small fruits from the healthy ones and classifying the fruits according to the required specifications and grading them | 174 | 729 | 724 | 1,628 |
| Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 169 | 165 | 165 | 498 |
| Inspect, clean, and replace water filters and fertilizers drippers | 166 | 206 | 201 | 573 |
| Inspect and clean equipment and tools used for spraying, fogging, dusting, manual and automatic | 126 | 126 | 126 | 379 |
| Monitoring the installation of protected holdings, covering and ventilating greenhouses, preparing the land, preparing seedlings and planting | 106 | 106 | 106 | 319 |
| Fruit cleaning, sorting, and grading | 104 | 653 | 653 | 1,409 |
| Transporting organic and chemical fertilizers in the farm stores according to the instructions and keeping them | 87 | 87 | 87 | 262 |
| Palm pollination | 85 | 81 | 80 | 245 |
| Managing and implementing tree and vegetable crop service programs and the processes of their training, pruning, and pruning | 61 | 82 | 103 | 247 |
| Milking of female cows and sheep (automatic or manual) | 45 | 53 | 53 | 151 |

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| Preparing the feed mixtures with their components according to the instructions | 44 | 47 | 44 | 134 |
| Preparation of furrows and lines, preparing them for the cultivation of summer and winter field crops | 44 | 44 | 44 | 131 |
| Cleaning and sterilizing the udders of livestock before milking | 37 | 37 | 37 | 110 |
| Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products | 33 | 33 | 33 | 98 |
| Cut lamb's wool and goat's hair using hand shears or electric shears | 32 | 80 | 80 | 193 |
| Sweeping the barns after removing the manure, cleaning them with water and plugging the simple holes in the barn and closing them | 31 | 83 | 79 | 193 |

Table 31 : Distribution of job opportunities according to the most important required skill and educational level /vocational apprenticeship for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| Apprenticeship Vocational | 405 | 385 | 383 | 1,172 |
| Fruit cleaning, sorting, and grading | 200 | 188 | 188 | 577 |
| Picking the fruits of vegetable crops or fruit trees and their products manually, mechanically, or chemically according to the instructions | 189 | 189 | 189 | 568 |

Table 32: Distribution of job opportunities according to the most important required skill and educational level / secondary school (Tawjihi) for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|--|----------------------------------|----------------------------------|----------------------------------|-------|
| Secondary (Tawjihi) | 988 | 726 | 838 | 2,552 |
| Picking the fruits of vegetable crops or fruit trees and their products manually, mechanically, or chemically according to the instructions | 240 | 95 | 28 | 364 |
| Crop storage | 188 | 188 | 188 | 565 |
| Irrigation and fertilization of field crops | 156 | 39 | 39 | 234 |
| Sorting the distorted, infected, and small fruits from the healthy ones and classifying and grading the fruits according to the required specifications and grading them | 75 | 75 | 75 | 226 |
| Implementation of irrigation and fertilization programs for orchid trees | 74 | 16 | 16 | 107 |
| Assembling and packaging the packages, and storing them in warehouses or refrigerators until they are marketed | 49 | 95 | 185 | 329 |
| Fruit cleaning, sorting, and grading | 46 | 92 | 184 | 322 |
| Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products | 44 | 44 | 44 | 131 |
| Management and implementation of tree and vegetable crop service programs, their training, pruning, and climbing programs and their implementation | 33 | 33 | 33 | 98 |

Table 33: Distribution of job opportunities according to the most important required skill and educational level /Associate degree for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| Associate degree | 82 | 60 | 54 | 196 |
| Management and implementation of feeding and fattening programs for animals and their young | 23 | 23 | 23 | 68 |
| Monitor the emergence of disease symptoms, and provide preventive and curative health care according to the instructions | 19 | | | 19 |
| Managing and implementing appropriate breeding programs | 6 | 6 | 6 | 17 |
| Management and implementation of tree and vegetable crop service programs, their training, pruning and climbing programs and their implementation | 6 | 4 | 4 | 14 |
| Preparation and management of irrigation and fertilization programs | 5 | 5 | 5 | 16 |

Table 34: Distribution of job opportunities according to the most important required skill and educational level / bachelor's degree for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| Bachelor- degree | 25 | 19 | 15 | 59 |
| Preparation of agricultural pest control management programs | 6 | 4 | 4 | 14 |
| Determining schedules of quantities for work materials and equipment, and determining their specifications | 4 | 4 | | 8 |
| Management and implementation of tree and vegetable crop service programs, their training, pruning and climbing programs and their implementation | 3 | 3 | 3 | 10 |
| Honeybee queen production and replacement | 3 | 3 | 3 | 9 |

Table 35: Distribution of job opportunities according to the most important skill required and educational level / postgraduate degree for the years(2024-2022)

| Educational level | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total |
|---|----------------------------------|----------------------------------|----------------------------------|-------|
| Post-graduate degree | 82 | 82 | 82 | 824 |
| artificial insemination of animals | 41 | 41 | 41 | 124 |
| Managing and implementing appropriate breeding programs | 41 | 41 | 41 | 124 |

Table 36: Holdings needs for training workers according to the training program for each profession for the years 2022-2024

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|---|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 1) Technician, Plant Production | 574 | 522 | 622 | 1,717 |
| 1. Preparation and management of irrigation and fertilization programs | 28 | 25 | 28 | 82 |
| 2. Preparing and managing agricultural pest control programs | 99 | 53 | 57 | 208 |
| 3. Coordination with the various production parties to accomplish the required tasks in the prescribed manner. | 1 | 1 | | 2 |
| 4. Management and implementation of tree and vegetable crop service programs, their training, pruning, and climbing programs and their implementation | 57 | 57 | 148 | 262 |
| 5. Application of hydroponics technology | 389 | 386 | 389 | 1,163 |
| 2) Farmhand, fruit picker | 548 | 544 | 548 | 1,641 |
| 1. Picking the fruits and products of vegetable crops or fruit trees manually, mechanically, or chemically according to the instructions | 221 | 220 | 221 | 661 |
| 2. Collect the fruits of fruit trees from the orchards using the prepared packages | 25 | 25 | 25 | 75 |
| 3. Fruit cleaning, sorting, and grading | 235 | 234 | 235 | 705 |
| 4. Packing the fruits in suitable packages, wrapping the packages with the appropriate packaging tools, and transporting the packages to freight cars or to farm stores | 4 | 4 | 4 | 13 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 5. Crop storage | 63 | 61 | 63 | 187 |
| 3) Farmhand, pesticide spraying | 456 | 684 | 691 | 1,831 |
| 1. Inspect and clean the equipment and tools used for spraying, fogging, fogging, manual and automatic, and servicing the tools and replacing some of its minor parts | | 75 | 78 | 153 |
| 2. Adding pesticides in the required quantities, mixing, and preparing them | 413 | 452 | 455 | 1,319 |
| 3. Spraying pesticides using manual or automatic equipment, and dusting crops with pesticides according to the instructions | 4 | 114 | 114 | 232 |
| 4. Distribute rodenticides, and dispose of spray and bottle residues by safe methods and according to the instructions | 39 | 38 | 39 | 116 |
| 5. Implement occupational and public safety and hygienic procedures and instructions | | 2 | 3 | 5 |
| 6. Assisting in installing, laying, and collecting irrigation pipes (hoses) and inspecting them and ensuring their readiness for work | | 3 | 3 | 6 |
| 4) Farmhand, irrigation, and fertilization | 455 | 684 | 688 | 1,827 |
| 1. Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 407 | 405 | 404 | 1,216 |
| 2. Assist in installing, laying and assembling irrigation pipes (hoses) and inspecting them and ensuring their readiness for work | 46 | 195 | 197 | 438 |
| 3. Inspect, clean and replace water filters and fertilizers drippers | 2 | 72 | 73 | 147 |
| 4. Opening and closing the valves of the irrigation network or irrigation channels on the different sections, and irrigating different crops according to the instructions | | 12 | 13 | 25 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 5. Transport and store the organic and chemical fertilizers in the farm stores according to the instructions | | | | |
| 5) Farmhand, packing and packaging | 393 | 392 | 393 | 1,178 |
| 1. Sorting the distorted, infected, and small fruits from the healthy ones and classifying and grading the fruits according to the required specifications | 15 | 15 | 15 | 46 |
| 2. Assembling and packaging the containers, and storing them in warehouses or refrigerators until they are marketed | 377 | 377 | 377 | 1,132 |
| 6) Farmer, horticulture | 365 | 252 | 66 | 683 |
| 1. Land planning, preparation of pits, planting of fruit trees, their seedlings and cuttings, their consolidation, and the distribution of pollinators. | 1 | | | 1 |
| 3. Implementation of training and pruning programs for orchard trees | 205 | 190 | 2 | 397 |
| 4. Implementation of irrigation and fertilization programs for orchard trees | 47 | 45 | 46 | 138 |
| 5. Implementation of agricultural pest control programs in orchards and spraying of preventive and curative agricultural pesticides in accordance with environmental standards | 15 | 12 | 13 | 40 |
| 6. Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products | 97 | 5 | 5 | 107 |
| 7) Apiarists | 102 | 12 | 17 | 131 |
| 1. Preparing, receiving, and housing bee parcels | 19 | | | 19 |
| 2. Honeybee queen production and replacement | 9 | 4 | 6 | 19 |
| 3. Proliferation and separation (division) of hives, and joining them as needed | 19 | | | 19 |
| 4. Diagnose the symptoms of disease and insect infections in cooperation | 46 | 1 | 1 | 48 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|---|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| with specialists, and take preventive and curative measures | | | | |
| 5. Honey harvesting, sorting and packing | 3 | 2 | 3 | 8 |
| 6. Royal Jelly Production | 7 | 5 | 7 | 18 |
| | | | | |
| 8) Livestock Milking Worker | 82 | 82 | 82 | 247 |
| 1. Cleaning and sterilizing the udders of livestock before milking | 41 | 41 | 41 | 123 |
| 2. Transporting the milk to the places of preservation, preparing the milk and keeping it by refrigeration until marketing | 41 | 41 | 41 | 123 |
| | | | | |
| 9) Breeder, sheep & goat | 48 | 52 | 36 | 136 |
| 1. Preparing fodder mixtures, providing fodder to sheep according to the instructions, and providing drinking water | 30 | | | 30 |
| 2. Sheep milking and newborn caring | 18 | 35 | 18 | 71 |
| 3. Milking of female cows and sheep (automatic or manually) | | 17 | 18 | 35 |
| | | | | |
| 10) Veterinarian, general | 43 | 41 | 41 | 125 |
| 1. Determination and quantities of vaccines, treatments and therapeutic materials for animal diseases and common diseases | 42 | 41 | 41 | 124 |
| 2. Diagnose cases that require surgical interventions, perform animal surgeries, and give birth to animals | 1 | | | 1 |
| | | | | |
| 11) Specialist, Plant Production | 27 | | | 27 |
| 1. Determining the types of plants produced and their production conditions, including the type of tools used, the time and other matters | 27 | | | 27 |
| | | | | |
| 12) Ploughman | 25 | 25 | 25 | 75 |
| 1. Plowing the land of agricultural orchards and gardens | 25 | 25 | 25 | 75 |
| | | | | |
| 13) Technician, Animal Production | 16 | 2 | 4 | 21 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 1. Administer and implement appropriate breeding programs | 2 | 1 | 2 | 4 |
| 2. Follow up the implementation of preventive and curative programs for farm animals | 14 | 1 | 2 | 17 |
| 14) Breeder, cattle | | | | |
| 1. Implementation of newborn care programs and preventive measures | 13 | | | 13 |
| 15) Harvester | | | | |
| 2. Preparing, servicing, maintaining, and preserving harvesting machinery, tools and supplies such as sickles, knives and scissors | 11 | 10 | 11 | 32 |
| 16) Specialist, irrigation, and fertilization | | | | |
| 1. Choosing the appropriate types of fertilizers, supervising their preparation and addition, and evaluating the response of the crops to them | 3 | 2 | 3 | 8 |
| 2. Application of hydroponics technology | 4 | 4 | 4 | 13 |
| 17) Specialist, Horticulture | | | | |
| 1. Preparation and management of training and pruning programs for orchid trees | 6 | 2 | 3 | 12 |
| 18) Farmer, nursery / general | | | | |
| 1. Implementation of agricultural pest control programs | | 1 | 1 | 2 |
| 2. Propagation of plants by different vegetative methods such as budding, grafting, cuttings, layering and rhizomes | 3 | | | 3 |
| 3. Implementation of irrigation and fertilization programs and procedures according to the instructions | 1 | | | 1 |
| 4. Follow-up of the growth, development and evaluation of the seedlings, the hardening and removal | 2 | | | 2 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| of the seedlings, and their transfer to the permanent planting places ⁵ | | | | |
| 19) Breeder, chicken / egg | 6 | 6 | 6 | 18 |
| 1. Cleaning and sterilizing the barn and preparing the egg hens to receive the chicks | 2 | 2 | 2 | 6 |
| 2. Investigate the symptoms of diseased infections, and implement preventive and curative immunization programs in cooperation with the specialist | 4 | 4 | 4 | 12 |
| 20) Tree grafting and pruning worker | 4 | 6 | 6 | 17 |
| 1. Pruning varieties and types of fruit trees in the appropriate manner and time | 1 | | | 1 |
| 2. Selection and preparation of Scions and buds and processing | 3 | 6 | 6 | 16 |
| 21) Agricultural Engineer | 3 | | | 3 |
| 1. Application of hydroponics technology | 3 | | | 3 |
| 22) Director, the plant wealth production department | 3 | 2 | 3 | 8 |
| 1. Develop executive work programs for the established policies and plans | 1 | 1 | 1 | 3 |
| 2. Crisis management and emergency handling | 2 | 1 | 2 | 4 |
| 23) Farmer, vegetables / general | 2 | 38 | 37 | 77 |
| 1. Implementation of agricultural pest control programs | 2 | 38 | 37 | 77 |
| 24) Specialist, Plant protection/Integrated Pest Management | 1 | 1 | 1 | 3 |
| 1. Preparing and managing agricultural pest control programs | 1 | 1 | 1 | 3 |
| 25) Veterinary Technician & Assistants | 1 | | | 1 |
| 1. Implement occupational and public safety and hygienic procedures and instructions | 1 | | | 1 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 26) Breeder, chicken / meat | 1 | 1 | 1 | 3 |
| 1. Monitoring symptoms of diseases, following up their treatment in coordination with the veterinarian, and giving veterinary vaccinations according to the instructions | 1 | 1 | 1 | 3 |
| 27) Farmhand, hoeing | | 148 | 151 | 299 |
| 1. Mowing orchards and gardens and removing weeds using hand tools | | 70 | 71 | 141 |
| 2. Preparation of basins for plants and trees, and drainage of shrubs and trees to collect rainwater | | 77 | 79 | 156 |
| 3. Preparing packaging tools such as containers, scissors, and knives | | 1 | 2 | 3 |
| 28) Worker, ornamental plant serving | | 2 | 2 | 4 |
| 1. Cultivation of indoor ornamental plants from seedlings, bulbs and seeds in basins and containers | | 2 | 2 | 4 |
| 29) Worker, agriculture / parks | | 2 | 2 | 4 |
| 1. Ornamental plant cultivation, garden plant irrigation and fertilization | | 1 | 1 | 2 |
| 2. Pruning and shaping plants, trees, shrubs, and hedges, cutting green spaces, and picking flowers and roses | | 1 | 1 | 2 |
| 30) Fodder provider | | 22 | 22 | 44 |
| 1. Prepare the feed mixtures with their ingredients according to the instructions | | 22 | 22 | 44 |
| 31) Worker, garden, and flat area serving | | 4 | 4 | 8 |
| 1. Grass cutting and hedges | | 4 | 4 | 8 |
| 32) worker, barn cleaning | | 5 | 5 | 10 |
| 1. Prepare the disinfectant according to the instructions and spray the barn with disinfectant | | 5 | 5 | 10 |
| 33) Clipper, cow toenail | | 2 | 3 | 5 |

| Occupation and training program | Numbers to be trained in 2022 | Numbers to be trained in 2023 | Numbers to be trained in 2024 | Numbers to be trained |
|--|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| 1. Clean the cow's toenail, and trim it with the appropriate equipment | | 2 | 3 | 5 |
| Total | 3,199 | 3,550 | 3,479 | 10,229 |

2.3.4 Preferred entities by holdings to train their employees

It appeared previously in item 2.4.4 about the availability of training facilities, where the data in Table 12 showed that the number of holdings that own training facilities to raise the capabilities of workers reached 293 holdings. It is in table 37

Table 37: Preferred training body for holdings to train workers.

| Training bodies | The number of interested holdings |
|---|-----------------------------------|
| National Agricultural Research Center | 555 |
| Agricultural Engineers Association | 450 |
| Jerash Private University | 314 |
| Jordan University of Science and Technology | 45 |
| Training Centers/Private Sector | 44 |
| Vocational Training Corporation | 7 |
| University of Jordan | 6 |
| Community Colleges/ Al-Balqa Applied University | 4 |
| University of Applied Sciences | 2 |
| Fakhoury Academy Center for Studies and Design | 1 |
| Total | 1,429 |

2.4. Future employment opportunities.

2.4.1 Expected job opportunities for the years 2022-2024.

The study showed, according to the answers of the holdings, that the expected job opportunities for the years 2022-2024 are estimated at thirty-two thousand six hundred and sixty-seven (32667) job opportunities, the most prominent of which were an agricultural worker picking crops, an agricultural worker packaging and plowing, and an agricultural worker for irrigation and fertilization. Table 38. Expectations also showed a decrease in employment opportunities Figure 22.

Table 38 : The number of expected job opportunities distributed by profession for the years 2022-2024

| Occupation | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total of Opportunities |
|---|----------------------------------|----------------------------------|----------------------------------|------------------------|
| Worker, agriculture/crop harvesting | 7,123 | 4,733 | 4,239 | 16,096 |
| Farmhand, packing and packaging | 2,029 | 951 | 1,029 | 4,009 |
| Ploughman | 1,378 | 1,377 | 1,001 | 3,756 |
| Farmhand, irrigation, and fertilization | 603 | 658 | 669 | 1,930 |
| Farmer, horticulture | 596 | 133 | 133 | 862 |
| Farmhand, pesticide spraying | 318 | 317 | 315 | 951 |
| Livestock Milking Worker | 263 | 251 | 218 | 733 |
| Technician, Plant Production | 257 | 275 | 296 | 828 |
| Farmer, field & forage crops | 206 | 70 | 70 | 346 |
| Porter | 188 | | | 188 |
| Farmer, mushroom | 188 | | | 188 |
| Farmer, vegetables / general | 116 | 120 | 119 | 355 |
| Farmer, palm growing | 93 | 81 | 80 | 253 |
| Farmhand, hoeing | 83 | 86 | 86 | 254 |
| Technician, Animal Production | 77 | 75 | 75 | 228 |
| Farmer, nursery / general | 59 | 68 | 68 | 195 |
| fodder provider | 52 | 56 | 50 | 157 |
| worker, pen cleaning | 44 | 104 | 99 | 247 |
| Breeder, sheep & goat | 43 | 97 | 61 | 201 |
| Veterinarian, general | 41 | 41 | 41 | 124 |
| Tree grafting and pruning farmers | 38 | 12 | 12 | 61 |
| Butcher, livestock | 32 | 80 | 80 | 193 |
| Market-oriented cattle breeder and dairy products | 31 | 31 | 31 | 92 |
| Breeder, chicken /broiler | 23 | 23 | 21 | 68 |
| Harvester | 23 | 30 | 30 | 83 |
| Pisciculturist, general | 19 | | | 19 |
| Apiarists | 10 | 3 | 3 | 16 |
| Breeder, poultry / incubators | 6 | 4 | 5 | 15 |
| Agricultural Engineer | 6 | 4 | 1 | 10 |
| Veterinary, Technician & Assistants | 5 | 7 | 6 | 19 |
| Farmer, flower plucking | 4 | 8 | 8 | 20 |
| Breeder, cattle | 3 | 37 | 34 | 75 |
| Specialist, breeder/poultry mothers and grandma | 3 | 3 | 3 | 9 |

| Occupation | Number of Opportunities for 2022 | Number of Opportunities for 2023 | Number of Opportunities for 2024 | Total of Opportunities |
|---|----------------------------------|----------------------------------|----------------------------------|------------------------|
| Specialist, Plant protection/Integrated Pest Management | 3 | 2 | 2 | 6 |
| Maker, dairy product | 3 | 3 | 4 | 9 |
| Specialist, Horticulture | 2 | 2 | 2 | 6 |
| Specialist, irrigation, and fertilization | 2 | 3 | 3 | 9 |
| Specialist, parks | 2 | 3 | 3 | 8 |
| Specialist, Garden, and landscape engineering | 1 | 1 | 1 | 3 |
| Director, the plant wealth production department | 1 | 1 | 1 | 3 |
| Specialist, Plant Production | 1 | 1 | 1 | 3 |
| Specialist, Animal Production (cattle, sheep, poultry) | 1 | | | 1 |
| Worker, hatching agent | 1 | 1 | 1 | 3 |
| Specialist, nursery management | | 1 | | 1 |
| Worker, internal ornamental plant serving | | 9 | 9 | 18 |
| Worker, garden and flat area serving | | 3 | 3 | 6 |
| Specialist, flower plucking and ornamentals | | 1 | 1 | 2 |
| Clipper, cow toenail | | 3 | 3 | 5 |
| Total | 13,979 | 9,770 | 8,919 | 32,667 |

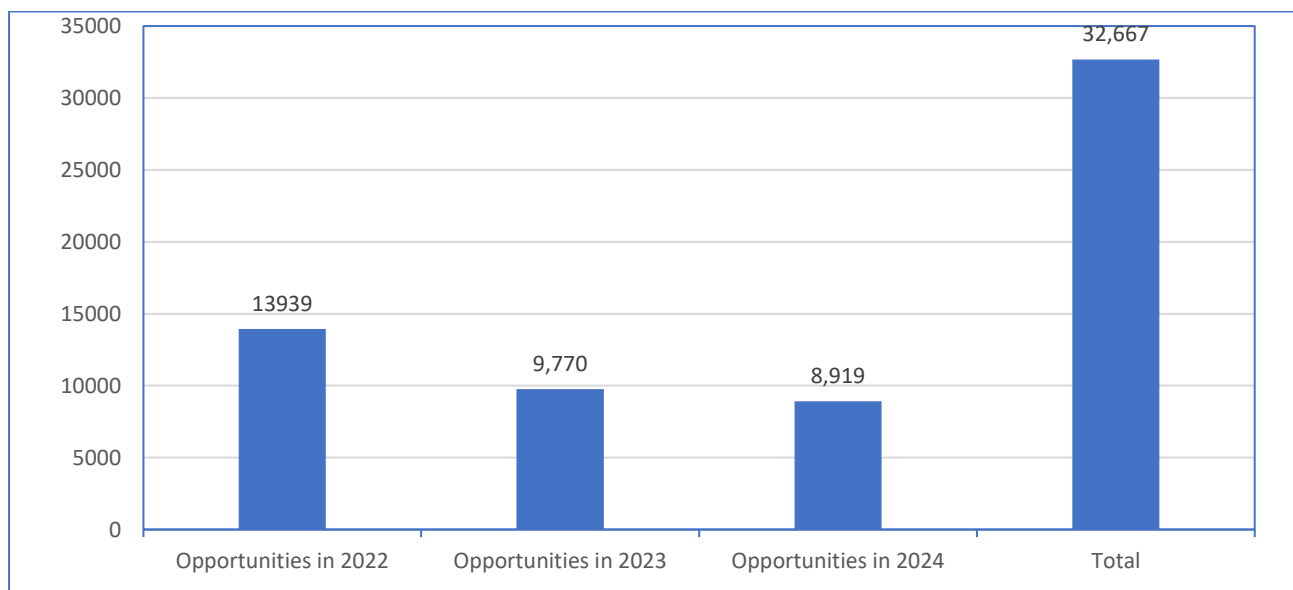


Figure No. 22: Expected number of job opportunities for the years 2022-2024

2.4.2 Expected job opportunities broken down by profession and gender

The expected job opportunities in the years 2022-2024 were distributed according to the responses of the holdings, about 19,988 jobs for males and 12,698 jobs for females, at 61% and 39%, respectively, although the distribution of workers (Table 5) and (Figure 4) tends at the present time. In favor of male employment at a rate of 84% to 16% for females, which indicates a change in gender in the sector.

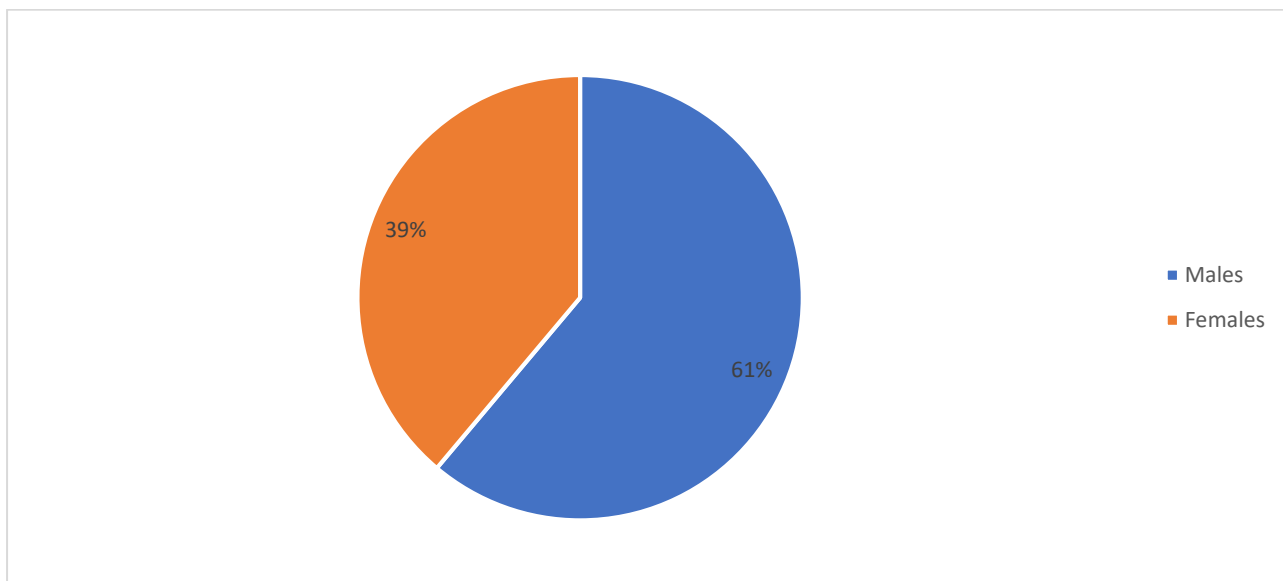


Figure No. 23: Relative distribution of employment opportunities in holdings by gender for the years 2022-2024

Table 39: Distribution of the number of expected job opportunities, broken down by gender, for the years 2022-2024

| Gender | 2022 | 2023 | 2024 | Total of opportunities |
|--------------|--------------|-------------|-------------|------------------------|
| Male | 7241 | 6709 | 6019 | 19968 |
| Female | 6738 | 3060 | 2900 | 12698 |
| Total | 13979 | 9770 | 8919 | 32667 |

Table 40: The number of expected job opportunities distributed by profession and gender for the years 2022-2024

| Occupation | 2022 | | 2023 | | 2024 | | Total | |
|---|-------|--------|-------|--------|-------|--------|-------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Worker, agriculture/crop harvesting | 3,215 | 3,908 | 2,808 | 1,925 | 2,552 | 1,687 | 8,576 | 7,520 |
| Ploughman | 1,378 | | 1,377 | | 1,001 | | 3,756 | |
| Farmhand, irrigation, and fertilization | 600 | 3 | 657 | 1 | 668 | 1 | 1,925 | 5 |
| Farmhand, pesticide spraying | 318 | | 317 | | 315 | | 951 | |
| Technician, Plant Production | 255 | 3 | 266 | 8 | 288 | 8 | 809 | 19 |
| Farmer, mushroom | 188 | | | | | | 188 | |
| Porter | 188 | | | | | | 188 | |
| Farmhand, packing and packaging | 185 | 1,844 | 229 | 722 | 229 | 800 | 644 | 3,366 |
| Farmer, horticulture | 144 | 452 | 51 | 81 | 51 | 81 | 247 | 615 |
| Farmer, vegetables / general | 114 | 2 | 118 | 2 | 117 | 2 | 350 | 6 |
| Farmer, palm growing | 85 | 8 | 72 | 9 | 72 | 8 | 229 | 24 |
| Technician, Animal Production | 77 | | 75 | | 75 | | 228 | |
| fodder provider | 52 | | 56 | | 50 | | 157 | |
| Farmer, field & forage crops | 50 | 156 | 31 | 39 | 31 | 39 | 113 | 234 |
| Farmer, nursery / general | 46 | 13 | 55 | 13 | 55 | 13 | 156 | 39 |
| worker, barn cleaning | 44 | | 104 | | 99 | | 247 | |
| Breeder, sheep & goat | 43 | | 97 | | 61 | | 201 | |
| Veterinarian, general | 41 | | 41 | | 41 | | 124 | |
| Farmer, Tree grafting and pruning | 37 | 1 | 11 | 1 | 11 | 1 | 58 | 3 |
| Livestock Milking Worker | 37 | 226 | 112 | 139 | 79 | 139 | 228 | 504 |
| Butcher, livestock | 32 | | 80 | | 80 | | 193 | |
| Harvester | 21 | 1 | 28 | 2 | 28 | 2 | 78 | 5 |
| Breeder, chicken / meat | 21 | 2 | 21 | 2 | 19 | 2 | 62 | 6 |
| Pisciculturist, general | 19 | | | | | | 19 | |
| Beekeepers | 7 | 3 | 3 | | 3 | | 13 | 3 |
| Farmhand, hoeing | 6 | 77 | 7 | 79 | 7 | 79 | 20 | 234 |
| Veterinary, Technician & Assistants | 5 | | 7 | | 6 | | 19 | |
| Agricultural Engineer | 5 | 1 | 4 | | 1 | | 9 | 1 |
| Farmer, flower plucking | 4 | | 8 | | 8 | | 20 | |
| Breeder, cattle | 3 | | 37 | | 34 | | 75 | |
| Specialist, breeder/poultry mothers and grandma | 3 | | 3 | | 3 | | 9 | |

| Occupation | 2022 | | 2023 | | 2024 | | Total | |
|---|-------|--------|-------|--------|-------|--------|-------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Specialist, Plant protection/Integrated pest management (IPM) | 3 | | 2 | | 2 | | 6 | |
| Maker, dairy product | 3 | | 3 | | 4 | | 9 | |
| Specialist, irrigation and fertilization | 2 | | 3 | | 3 | | 9 | |
| Specialist, Horticulture | 2 | | 2 | | 2 | | 6 | |
| Breeder, poultry / incubators | 2 | 4 | 1 | 3 | 1 | 4 | 4 | 11 |
| Director, the plant wealth production department | 1 | | 1 | | 1 | | 3 | |
| Specialist, Plant Production | 1 | | 1 | | 1 | | 3 | |
| Worker, hatching agent | 1 | | 1 | | 1 | | 3 | |
| Specialist, Animal Production (cattle, sheep, poultry) | 1 | | | | | | 1 | |
| Specialist, Garden and landscape engineering | | 1 | | 1 | | 1 | | 3 |
| Specialist, Cut flowers and ornamental plants | | | 1 | | 1 | | 2 | |
| Clipper, cow toenail | | | 3 | | 3 | | 5 | |
| Gardner | | 2 | 1 | 2 | 1 | 2 | 2 | 6 |
| Worker, ornamental plant serving | | | 9 | | 9 | | 18 | |
| Specialist, nursery management | | | 1 | | | | 1 | |
| Worker. ornamentals and landscape | | | 3 | | 3 | | 6 | |
| Market-oriented cattle breeder and dairy products | | 31 | | 31 | | 31 | | 92 |
| Total | 7,241 | 6,738 | 6,709 | 3,060 | 6,019 | 2,900 | 19968 | 12698 |

2.4.3 Expected job opportunities broken down by educational level

Job opportunities were concentrated within an educational level less than secondary, with nearly three quarters of the demand, while the level of demand was the lowest for the bachelor's level by 0.18%.

Table 41 : The number of expected job opportunities, distributed by educational level, for the years 2022-2024

| Education level | 2022 | 2023 | 2024 | Total | |
|---------------------------|-------|------|------|-------|--------|
| Less than secondary | 10417 | 6848 | 6002 | 23267 | 71.22% |
| Illiterate | 1978 | 1650 | 1545 | 5173 | 15.84% |
| Secondary (Tawjihi) | 988 | 726 | 838 | 2552 | 7.81% |
| Vocational apprenticeship | 405 | 385 | 383 | 1172 | 3.59% |
| Post-graduate degree | 82 | 82 | 82 | 247 | 0.76% |
| Associate degree | 82 | 60 | 54 | 196 | 0.60% |
| Bachelor's degree | 25 | 19 | 15 | 59 | 0.18% |
| Total | 13979 | 9770 | 8919 | 32667 | |

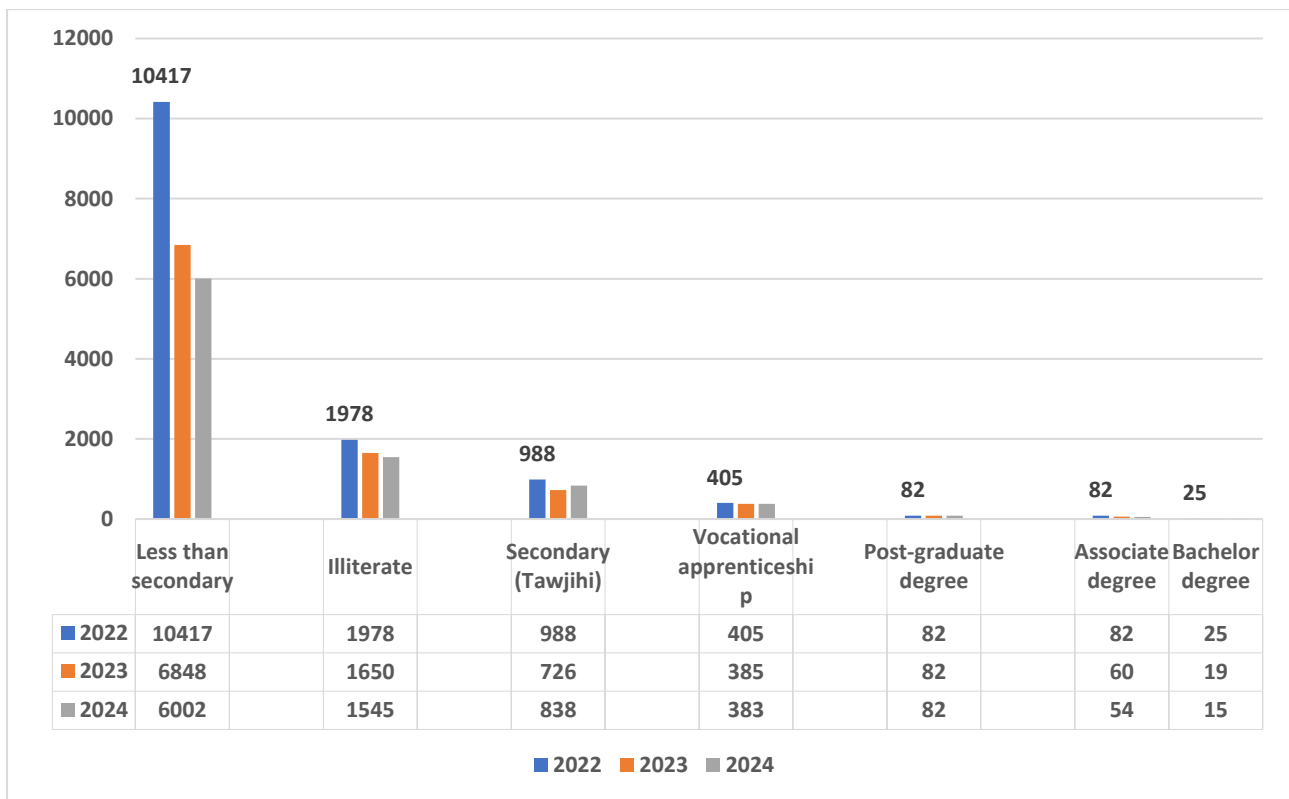


Figure No. 24: Expected number of job opportunities distributed by educational level for the years 2022-2024

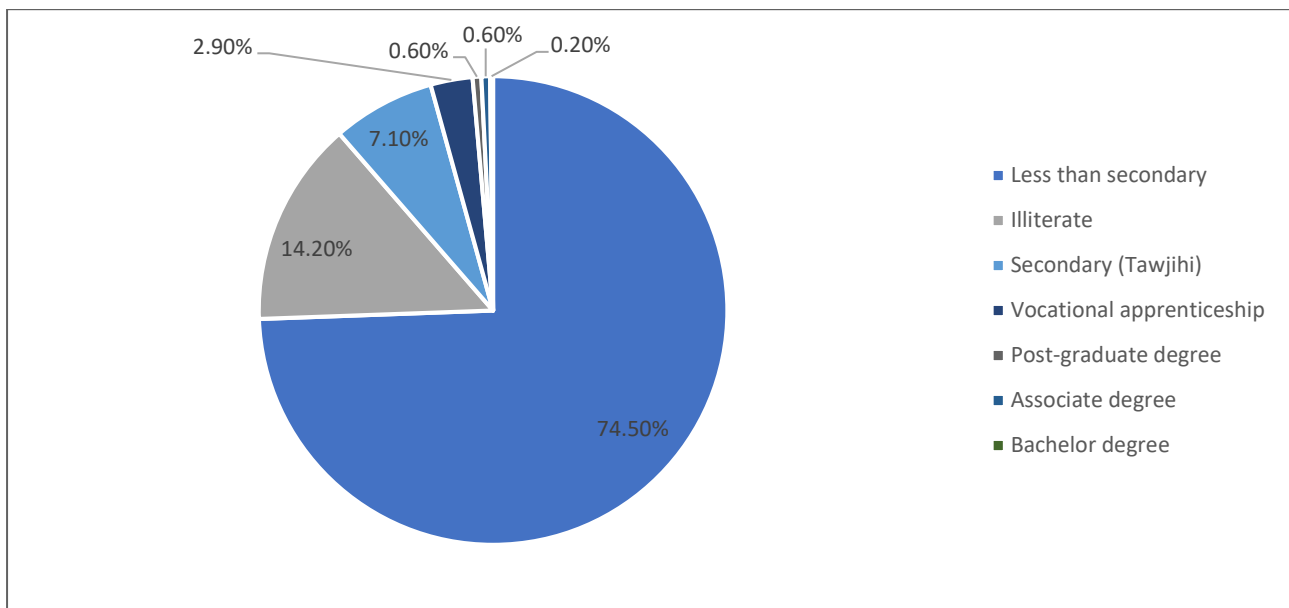


Figure No. 25: Relative distribution of the number of expected job opportunities, distributed by educational level, for the years 2022-2024

Table 42: Distribution of job opportunities by level of education and gender for the years(2024-2022)

| Gender | 2022 | | 2023 | | 2024 | | Total of opportunities | |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|---------------|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| illiterate | 930 | 1,048 | 1,007 | 643 | 910 | 635 | 2,848 | 2,325 |
| Less than secondary | 5,327 | 5,091 | 4,797 | 2,051 | 4,126 | 1,875 | 14,250 | 9,017 |
| Vocational apprenticeship | 390 | 15 | 381 | 4 | 380 | 3 | 1,150 | 22 |
| Secondary (Tawjihi) | 411 | 577 | 366 | 360 | 454 | 384 | 1,231 | 1,321 |
| Associate degree | 77 | 5 | 59 | 2 | 52 | 2 | 188 | 8 |
| Bachelor's degree | 23 | 2 | 18 | 1 | 14 | 1 | 55 | 4 |
| Post-graduate degree | 82 | | 82 | | 82 | | 247 | |
| Total | 7,241 | 6,738 | 6,709 | 3,060 | 6,019 | 2,900 | 19,968 | 12,698 |

2.4.4 Expected job opportunities broken down by minimum experience

The study showed that the minimum experience required for expected job opportunities is concentrated in the stage of at least one year, and Figure 26 shows the relative distribution of this. Table 42 also shows the numerical distribution of expected job opportunities, and the distribution of demand by gender, as the demand in 2022 tends to favor females, while it tends in 2023 and 2024 for males.

Table 43: The number of expected job opportunities, distributed according to the minimum required experience (for the years 2022-2024)

| Years of Experience | 2022 | 2023 | 2024 | Total of opportunities |
|---------------------|---------------|--------------|--------------|------------------------|
| 0 | 1,410 | 344 | 329 | 2,082 |
| 1 | 7,727 | 7,818 | 6,808 | 22,353 |
| 2 | 3,761 | 811 | 1,003 | 5,576 |
| 3 | 850 | 571 | 554 | 1,976 |
| 5 | 199 | 195 | 194 | 588 |
| 11 | 31 | 31 | 31 | 92 |
| Total | 13,979 | 9,770 | 8,919 | 32,667 |

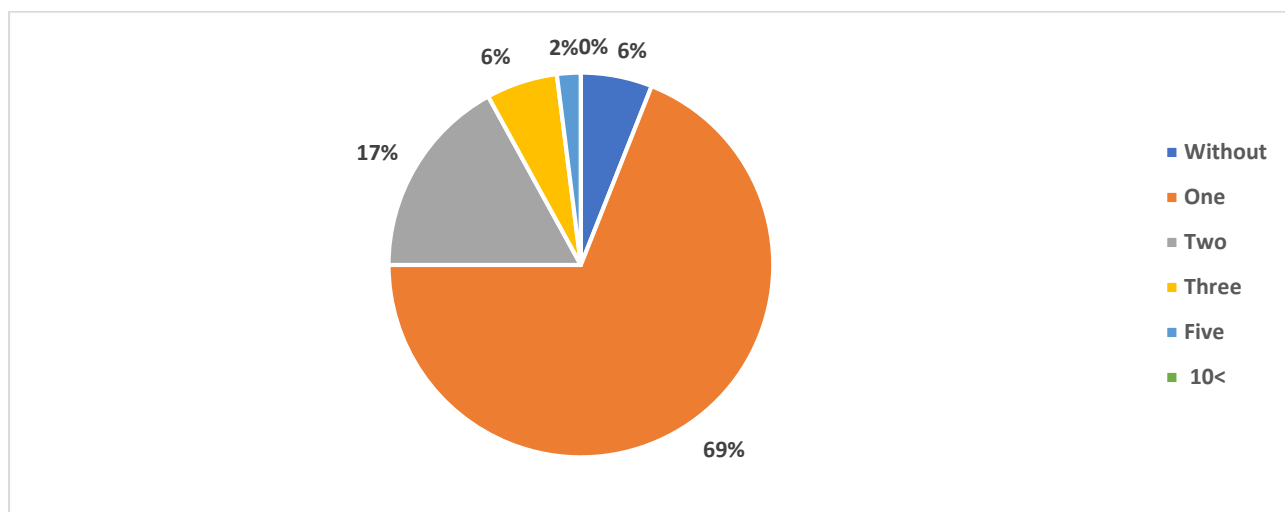


Figure No. 26: Relative distribution of the number of expected job opportunities, distributed according to the minimum required experience (for the years 2022-2024)

Table 44: The number of expected job opportunities, distributed according to the minimum required experience (for the years 2022-2024)

| Years of Experience | 2022 | | 2023 | | 2024 | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Male | Female | Male | Female | Male | Female |
| Without | 160 | 1250 | 90 | 254 | 85 | 244 |
| One | 4818 | 2112 | 4601 | 2421 | 3828 | 2183 |
| Two | 407 | 3354 | 436 | 374 | 541 | 462 |
| Three | 835 | 15 | 564 | 7 | 547 | 7 |
| Five | 192 | 7 | 190 | 5 | 190 | 4 |
| > 10 | 31 | | 31 | | 31 | |
| Total | 6443 | 6738 | 5912 | 3060 | 5222 | 2900 |

2.4.5 Expected job opportunities distributed according to the nature of the form of demand (job turnover, expansion, or both)

Table 44 shows the number of expected job opportunities for the years 2022-2024 in terms of the form of demand, as new job opportunities (expansion) amounted to 8476 expected opportunities, while the replacement or rotation of labor for labor leaving work constituted the largest share of 18558 expected opportunities, and the total option Both (i.e. rotation and expansion) 5633 expected opportunities.

Table 45 : The number of expected job opportunities distributed according to the form of demand (for the years 2022-2024)

| Form of Demand | 2022 | 2023 | 2024 | Total of opportunities |
|----------------|---------------|--------------|--------------|------------------------|
| Rotation | 9,129 | 5,178 | 4,251 | 18,558 |
| Expansion | 3,878 | 2,266 | 2,332 | 8,476 |
| Both | 971 | 2,325 | 2,336 | 5,633 |
| Total | 13,979 | 9,770 | 8,919 | 32,667 |

2.4.6 Skills Required for Expected Job Opportunities

Table 46 shows the most important 95 required skills according to the expected job opportunities for the years 2022-2024, the most prominent of which was the demand for the skill of picking fruits and products of vegetable crops or fruit trees manually, mechanically, or chemically according to the instructions, followed by the skill of cleaning, sorting and grading fruits, and then the skill of plowing Agricultural orchards and gardens.

Table 46: Skills required according to expected job opportunities for the years 2022-2024

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|---|------|------|------|------------------------|
| Picking the fruits of vegetable crops or fruit trees and their products manually, mechanically, or chemically according to the instructions | 5259 | 2638 | 2204 | 10100 |
| Fruit cleaning, sorting, and grading | 787 | 1369 | 1461 | 3616 |
| Plowing the land of agricultural orchards and gardens | 821 | 819 | 631 | 2272 |
| Packing the fruits in suitable containers, wrapping the containers with the appropriate packaging tools, and .transporting the packages to freight cars or to farm stores | 1939 | 69 | 84 | 2093 |
| Sorting the distorted, infected, and small fruits from the healthy ones and classifying and grading the fruits according to the required specifications | 250 | 805 | 800 | 1854 |
| Collect the fruits of fruit trees from the orchards using the packages prepared for this | 627 | 452 | 272 | 1351 |
| Inspect, clean and replace water filters and fertilizers points | 252 | 312 | 326 | 889 |
| Plowing the land between fruit trees in orchards and gardens to remove weeds, and prepare it to receive rainwater | 325 | 326 | 138 | 789 |

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|--|------|------|------|------------------------|
| Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 252 | 246 | 244 | 742 |
| Management and implementation of tree and vegetable crop service programs, as well as their breeding, pruning and hilling operations | 220 | 239 | 261 | 720 |
| Crop storage | 222 | 228 | 238 | 687 |
| Implementation of programs for harvesting, harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products | 453 | 76 | 76 | 605 |
| Install tools such as the yoke, and the plow stick, and ensure .that the rails are ready | 188 | 188 | 188 | 565 |
| Spraying pesticides using manual or automatic equipment, and dusting crops with pesticides according to the instructions | 178 | 178 | 178 | 535 |
| Transporting the milk to the places of preservation, preparing the milk, and keeping it by refrigeration until marketing | 181 | 125 | 125 | 431 |
| Inspect and clean equipment and tools used for spraying, fogging, fogging, manual and automatic | 134 | 134 | 134 | 401 |
| Assembling and packaging the packages, and storing them in warehouses or refrigerators until they are marketed | 57 | 108 | 197 | 362 |
| Monitoring the installation of protected holdings, covering, and ventilating greenhouses, preparing the land, preparing seedlings and planting | 106 | 106 | 106 | 319 |
| undefined | 222 | 33 | 35 | 290 |
| Transporting organic and chemical fertilizers and keeping them in the farm stores according to the instructions | 88 | 88 | 87 | 264 |
| Palm pollination | 85 | 81 | 80 | 245 |
| Preparation of basins for plants and trees, and drainage of shrubs and trees to collect rainwater | 77 | 79 | 79 | 236 |
| Irrigation and fertilization of field crops | 156 | 39 | 39 | 234 |
| Implementation of grafting in various ways and follow-up to ensure their success | 213 | 0 | 0 | 213 |
| Sweeping the barns after removing the manure, cleaning them with water and plugging the simple holes in the barn and closing them | 31 | 85 | 79 | 195 |
| Cut lamb's wool and goat's hair using hand shears or electric shears | 32 | 80 | 80 | 193 |
| Managing and implementing appropriate breeding programs | 53 | 53 | 53 | 159 |
| Milking of female cows and sheep (automatic or manual) | 45 | 53 | 53 | 151 |
| Implementation of irrigation and fertilization programs for orchard trees | 85 | 27 | 27 | 138 |
| Preparing the feed mixtures with their components according to the instructions | 44 | 48 | 44 | 135 |
| Preparation of furrows and lines, preparing them for the cultivation of summer and winter field crops | 44 | 44 | 44 | 131 |

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|--|------|------|------|------------------------|
| Sheep milking and newborn care | 42 | 42 | 42 | 127 |
| Artificial insemination of animals | 41 | 41 | 41 | 124 |
| Implementation of training and pruning programs for orchid trees | 55 | 28 | 28 | 111 |
| Cleaning and sterilizing the udders of livestock before milking | 37 | 37 | 37 | 110 |
| Harvesting, picking, sorting, grading, and packaging of field crop products | 30 | 30 | 30 | 91 |
| Monitoring the growth, development, and evaluation of seedlings, hardening, and removing seedlings, and transferring them to places of permanent cultivation | 28 | 28 | 28 | 84 |
| Preparing, cleaning, sterilizing, and using milking tools and utensils according to the instructions | 0 | 54 | 21 | 76 |
| Milking cows manually or using automated parlors, cleaning and servicing of milking equipment, and sterilization of the parlor | 3 | 34 | 34 | 72 |
| Managing and implementing feeding and fattening programs for animals and their young | 23 | 23 | 23 | 68 |
| Preparation and management of irrigation and fertilization programs | 18 | 23 | 23 | 65 |
| Preparing fodder mixtures, providing fodder to the herd, and providing drinking water | 21 | 21 | 19 | 62 |
| Harvesting (cutting) the grain or legume crop, embedding it, and transporting it to the collection site (the threshing floor) | 19 | 18 | 18 | 55 |
| Collecting the manure with the tools for this, filling it in bags or in a transport cart, and transporting it to the collection pits | 13 | 19 | 19 | 52 |
| Preparing packaging tools and supplies such as containers, scissors, and knives | 11 | 15 | 11 | 38 |
| Pruning varieties and species of fruit trees in the appropriate manner and time | 13 | 12 | 12 | 36 |
| Preparing open and protected planting areas, sterilizing agricultural media, workplaces used for seedlings, and their tools | 12 | 12 | 12 | 36 |
| Shearing lamb's wool, goat hair and trimming hooves | 0 | 36 | 0 | 36 |
| Implementation of agricultural pest control programs | 9 | 13 | 12 | 34 |
| Assistance in installing irrigation pipes (hoses) by laying, extending, and collecting them, inspecting them, and ensuring their readiness for work | 10 | 11 | 11 | 31 |
| Organizing daily work, technical and administrative supervision of subordinates, distributing workers, and following up on the implementation of their work | 11 | 8 | 8 | 27 |
| Propagation of plants by different vegetative methods such as grafting, layering, installation, cuttings, leaves and rhizomes | 6 | 10 | 10 | 26 |
| Mowing the orchards and gardens land and removing weeds using hand tools | 12 | 6 | 6 | 25 |

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|---|------|------|------|------------------------|
| Packing, transporting and storing in farm warehouses and collecting crop residues (straw and hay) | 2 | 11 | 11 | 25 |
| Cultivation of propagules, seeds and bulbs, and follow-up and evaluation of their growth | 4 | 9 | 9 | 22 |
| Cultivation of field crop propagules and their seedlings according to species, varieties, dates and rates determined automatically and manually, thinning dense plants and compensating lost ones | 20 | 1 | 1 | 22 |
| Implementation of irrigation and fertilization programs and procedures according to the instructions | 7 | 7 | 7 | 21 |
| Implementation of programs for picking and packing ornamental plants and cut flowers and packing, grading, and wrapping cut flowers and ornamental plants | 4 | 8 | 8 | 20 |
| Monitor the appearance of disease symptoms, and provide preventive and curative health care according to the instructions | 19 | 0 | 0 | 19 |
| Cleaning feeders from feed residues | 6 | 6 | 6 | 17 |
| Develop and manage agricultural pest control programs | 7 | 4 | 4 | 16 |
| Adding pesticides in the required quantities, mixing and preparing them | 6 | 5 | 3 | 14 |
| Preparing agricultural mixtures according to the instructions, filling them in containers, pots and bags, adding soil and agricultural media to permanent basins, and hoeing their soil | 0 | 6 | 6 | 12 |
| Honeybee queen production and replacement | 6 | 3 | 3 | 12 |
| Cleaning and sterilization of incubators, receiving hatching eggs, grading, and cleaning eggs, selecting and isolating invalid eggs | 4 | 3 | 4 | 11 |
| Conducting periodic examinations on animals, and evaluating disease cases | 0 | 5 | 5 | 11 |
| Evaluation of the adequacy of irrigation and drainage systems | 2 | 3 | 3 | 9 |
| Determining and quantifying vaccines, treatments, and therapeutic materials for animal and common diseases | 5 | 2 | 1 | 8 |
| Determining schedules of quantities for work materials and equipment, and determining their specifications | 4 | 4 | 0 | 7 |
| Planning the land, preparing the pits, planting the seedlings of fruit trees, their seedlings, and cuttings, strengthening them, and distributing pollinators | 4 | 1 | 1 | 7 |
| Implementation of harvesting programs and methods of crop service after harvest | 3 | 2 | 2 | 7 |
| Preparing and managing agricultural pest control programs in orchards in accordance with environmental standards | 2 | 2 | 2 | 6 |
| Pest control as directed in line with environmental standards | 2 | 2 | 2 | 6 |
| Investigate the symptoms of diseased plants, and implement preventive and curative immunization programs in cooperation with the specialist | 2 | 2 | 2 | 6 |

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|--|------|------|------|------------------------|
| Preparing broiler sheds, cleaning, and sterilizing them, preparing mattresses for young chicks, and distributing feeders and drinkers | 2 | 2 | 2 | 6 |
| Cultivation of indoor ornamental plants from seedlings, bulbs and seeds in basins and containers | 0 | 3 | 3 | 6 |
| Clean the cow's toenail, and trim it with the appropriate equipment | 0 | 3 | 3 | 5 |
| Hydroponic technology application | 3 | 1 | 1 | 5 |
| Diagnose the symptoms of disease infections and insect infestations in cooperation with specialists, and take preventive and curative measures | 4 | 0 | 0 | 4 |
| Installation and operation of equipment and devices such as incubators | 2 | 1 | 1 | 4 |
| Planting plants and trees in the gardens according to the instructions | 0 | 2 | 2 | 4 |
| Receiving the vegetable or fruit crops, and unloading them in the designated place | 1 | 1 | 1 | 4 |
| Opening and closing the valves of the irrigation network or irrigation channels on the different sections, and irrigating different crops according to the instructions | 1 | 1 | 1 | 4 |
| Preparing, servicing, maintaining, and preserving harvesting machinery, tools and accessories such as sickles, knives and scissors | 1 | 1 | 1 | 3 |
| Preparing programs for the management and preparation of garden land, including plowing, planning, piling, sterilization and planting of plants, trees, shrubs, and green spaces | 1 | 1 | 1 | 3 |
| Develop executive work programs for established policies and plans | 1 | 1 | 1 | 3 |
| Implementation of irrigation and fertilization programs | 1 | 1 | 1 | 3 |
| Coordination with the various production parties to accomplish the required tasks in the prescribed manner | 1 | 1 | 1 | 3 |
| Implementation of newborn care programs and preventive measures | 0 | 3 | 0 | 3 |
| Preparing fodder mixtures, providing fodder to sheep according to the instructions, and providing drinking water | 1 | 1 | 1 | 3 |
| Provide food to the hatched chicks according to the instructions | 1 | 1 | 1 | 3 |
| Preparing fodder mixtures and presenting them to the herd | 1 | 1 | 1 | 3 |
| Crisis management and emergency handling | 1 | 0 | 1 | 2 |
| Providing feed to the animal according to the specified quantities and times | 1 | 1 | 0 | 2 |
| Storing feed in a healthy and safe manner | 1 | 1 | 0 | 2 |
| Adding agricultural soils to the garden land and preparing the land and basins by hoeing and leveling | 0 | 1 | 1 | 2 |
| Pruning and shaping plants, trees, shrubs, and hedges, cutting green spaces, and picking flowers and roses | 0 | 1 | 1 | 2 |

| Required skill | 2022 | 2023 | 2024 | Total of opportunities |
|---|--------------|-------------|-------------|------------------------|
| Determining the methods and dates of propagation of ornamental plants and cut flowers, determining the needs and the mechanism for breaking the dormancy of ornamental bulbs and their plants, and choosing the appropriate stocks and scions | 0 | 1 | 1 | 2 |
| Management and implementation of operating programs for devices and equipment used in livestock production and multiplication | 2 | 0 | 0 | 2 |
| Preparing plant control programs, planting date for each plant, and the appropriate biological enemies for it. | 1 | 0 | 0 | 1 |
| Analysis of agricultural pests and their symptoms, diagnosis, and determination of dangerous levels | 1 | 0 | 0 | 1 |
| Develop and manage farm animal breeding programs | 1 | 0 | 0 | 1 |
| Preparing training, pruning, and hardening programs, and determining the appropriate ages for marketing seedlings | 0 | 1 | 0 | 1 |
| Total | 13979 | 9770 | 8919 | 32667 |

Employment-supportive skills according to their importance from the employer's point of view

The answers of the study sample showed that the general skills required for professions vary in importance. The tables link 46 professions and skills, as they appear below each skill of the professions that require their presence, and they included six general skills as follows: Ethics and commitment skill, communication and teamwork skill, numerical skills, analysis and problem-solving skill, planning, organization and time management skill, and work pressure bearing skill

Table 47: Necessary skills for occupations

| Profession/Skill | Ethics and commitment skills | Communication skill and teamwork | Numerical skills | Analytical and problem-solving skill | Planning, organizing and time management skills | Ability to work under pressure |
|---|------------------------------|----------------------------------|------------------|--------------------------------------|---|--------------------------------|
| Farmhand, fruit picker | × | × | × | × | × | × |
| Ploughman | × | × | × | × | × | |
| Farmhand, packing and packaging | × | × | × | × | × | × |
| Farmhand, irrigation, and fertilization | × | × | × | × | × | × |
| Farmer, horticulture | × | | | | | |
| Farmhand, pesticide spraying | × | × | | × | × | × |
| Livestock Milking Worker | × | | | × | × | |

| Profession/Skill | Ethics and commitment skills | Communication skill and teamwork | Numerical skills | Analytical and problem-solving skill | Planning, organizing and time management skills | Ability to work under pressure |
|-------------------------------|------------------------------|----------------------------------|------------------|--------------------------------------|---|--------------------------------|
| Farmhand, Mushroom | | x | x | x | x | x |
| Porter | | x | x | x | x | x |
| Worker, barn cleaning | x | x | | x | x | |
| Technician, Plant Production | | | | x | | |
| livestock butcher | x | | | x | x | |
| Breeder, sheep & goat | x | | | | x | x |
| Farmer, field & forage crops | | | | | | |
| Technician, Animal Production | | | | x | x | |
| Farmhand, hoeing | x | | | | | |

2.5 Employment of people with disabilities in the agricultural sector

2.5.1 Workers with disabilities in agricultural holdings

Table 47 shows the number of workers with disabilities in the agricultural sector holdings, with a total number of 1457 workers working in 933 different holdings within 23 different professions. Figure 27 also shows the percentage of workers by gender.

Table 48: Distribution of workers with disabilities by occupation

| | Disabled employees | Number of holdings |
|---|--------------------|--------------------|
| 1 Farmhand, fruit picker | 670 | 213 |
| 2 Livestock Milking Worker | 116 | 118 |
| 3 Breeder, sheep & goat | 108 | 70 |
| 4 Farmhand, horticulture | 100 | 98 |
| 5 Harvester | 90 | 90 |
| 6 Farmhand, packing and packaging | 68 | 53 |
| 7 Technician, Plant Production | 68 | 55 |
| 8 fodder provider | 42 | 42 |
| 9 Farmhand, irrigation, and fertilization | 42 | 42 |
| 10 Farmer, vegetables / general | 41 | 41 |
| 11 Ploughman | 41 | 41 |
| 12 Breeder, chicken / meat | 29 | 29 |
| 13 Breeder, cattle | 14 | 14 |

| | | | |
|--------------|---|--------------|------------|
| 14 | Farmhand, hoeing | 6 | 6 |
| 15 | Farmer, field crops / general | 4 | 4 |
| 16 | Agricultural Engineer | 4 | 4 |
| 17 | Farmer, nursery / general | 3 | 2 |
| 18 | Worker, barn cleaning | 3 | 3 |
| 19 | Clipper, cow toenail | 2 | 2 |
| 20 | Other (security guards, warehouse keeper) | 3 | 3 |
| 21 | Farmhand, pesticide spraying | 1 | 1 |
| 22 | Farmhand, pesticide spraying | 1 | 1 |
| 23 | Farmer, palm growing | 1 | 1 |
| Total | | 1,457 | 933 |

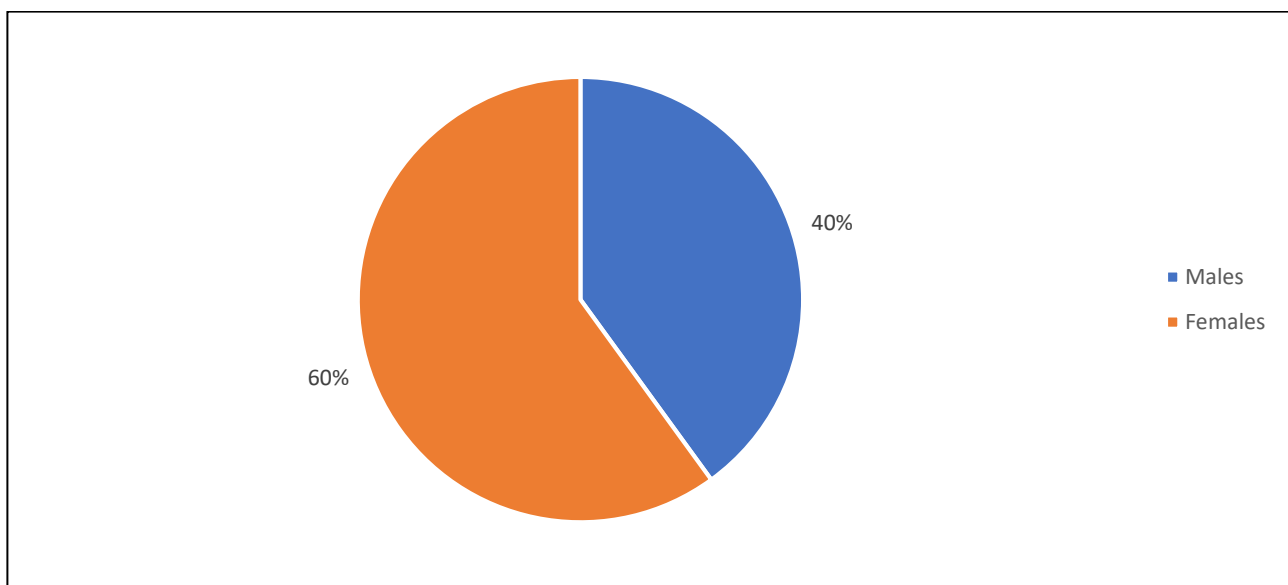


Figure No. 27: Relative distribution of the number of workers with disabilities by gender.

Table 49: Number of employees with disabilities by type of disability

| Type of Disability | Number of workers |
|--------------------|-------------------|
| Mentality | 269 |
| Hearing | 662 |
| Visual | 54 |
| Physical | 472 |
| Total | 1,457 |

2.5.2 Future employment opportunities for people with disabilities in the agricultural sector holdings

Tables 49, 50 and 51 show the distribution of future job opportunities for people with disabilities by type of disability, gender, profession and region. Future expectations have shown an increase in the

number of workers with disabilities compared to the current situation, and expectations indicate an increased demand for female employment over males, Figure 28. The total expected opportunities amounted to 1198 opportunities within 11 different professions.

Table 50: Distribution of future job opportunities (2022-2024) for people with disabilities by type of disability

| Type of Disability | Number of opportunities |
|--------------------|-------------------------|
| Mentality | 5 |
| Hearing | 1562 |
| Visual | 2 |
| Physical | 65 |
| Hearing & Physical | 4 |
| Total | 1638 |

Table 51: Distribution of future job opportunities for people with disabilities by gender for the years-2022) (2024.

| Gender | Number of opportunities |
|--------|-------------------------|
| Male | 673 |
| Female | 965 |
| Total | 1,638 |

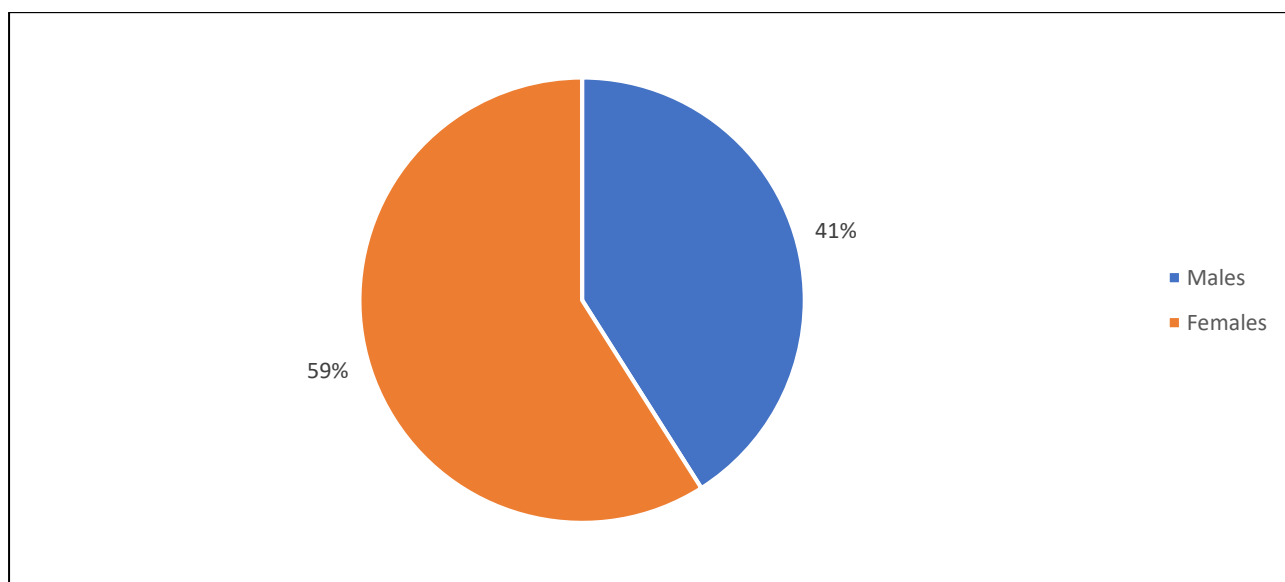


Figure No. 28: Relative distribution of future job opportunities for people with disabilities by gender.

Table 52 : Distribution of future job opportunities (2022-2024) for people with disabilities by profession, gender and region

| Occupation | Central Region | | Northern Region | | Total |
|--|----------------|------------|-----------------|------------|--------------|
| | Male | Female | Male | Female | |
| Specialist, Horticulture | | | 2 | | 2 |
| Technician, Plant Production | 4 | | | 1 | 5 |
| Farmhand, Field, and forage crops production | | | 18 | | 18 |
| Farmhand, horticulture | | | 47 | | 47 |
| Apiarists | | | 3 | | 3 |
| Harvester | 4 | | 3 | | 7 |
| Farmhand, irrigation, and fertilization | | | 46 | | 46 |
| Farmhand, fruit picker | 5 | 207 | 500 | 498 | 1,211 |
| Farmhand, packing and packaging | | 204 | 1 | 48 | 253 |
| Livestock Milking Worker | 3 | 7 | 31 | | 40 |
| Worker, barn cleaning | 7 | | | | 7 |
| Total | 22 | 418 | 651 | 547 | 1,638 |

2.5.3 Employment difficulties in general

The study showed that the most important difficulties facing holdings when hiring workers lies in the availability of the required skills, values and positive attitudes towards work and skills that support employment, and the availability of academically qualified workers. On the other hand, commitment to work, endurance of work pressure / nature of work, availability of work ethic (honesty, activity, discipline), and employee approval of wages are among the least important difficulties. Figure 29

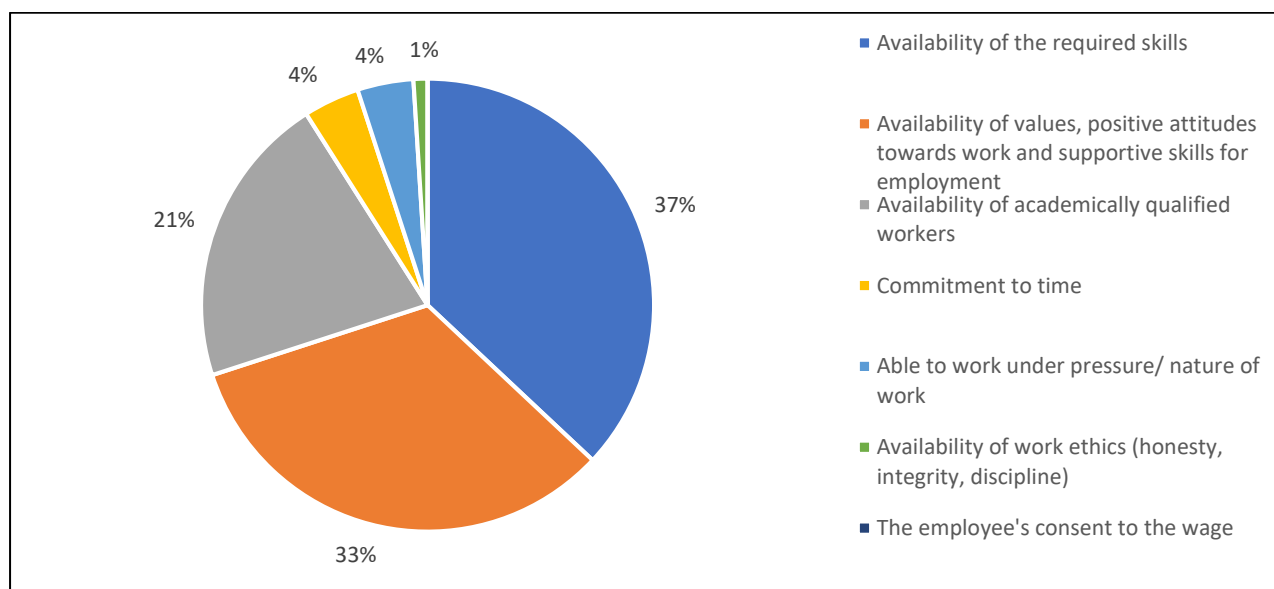


Figure No. 29: Difficulties facing holdings when hiring worker

2.6 Benefits offered by holdings to employees

The study showed that the benefits obtained by the workers in the holdings include the following, in order: the provision of transportation, the provision of housing, the provision of meals, the disbursement of the end-of-service gratuity, participation in social security, health insurance for the worker, family health insurance, a communication and telephone allowance, and then a degree Less children's education, bonuses, tips and allowances, tickets and trips.

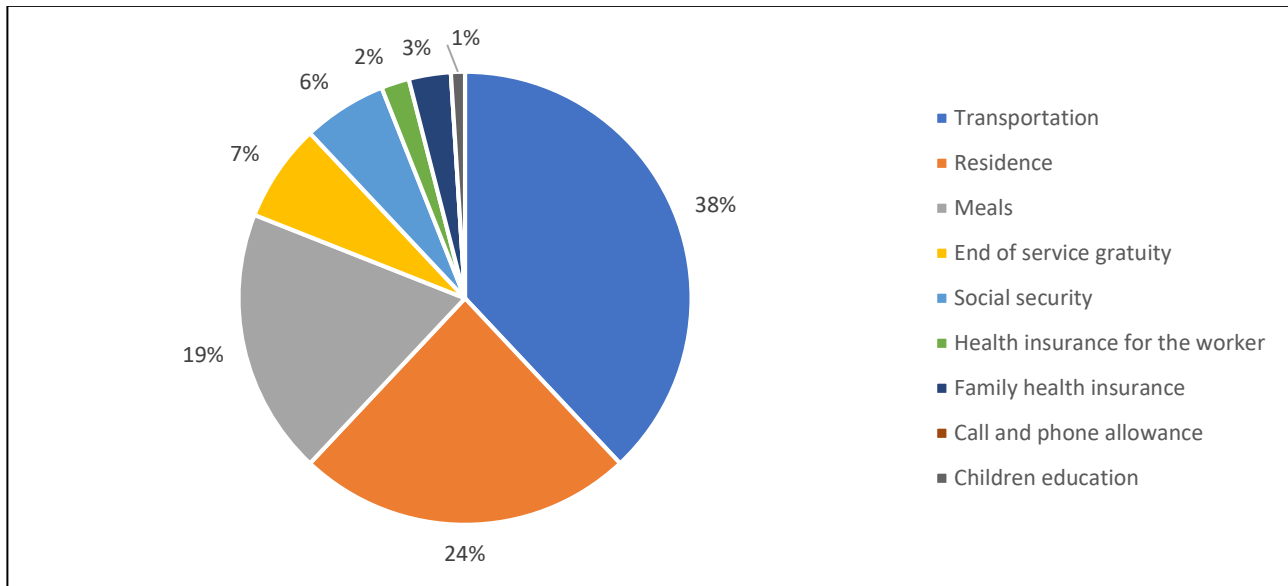


Figure No. 30: Benefits offered by holdings to employees.

2.7 Methods of hiring workers for holdings

The study showed that direct contact and personal relationship is the most important means for hiring workers in holdings in the agricultural sector, and other means remained available and include national campaigns for employment, newspapers and websites, employment offices, the Civil Service Commission, job days set up by the Ministry of Labor, through unions, and the Ministry of Labor. work, but together they constituted only 3% of the total responses of the study sample.

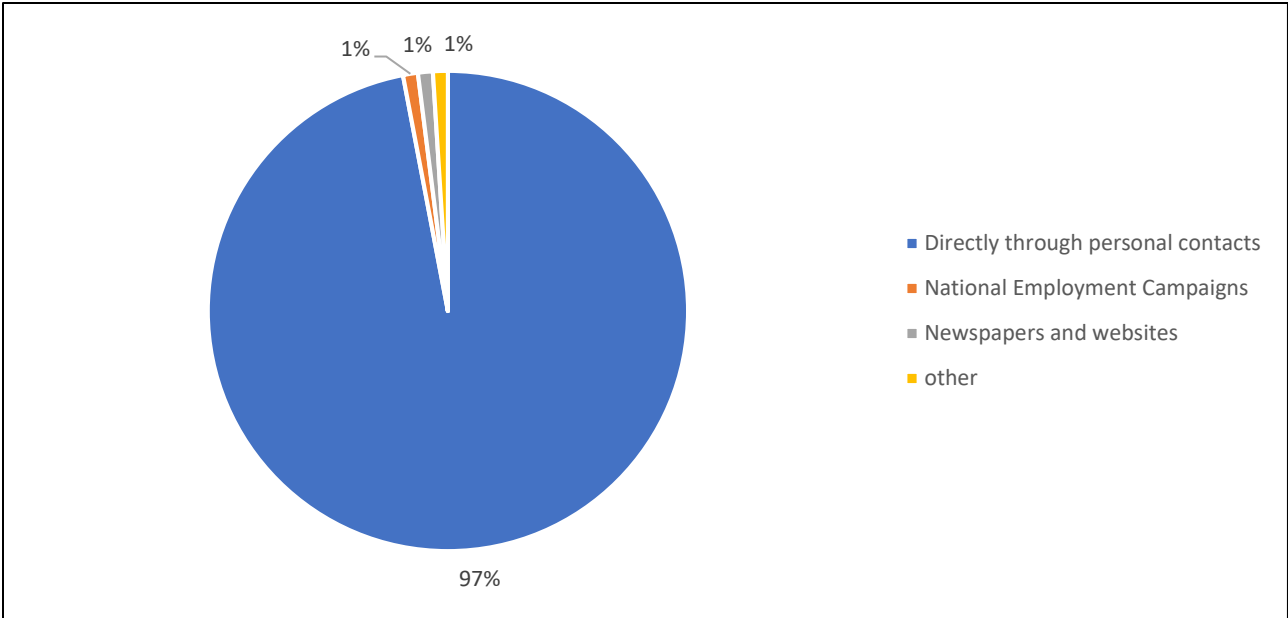


Figure No. 31: Methods of hiring workers in holdings.

Chapter III

Supply-side analysis in the agricultural sector

3.1 Training programs applied in the agricultural sector

The Arab Standard Classification of Occupations has adopted five skill-level categories, and the category may include more than one level, to reflect the Arab Standard Classification of Occupations, levels of education according to ISCED 97, the reality of the Arab labor market and its requirements, and to be in harmony with the Arab educational system in general, and with the education and training system Especially professional and technical. The following is a definition of skill level categories:

a. Professional level category

The category of specialist level includes works whose completion requires the availability of a high degree of cognitive, technical, and administrative skills among its occupants to enable them to improve and develop principles, concepts, methods and procedural methods, and to apply the outcome of scientific and cognitive knowledge in the field of work, and to enable them also to follow up workers during implementation, evaluate achievement, and solve Work and employee problems. Individuals who occupy businesses within this category require university preparation and qualification. Among the jobs that are classified in this category within the study are: plant protection specialist, fertilization specialist, field crop and feed production specialist, vegetable production specialist, tree horticultural specialist, cut flowers and ornamental plants specialist, nursery management specialist, veterinarians, animal production specialist (cows, Sheep, poultry), aquaculture specialist (fish, ..etc.), a specialist in breeding beneficial insects (bees, etc.), agricultural extension specialist, agricultural machinery specialist, landscaping and landscape engineering specialist.

B. Technician level category

For the purposes of this study, graduates of the Community Agricultural College (Al-Balqa University) who hold an agricultural diploma will be accredited as technicians. The category of technical level includes works whose completion requires the application of principles, concepts, methods, and procedural methods related to work. This requires the availability of scientific, technical, performance and supervisory skills for business occupants within this category, to enable them to understand the nature of performance and analysis, identify the steps of achievement, follow-up and evaluate their implementation, and workers in this category represent the link between specialists and workers. Individuals who occupy jobs within this category need intermediate preparation and qualification (post-secondary education and below university education), or at the level of community colleges or their equivalent. Among the jobs that fall into this category are plant production technician, animal production technician, veterinarian and their assistants.

c. Craftsman level category

The category of professional level includes the work that requires the availability of practical skills and professional information covering the profession's framework in an integrated manner for its occupants; to enable them to carry out the tasks and duties of the profession to a degree of proficiency according to the requirements of the labor market. And to enable them to distribute work

to subordinates and develop their skills. Individuals who occupy jobs within this category require education or professional qualification after completing secondary education, mainly for a period of up to a training year.

d. Skilled worker level category

For the purposes of this study, graduates of agricultural vocational education/Ministry of Education will be accredited as skilled workers, and the category of skilled worker includes works whose completion requires the availability of practical skills and professional information related to part of the profession, and does not cover the entire profession framework for its occupants, to enable them to perform work tasks and duties, To a degree of mastery according to the requirements of the labor market. Individuals who occupy businesses in this category require an education or vocational qualification equivalent to secondary education. Among the businesses classified in this category are: farmers in field crops and vegetables, farmers in tree trimming and planting for commercial purposes, farmers in horticulture, nurseries and gardens for commercial purposes, livestock breeders and dairy producers for commercial purposes, working in poultry and birds for commercial purposes, beekeepers and sericulture.

e. Limited skills level category

For the purposes of this study, those enrolled in the skill training programs designated to raise the efficiency of those who did not exceed their academic education and basic education will be accredited as workers with limited skills, and a category of limited (specific) skills includes work that requires the availability of practical skills and professional information covering a narrow part of the profession, or jobs that include Routine tasks and duties that require limited hand tools and muscle effort, and do not require professional knowledge of tools, materials and products. These skills can be acquired either through short training (less than nine months) or from experience, self-learning, or on-the-job training. Among the jobs that fall into this category: field crop workers, livestock workers, garden workers and gardening.

3.2 The most important training providers in the agricultural sector

The most prominent training providers in Jordan are limited to seven main bodies, three of which belong to the public sector. Table (53) shows the distribution of these entities according to the year of service provision.

Table 53 : Training Providers by Year of Starting Provide Training/Vocational Education Services

| Training providers | Year of service commencement |
|--|------------------------------|
| Vocational Education/Ministry of Education | 1957 |
| Al-Balqa Applied University (Agricultural Diploma) | 1975 |
| Agricultural Engineers Association | 1966 |
| Veterinarians Association | 1972 |
| National Agricultural Research Center | 1999 |
| Agro for Consultation and Training (Company) | 2007 |
| University of Jordan Counseling Center | 1981 |

Key data from training providers shows that there are two types of qualification; The first type includes vocational preparation programs at all levels, the duration of which exceeds four months, while the second type includes short and medium proficiency programs, which are concerned with raising the adequacy of the work of practitioners in the agricultural labor market, which ranges from three days to less than four months. The data received from the training providers in Table (54) reveals that the number of graduates of the main training agencies, including programs to prepare workers and raise competency in the Kingdom for the years (2019-2021) reached (21344), in which the training bodies of the public sector contributed 32 percent. The rest of the training providers contributed to the rehabilitation of 68% of the beneficiaries.

Figure No. 32: Relative distribution of the number of beneficiaries according to the training providers

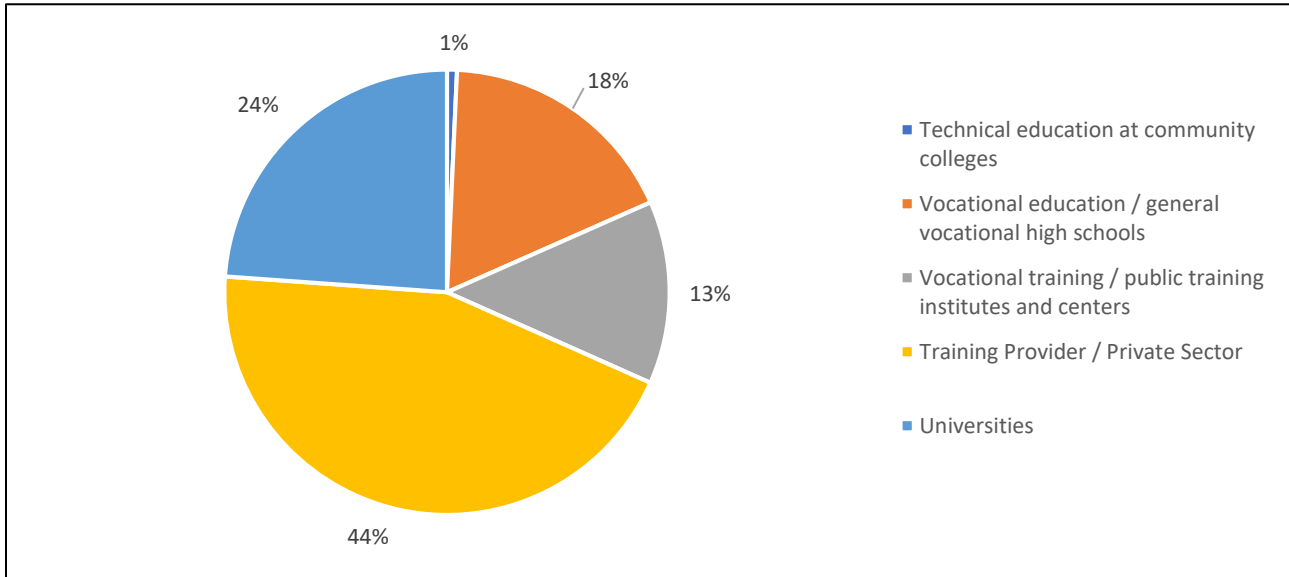


Table 54 : Distribution of graduates of training providers according to the nature of the training provider (preparation of employees and courses to raise competency)

| Training bodies | 2019 | 2020 | 2021 | Total |
|--|------|------|-------|-------|
| Technical education at community colleges | 44 | 66 | 44 | 154 |
| Vocational education / general vocational high schools | 1171 | 1498 | 1100 | 3769 |
| Vocational training / public training institutes and centers | 0 | 0 | 2836 | 2836 |
| * Training Provider / Private Sector | 516 | 1575 | 7400 | 9491 |
| Universities | 2084 | 1234 | 1776 | 5094 |
| Total | 3815 | 4373 | 13156 | 21344 |

*The private sector includes the Agricultural Engineers Association, followed by the Agricultural Consulting and Training Company, and the Veterinarians Association.

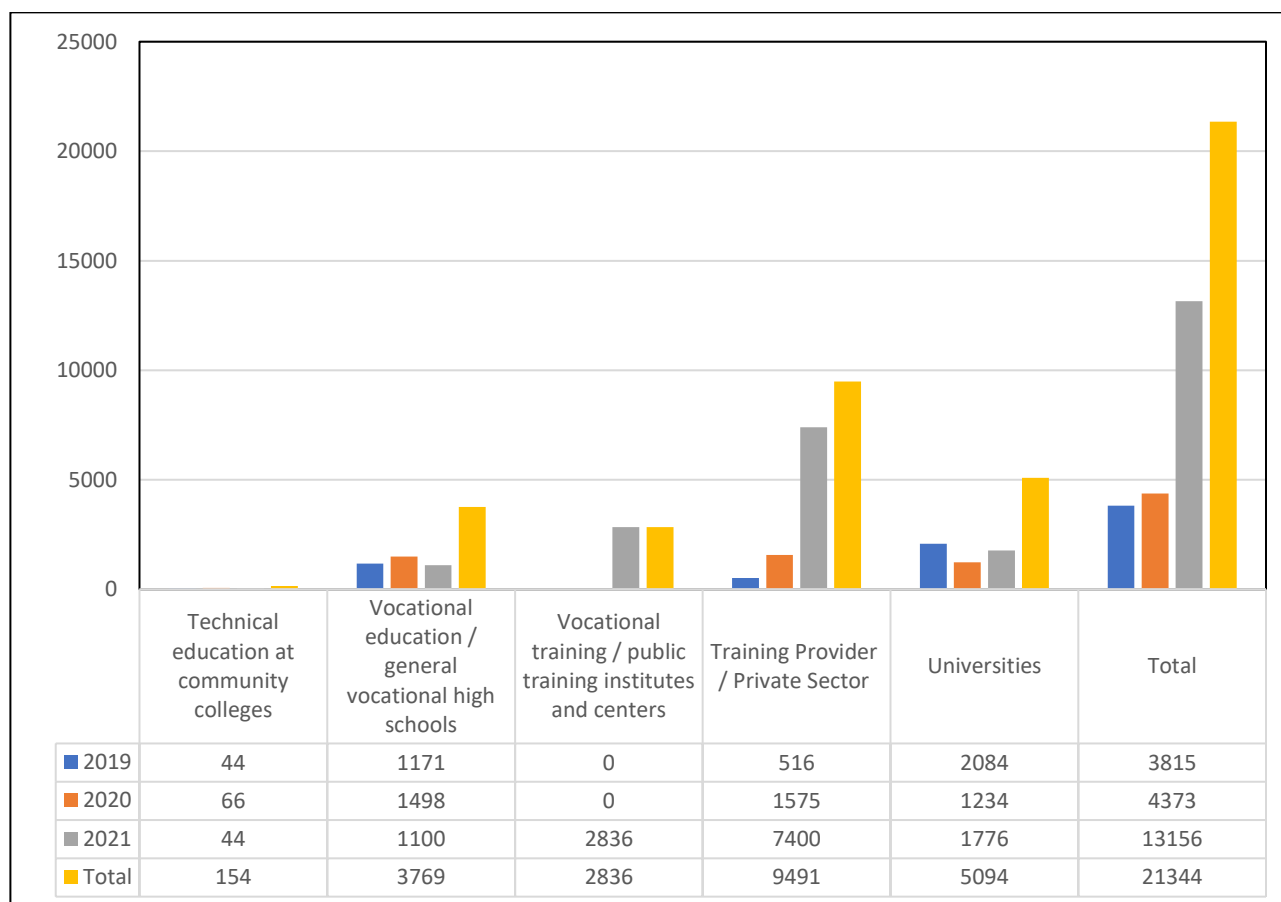


Figure No. 33: Training Providers and Number of Graduates for the Years(2021-2019)

The details of the mentioned programs can be explained as follows:

- Vocational preparation programs at all professional levels, in which the duration of the programs exceeds four months (number of employees)

The total number of workers prepared over the three years 2019-2021 reached nine thousand two hundred and eighty workers, during which the number of university graduates reached 2472.

Table 55 : Distribution of graduates by training provider for the years 2019-2020-2021 (preparation of employees)

| | 2019 | 2020 | 2021 | Total |
|---|-------------|-------------|-------------|-------------|
| Community Colleges/ Al-Balqa Applied University | 44 | 66 | 44 | 154 |
| Vocational Education/Ministry of Education | 1171 | 1498 | 1100 | 3769 |
| Vocational Training Corporation | 0 | 0 | 278 | 278 |
| National Company for Training and Employment | 0 | 0 | 2018 | 2018 |
| Jerash Private University | 84 | 79 | 118 | 281 |
| Jordan University of Science and Technology | 145 | 126 | 174 | 445 |
| The Hashemite University | 136 | 79 | 83 | 298 |
| Mutah University | 41 | 47 | 47 | 135 |
| University of Jordan | 338 | 429 | 331 | 1098 |
| Balqa Applied University | 82 | 51 | 82 | 215 |
| Al-Balqa Applied University Counseling Center | 552 | 0 | 0 | 552 |
| University of Jordan Counseling Center | 10 | 0 | 27 | 37 |
| Total | 2603 | 2375 | 4302 | 9280 |

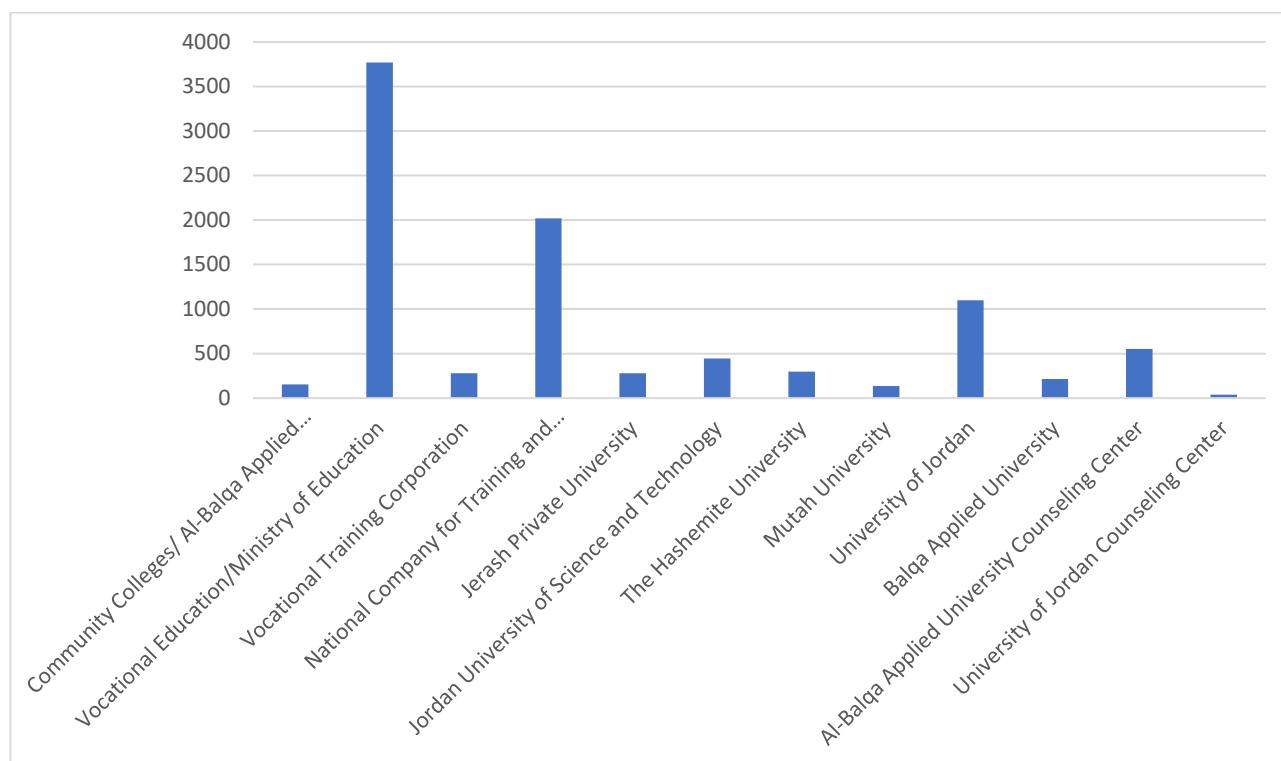


Figure No. 34: Relative distribution of graduates by training provider for the years 2019-2020-2021 (preparation of employees)

As shown in Table 55, the study showed the availability of 26 fields for preparing workers in the sector. The total number of agricultural technicians in the years (2019-2021) constituted 40.6% of them, while the total of specialists constituted 26.6% of the total graduates.

The majors attracting the most males were, respectively; Agricultural technicians (3087), gardeners and horticulture (533), mixed crops (386), and the agricultural technician (682) who had the highest number of females.

Table 56 : Distribution of graduates of training providers by educational program and by gender for the years 2019-2020-2021.

(preparation of employees)

| | 2019 | 2020 | 2021 | Total | Male | Female |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Specialist, animal production/ General (cattle, sheep, poultry) | 130 | 153 | 139 | 422 | 360 | 62 |
| Specialist, Plant protection/IPM | 93 | 102 | 106 | 301 | 156 | 145 |
| Specialist, Agriculture extension | 77 | 57 | 56 | 190 | 74 | 116 |
| Specialist, Plant Production | 103 | 100 | 174 | 377 | 230 | 147 |
| Specialist, Horticulture | 69 | 112 | 97 | 278 | 130 | 148 |
| Agricultural engineer | 248 | 179 | 191 | 618 | 192 | 426 |
| Engineer, landscaping | 55 | 79 | 45 | 179 | 34 | 145 |
| Veterinary\ General | 51 | 29 | 27 | 107 | 56 | 51 |
| Technician, general agriculture | 1171 | 1498 | 1100 | 3769 | 3087 | 682 |
| Technician, Plant Production | 44 | 66 | 159 | 269 | 170 | 99 |
| Farmhand, field & forage crop | 0 | 0 | 28 | 28 | 28 | 0 |
| Farmhand, general vegetables | 110 | 0 | 263 | 373 | 291 | 82 |
| Farmhand, Horticulture | 115 | 0 | 25 | 140 | 125 | 15 |
| Farmhand, Palm | 114 | 0 | 155 | 269 | 233 | 36 |
| Farmhand, Gardeners in horticulture, nurseries, and gardens for commercial purposes | 103 | 0 | 0 | 103 | 23 | 80 |
| Farmhand, mixed crop cultivation | 0 | 0 | 466 | 466 | 386 | 80 |
| Cattle breeders | 0 | 0 | 90 | 90 | 74 | 16 |
| Farmhand, fish | 10 | 0 | 70 | 80 | 80 | 0 |
| Breeder, chicken / incubators | 0 | 0 | 21 | 21 | 21 | 0 |
| Apiarists | 0 | 0 | 133 | 133 | 133 | 0 |
| Worker, Field crops | 0 | 0 | 57 | 57 | 57 | 0 |
| Farmhand, irrigation, and fertilization | 110 | 0 | 0 | 110 | 70 | 40 |
| Farmhand, packing and packaging | 0 | 0 | 197 | 197 | 75 | 122 |
| Fodder, fish | 0 | 0 | 20 | 20 | 20 | 0 |
| Worker, Horticulture and gardens | 0 | 0 | 646 | 646 | 533 | 113 |
| Worker, flower picking and grading | 0 | 0 | 37 | 37 | 17 | 20 |
| Total | 2603 | 2375 | 4302 | 9280 | 6655 | 2625 |

At the male specialist level, the most frequent majors were general animal production (cows, sheep, poultry) (360), then plant production (230), then the title of agricultural engineer (192). On the other hand, female graduates concentrated in the specialty of agricultural engineer (426), then appeared the residences are close for a tree horticultural specialist (148), a plant production specialist (147), a plant protection/integrated control specialist (145), and a site coordination engineer (145) (Landscape).

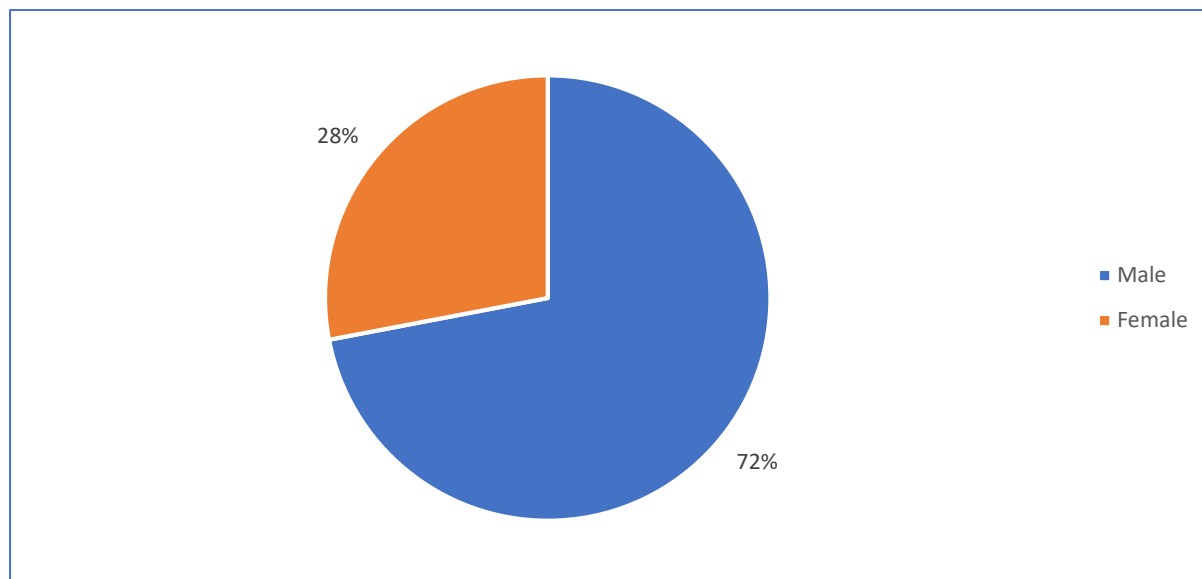


Figure No. 35: Relative distribution of the number of graduates of employee preparation programs by gender for the years 2019-2020-2021

Table 57 : Distribution of graduates by profession and training provider for the years 2019-2020-2021 (number of employees)

| | 2019 | 2020 | 2021 |
|---|------|------|------|
| Community Colleges/ Al-Balqa Applied University | 44 | 66 | 44 |
| – Technician, Plant Production | 44 | 66 | 44 |
| Vocational Education/Ministry of Education | 1171 | 1498 | 1100 |
| – Technician, general agriculture | 1171 | 1498 | 1100 |
| Vocational Training Corporation | 0 | 0 | 278 |
| – Apiarists | 0 | 0 | 23 |
| – Farmhand, field crops | 0 | 0 | 57 |
| – Farmhand, packing and packaging | 0 | 0 | 16 |
| – Fodder, fish | 0 | 0 | 20 |
| – Worker, Horticulture and gardens | 0 | 0 | 142 |
| – Worker, flower picking and grading | 0 | 0 | 20 |
| National Company for Training and Employment | 0 | 0 | 2018 |
| – Technician, Plant Production | 0 | 0 | 115 |
| – Farmhand , field & forage crops Farm- | 0 | 0 | 28 |
| – Farmhand, vegetables/general | 0 | 0 | 263 |

| | 2019 | 2020 | 2021 |
|---|------|------|------|
| – Farmhand, Horticulture | 0 | 0 | 25 |
| – Farmhand, Palm | 0 | 0 | 143 |
| – Farmhand, mixed crop cultivation | 0 | 0 | 466 |
| – Cattle breeders | 0 | 0 | 90 |
| – Farmhand, fish | 0 | 0 | 70 |
| – Breeder, chicken / incubators | 0 | 0 | 21 |
| – Apiarists | 0 | 0 | 95 |
| – Farmhand, packing and packaging | 0 | 0 | 181 |
| – Worker, Horticulture and gardens | 0 | 0 | 504 |
| – Worker, flower picking and grading | 0 | 0 | 17 |
| Jerash Private University | 84 | 79 | 118 |
| – Specialist, animal production/ General (cattle, sheep, poultry) | 21 | 24 | 19 |
| – Specialist, Agriculture extension | 15 | 8 | 16 |
| – Specialist, Plant Production | 48 | 34 | 69 |
| – Agricultural engineer | 0 | 13 | 14 |
| Jordan University of Science and Technology | 145 | 126 | 174 |
| – Specialist, animal production/ General (cattle, sheep, poultry) | 35 | 27 | 47 |
| – Specialist, Plant Production | 35 | 42 | 68 |
| – Agricultural engineer | 24 | 28 | 32 |
| – Veterinary\ General | 51 | 29 | 27 |
| Hashemite University | 136 | 79 | 83 |
| – Agricultural engineer | 136 | 79 | 83 |
| Mutah University | 41 | 47 | 47 |
| – Specialist, animal production/ General (cattle, sheep, poultry) | 15 | 20 | 18 |
| – Specialist, Plant protection/IPM | 6 | 3 | 3 |
| – Specialist, Plant Production | 20 | 24 | 26 |
| University of Jordan | 338 | 429 | 331 |
| – Specialist, animal production/ General (cattle, sheep, poultry) | 59 | 82 | 55 |
| – Specialist, Plant protection/IPM | 44 | 76 | 59 |
| – Specialist, Agriculture extension | 62 | 49 | 40 |
| – Specialist, Horticulture | 69 | 112 | 97 |
| – Agricultural engineer | 49 | 31 | 35 |
| – Engineer, landscaping | 55 | 79 | 45 |
| Al-Balqa Applied University | 82 | 51 | 82 |
| – Specialist, Plant protection/IPM | 43 | 23 | 44 |
| – Specialist, Plant Production | 0 | 0 | 11 |
| – Agricultural engineer | 39 | 28 | 27 |
| Al-Balqa Applied University Counseling Center | 552 | 0 | 0 |
| – Farmhand, vegetables/general | 110 | 0 | 0 |

| | 2019 | 2020 | 2021 |
|--|------|------|------|
| – Farmhand, Horticulture | 115 | 0 | 0 |
| – Farmhand, Palm | 114 | 0 | 0 |
| – Market-oriented, agriculture / horticulture, nursery and barks | 103 | 0 | 0 |
| – Farmhand, irrigation and fertilization | 110 | 0 | 0 |
| University of Jordan Counseling Center | 10 | 0 | 27 |
| – Farmhand, Palm | 0 | 0 | 12 |
| – Farmhand, fish | 10 | 0 | 0 |
| – Apiarists | 0 | 0 | 15 |
| Total | 2603 | 2375 | 4302 |

3.3 Skills in employee preparation programs

When the authorities concerned with preparing workers were asked about the degree of availability of different skills within their training programs and whether those skills were sufficiently available, available to some extent or not, the study showed that the authorities that prepare workers at a specialized level (general animal production, plant protection specialist Integrated control, agricultural extension specialist, plant production specialist, tree horticultural specialist, agronomist, landscape engineer, and veterinarians, taking into account in their programs to some extent the provision of computer skills, creativity and innovation, communication skill, analysis and problem solving, Planning, organization, time management, communication in English, numerical skills, as well as with regard to the rest of the programs provided by the preparation of workers at a level less than a specialist and which provide skills at the same level.

Despite the foregoing, there are exceptions shown by the study, especially in some programs and some skills, where the programs of fruit tree growers and agricultural worker irrigation and fertilization did not specifically provide the skill of using the computer, and the English language communication skill was not available within the programs of field crop and fodder farmers, vegetable farmers, and tree farmers Fruit-bearers, palm growers, horticultural growers, nurseries and gardens for commercial purposes, workers in mixed crop cultivation, cow breeders, fish breeders, poultry breeders / hatcheries, agricultural workers irrigation and fertilization, agricultural workers packaging and packaging, gardeners and gardeners, picking and flower grading workers, As for numerical skills, they are absent in the programs of vegetable growers, fruit tree growers, palm growers, horticultural growers, nurseries and gardens for commercial purposes, and agricultural worker irrigation and fertilization.

Table 58: Availability of skills in employee preparation programs

| skill | available enough | Somewhat available | Not available |
|--|------------------|--------------------|---------------|
| Using the computer | 1 | 23 | 2 |
| Creativity and innovation | 1 | 25 | |
| Communication skill | 2 | 24 | |
| Analysis and problem solving | 2 | 24 | |
| Planning, organizing and time management | 2 | 24 | |
| Communication in English | | 12 | 14 |
| Numerical skills | | 23 | 3 |

- Vocational preparation programs at all professional levels in which the duration of the programs is less than four months (increasing the efficiency of workers)

The total number of qualifications in the programs to raise efficiency over the three years 2019-2021 reached twelve thousand and sixty-four beneficiaries, including repetition. The figures indicate an increase in the number of beneficiaries of the efficiency-raising programs implemented by the Syndicate of Agricultural Engineers and implemented by the National Center for Agricultural Research in the year 2021 as a direct result of the spread of remote training programs, which are characterized by low costs and ease of attendance of participants, although the number of beneficiaries of the efficiency-raising programs that were implemented in a manner decreased. Directly due to the circumstances imposed by the Corona pandemic.

It is noteworthy that the programs to raise competence in the Syndicate of Agricultural Engineers in particular, as well as in the various training providers - albeit to a lesser extent - allow the beneficiaries to participate in more than one training program, which means that the total number of graduates of the courses to raise competence without repetition will be lower than what is mentioned in Table 5858

Table 59: Distribution of graduates of competency raising courses by training provider for the years 2019-2020-2021

| | 2019 | 2020 | 2021 | Total |
|---|------|------|------|--------|
| Vocational Training Corporation | 0 | 0 | 335 | 2.78% |
| National Company for Training and Employment | 0 | 0 | 205 | 1.70% |
| Agro for Consultation and Training (Company) | 30 | 25 | 25 | 0.66% |
| Agricultural Engineers Association | 473 | 1550 | 7375 | 77.90% |
| National Agricultural Research Center | 696 | 413 | 911 | 16.74% |
| University of Jordan Counseling Center | 0 | 10 | 3 | 0.11% |
| Veterinarians Association | 13 | 0 | 0 | 0.11% |
| Total | 1212 | 1998 | 8854 | 12064 |

Graduates of the competency-raising courses were distributed by region, with 47.99% in the center region, 35% in the North region, and 16.92% in the South region, while males constituted 53.46% of the total graduates, compared to 46.54% for females.

Table 60 : Distribution of graduates of qualification courses by region for the years 2019-2020-2021

| | 2019 | 2020 | 2021 | Total | |
|-----------------|------|------|------|-------|--------|
| Central Region | 396 | 914 | 4480 | 5790 | 47.99% |
| Northern Region | 581 | 806 | 2846 | 4233 | 35.09% |
| Southern Region | 235 | 278 | 1528 | 2041 | 16.92% |
| Total | 1212 | 1998 | 8854 | 12064 | |

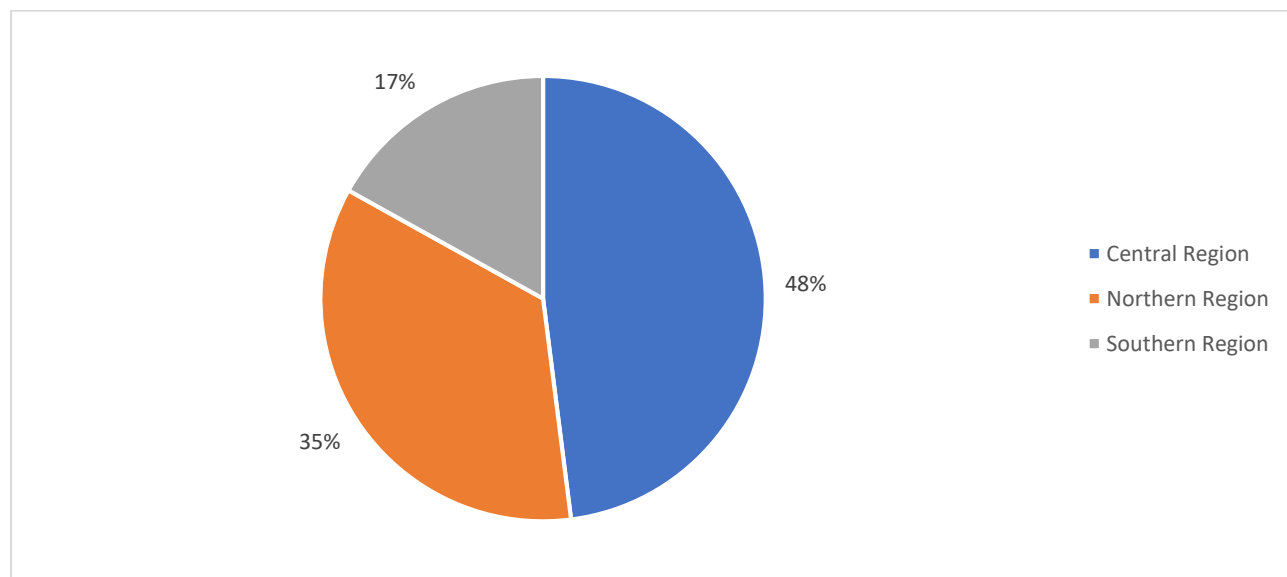


Figure No. 36: Distribution of graduates of competency-raising courses by region for the years 2019-2020-2021

Table 61: Distribution of graduates of competency-raising courses by gender for the years 2019-2020-2021

| | 2019 | 2020 | 2021 | Total | |
|--------|------|------|------|-------|--------|
| Male | 667 | 1145 | 4638 | 6450 | 53.46% |
| Female | 545 | 853 | 4216 | 5614 | 46.54% |
| Total | 1212 | 1998 | 8854 | 12064 | |

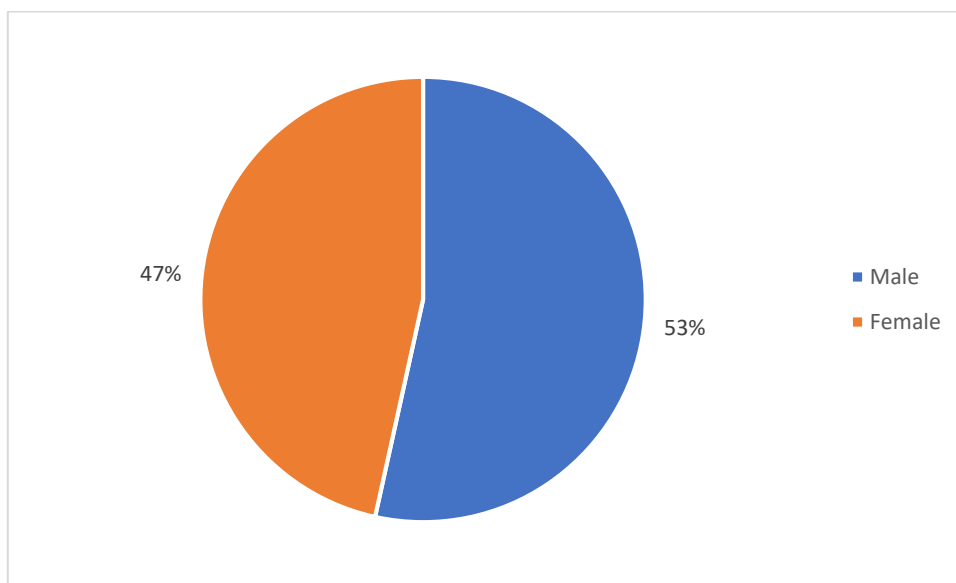


Figure No. 37: Distribution of graduates of competency-raising courses by region for the years 2019-2020-2021

The courses varied to include 64 different topics, including topics such as: management of farm animal breeding programs, nutrition and fattening, preparation of feed mixture, artificial insemination of animals, analysis and diagnosis of agricultural pests, pesticides and their effects, design of garden plans, management of irrigation and fertilization programs, design of irrigation schemes, application of technology Hydroponics, field crop cultivation programs, vegetable crop service programs in greenhouses, agricultural pest control programs, breeding and pruning programs for orchid trees, selection, hybridization, seed production, hybridization and production programs, animal and domestic bird care and ornamental fish breeding

Table 62 : Distribution of graduates of qualification courses for the years 2019-2020-2021

| | 2019 | 2020 | 2021 | Total |
|---|------|------|------|-------|
| Develop and manage farm animal breeding programs | 0 | 21 | 0 | 21 |
| Preparation and management of feeding and fattening programs for animals and their young | 0 | 0 | 25 | 25 |
| Determining the specifications of the breeding ponds, and supervising the procedures for their processing | 0 | 0 | 200 | 200 |
| Preparing and managing production program, managing (beehives) and breeding natural enemies | 0 | 200 | 10 | 210 |
| Preparing the feed mixture, and managing fattening programs | 0 | 0 | 100 | 100 |
| Analysis of agricultural pests, symptoms of infection, diagnosis, and determination of dangerous levels | 35 | 70 | 150 | 255 |
| Studying the properties, types, effects and toxicity of pesticides on pests, crops, insects, beneficial organisms and the environment | 0 | 0 | 400 | 400 |
| Evaluation of the results of the pest control | 0 | 0 | 110 | 110 |
| Design of public and private gardens | 0 | 0 | 30 | 30 |
| Preparing garden land preparation, including plowing, planning, piling, sterilization and planting of plants, trees, shrubs and green spaces | 48 | 200 | 748 | 996 |
| Preparation and management of irrigation and fertilization programs | 10 | 32 | 13 | 55 |
| Choosing the appropriate types of fertilizers, supervising their preparation and addition, and evaluating the response of the plants to them | 60 | 40 | 124 | 224 |
| Designing plans for various agricultural irrigation and drainage networks, and supervising the installation of irrigation and drainage networks | 40 | 0 | 365 | 405 |
| Evaluation of the adequacy of irrigation and drainage systems | 0 | 0 | 53 | 53 |
| Determining the water needs of the crops, and setting appropriate irrigation programs for them by determining the quantities and dates | 0 | 0 | 16 | 16 |
| Preparation and management of field crop cultivation programs | 7 | 77 | 380 | 464 |
| Preparation and management of field crop product processing programs in post-harvest operations | 24 | 42 | 0 | 66 |
| Preparation of vegetable crop service programs in greenhouses, their cultivation, pruning, blanching and management | 0 | 131 | 57 | 188 |
| Develop and manage agricultural pest control programs | 64 | 159 | 274 | 497 |
| Preparing and managing harvest programs and post-harvest service methods | 22 | 0 | 80 | 102 |

| | 2019 | 2020 | 2021 | Total |
|---|------|------|------|-------|
| Preparing programs for planning, preparing, and managing the land, planting fruit trees, their seedlings and cuttings, and distributing pollinators | 59 | 164 | 1242 | 1465 |
| Preparation of training and pruning programs for orchid trees and their management | 0 | 0 | 134 | 134 |
| Preparation and management of irrigation and fertilization programs for orchard trees | 0 | 0 | 150 | 150 |
| Preparing programs for harvesting, sorting, grading, handling, packaging, management, preservation and storage of horticultural products | 0 | 48 | 102 | 150 |
| Preparing programs for preparing the land and agricultural media for propagation, seed cultivation and management | 0 | 0 | 200 | 200 |
| Preparing programs for the selection, management, hybridization, and production of promising propagules | 0 | 0 | 200 | 200 |
| Determining the methods and dates of the propagation of ornamental plants and picking flowers, identifying the needs and mechanism of breaking the dormancy in bulbs, and choosing the appropriate stocks and scions of plants. | 30 | 35 | 10 | 75 |
| Preparing the land of the nursery, mixtures of agricultural media and soil alternatives, determining the varieties of seedlings intended to be propagated, choosing the appropriate dates for their cultivation, and determining the methods of their propagation | 0 | 200 | 210 | 410 |
| Doing periodic and emergency examinations on animals, evaluating diseased cases, determining the necessary laboratory tests and analyzes, studying the results, and diagnosing the case | 9 | 0 | 38 | 47 |
| Determining and quantifying vaccines, treatments, and therapeutic materials for animal and common diseases | 3 | 0 | 0 | 3 |
| Determining ways to care for domestic animals and birds and diagnosing their diseases, determining the types and quantities of necessary treatments and the number of doses, and preparing a medical prescription | 0 | 0 | 38 | 38 |
| Management and implementation of tree and vegetable crop service programs, their training and pruning programs and their implementation | 0 | 0 | 27 | 27 |
| Managing and implementing harvesting programs and post-harvest crop service methods | 51 | 0 | 130 | 181 |
| Managing and implementing feeding and fattening programs for animals and their young | 0 | 11 | 0 | 11 |
| Planning the land, preparing the pits, planting the seedlings of fruit trees, their seedlings and cuttings, strengthening them, and distributing pollinators | 134 | 0 | 0 | 134 |
| Implementation of training and pruning programs for orchard trees | 0 | 25 | 16 | 41 |

| | 2019 | 2020 | 2021 | Total |
|---|------|------|------|-------|
| Implementation of agricultural pest control programs in orchards and spraying of preventive and curative agricultural pesticides in accordance with environmental standards | 0 | 0 | 320 | 320 |
| Pruning tree species and their types in the appropriate manner and time | 0 | 15 | 0 | 15 |
| Preparing stocks to grafted with suitable scion | 0 | 10 | 0 | 10 |
| Implementation of irrigation and fertilization procedures programs according to the instructions | 0 | 0 | 10 | 10 |
| Preparing animal barn, cleaning and sterilizing barns, and .pest control | 49 | 0 | 0 | 49 |
| Unifying the dates of maturation in sheep through the sponge system, facilitating the process of natural insemination, monitoring pregnant females and participating in their giving births | 0 | 11 | 0 | 11 |
| Operate devices and equipment, follow up the cleaning of ponds and basins, and fill them with water | 40 | 0 | 0 | 40 |
| Equipping ornamental fishponds and basins, and placing the necessary equipment for them, such as gravel, air and water pumps | 0 | 0 | 20 | 20 |
| Preparing fodder mixtures and presenting them to the herd | 0 | 60 | 20 | 80 |
| Honeybee queen production and replacement | 0 | 0 | 300 | 300 |
| Inspect and clean equipment and tools used for spraying, dusting, fogging, manual and machine tools, tool servicing, replacement, and cleaning of some minor parts | 0 | 34 | 54 | 88 |
| Adding pesticides in the required quantities, mixing and preparing them | 0 | 0 | 150 | 150 |
| Check the readiness of the fertilizers, and add the organic and chemical fertilizers manually or automatically through the fertilizers according to the instructions | 0 | 0 | 16 | 16 |
| Transporting organic and chemical fertilizers in the farm stores according to the instructions and keeping them | 0 | 0 | 25 | 25 |
| Picking of vegetable crops or fruit trees manually, mechanically or chemically according to the instructions | 0 | 0 | 50 | 50 |
| Preparing the garden land by plowing and paving it and adding agricultural soils and chemical and organic fertilizers to the garden according to the instructions | 30 | 40 | 81 | 151 |
| Cultivation of indoor ornamental plant seedlings, bulbs and seeds in basins and containers | 0 | 0 | 200 | 200 |
| Preparing a mechanism for linking fishponds with aquaculture for plant production to benefit from the organic .matter resulting from fish farming in fertilizing plants | 28 | 0 | 0 | 28 |
| Preparing plant control programs, planting date for each .plant and the appropriate biological enemies for it | 120 | 0 | 100 | 220 |
| Supervising the design of protected agriculture (plastic and greenhouses) and knowing the tools used, their type and specifications | 35 | 0 | 285 | 320 |

| | 2019 | 2020 | 2021 | Total |
|---|------|------|------|-------|
| Supervising the work of machines and devices in protected agriculture houses and knowing their control and mechanism .of work | 0 | 0 | 500 | 500 |
| Determining the types (species) of plants produced and their productive conditions, the type of tools used, the time and other things | 0 | 0 | 150 | 150 |
| Determining the needs of the local and foreign markets for foodstuffs and agricultural products and their requirements | 0 | 0 | 180 | 180 |
| Orienting farmers to the requirements and needs of consumers of agricultural products, preparing marketing programs and how to connect farmers to markets | 0 | 0 | 200 | 200 |
| Develop plans for farmers that include specifications and .quality of agricultural products | 0 | 0 | 18 | 18 |
| Connect farmers to each other as well as to consumers through cellular applications or social networking sites to know the requirements of consumers in order to improve .the quality and varieties they desire | 15 | 118 | 29 | 162 |
| Hydroponic technology application | 279 | 169 | 334 | 782 |
| artificial insemination of animals | 20 | 86 | 180 | 286 |
| Total | 1212 | 1998 | 8854 | 12064 |

Chapter IV

Estimating the supply and demand gap in the agricultural sector

This chapter of the study deals with the gap between the supply and demand of agricultural professions and makes a comparison between the professions needed by the holdings working in the sector and those provided by educational programs. It also makes a comparison between the training programs that employers demand for workers to be employed in the agricultural sector to obtain for the years (2022 - 2024) with the training programs provided by the training providers in the years (2019-2021) with the aim of knowing the extent of convergence or divergence between what is required and what is offered.

The high unemployment rate is one of the most important indicators of the labor market study, and it is obvious at first glance that there is a gap between supply and demand. From this study, the extent of the gap between supply and demand in the agricultural sector and its various fields was investigated. The results revealed the following: The number of holdings working in this sector (105,172) holdings with a total employment volume of (423,728) male and female workers. The total demand for the years (2022-2024) amounted to about 32,667 job opportunities, while the total supply volume for the years (2019-2021) reached 21,344 male and female workers within the education and efficiency programs, which indicates the existence of a numerical gap estimated at (11323) as a deficit in supply (excess demand), deficit and surplus will be reviewed in detail:

4.1 The gap between expected job opportunities and the number of graduates of educational programs

Important disclaimer: The demand monitored by the study is not an expression of the total demand for professions at the level of the specialist and technician, as the holdings operating in the sector in the field of supplying production inputs, trading agricultural materials, exporting agricultural products, seed production companies and agricultural service companies are not included in the sample framework. In addition to the failure to monitor job opportunities in official institutions, which provide extension services, control, care for public gardens and agricultural education, despite the fact that the above are the most important work sites for graduates of agricultural professions.

4.1.1 The gap at the specialist level

Table 62 shows a total surplus in supply at the level of specialist, totaling 2298, and the surplus appeared in all professions except for the profession of veterinarian, despite the emergence of a supply deficit for the professions of nursery management specialist, cut flower specialist, ornamental plant specialist, irrigation specialist and fertilization specialist, which can be compensated through The profession of a plant production specialist, as is the case of a specialist in raising chickens, mothers and grandmothers, who can be compensated through the profession of a general animal production specialist (cows, sheep, poultry).

Table 63: Supply and demand gap at the level of specialist

(Total demand at specialist level for the years 2022-2024 compared to the total (supply) number of graduates of educational institutions for the years 2018-2021)

| Occupation | Total of demand | Total of supply | Shortage | |
|---|-----------------|-----------------|----------|---------------------|
| Veterinarian, general | 124 | 107 | 17 | Shortfall in supply |
| Specialist, breeder/poultry mothers and grandma | 9 | | 9 | Shortfall in supply |
| Specialist, irrigation, and fertilization | 9 | | 9 | Shortfall in supply |
| Specialist, Cut flowers and ornamental plants | 2 | | 2 | Shortfall in supply |
| Specialist, Nursery management | 1 | | 1 | Shortfall in supply |
| Specialist, garden, and landscape engineering | 3 | 179 | -176 | Oversupply |
| Specialist, agriculture extension | | 190 | -190 | Oversupply |
| Specialist, Horticulture | 6 | 278 | -272 | Oversupply |
| Specialist, Plant protection/Integrated Pest Management | 6 | 301 | -295 | Oversupply |
| Specialist, Plant Production | 3 | 377 | -374 | Oversupply |
| Specialist, Animal Production (cattle, sheep, poultry) | 1 | 422 | -421 | Oversupply |
| Specialist, Agricultural engineer | 10 | 618 | -608 | Oversupply |
| Overall oversupply | | | 2298 | |

4.1.2 The technical/technical level gap

Table 63 shows a total surplus in supply at the technician/technical level, a total of 2,963. On the supply side, there is a title of agricultural technician without demand, which most likely can cover the profession of plant production technician without covering the profession of animal production or veterinary technician.

Table 64: Supply and demand gap at the technical level

(Total demand at the technical level for the years 2022-2024 compared to the total (supply) number of graduates of educational institutions for the years 2018-2021)

| Occupation | Total of demand | Total of supply | Shortage | |
|-------------------------------------|-----------------|-----------------|----------|---------------------|
| Technician, Plant Production | 828 | 269 | 559 | Shortfall in supply |
| Technician, Animal Production | 228 | | 228 | Shortfall in supply |
| Veterinary, Technician & Assistants | 19 | | 19 | Shortfall in supply |
| Technician, Agriculture | | 3769 | -3,769 | Oversupply |
| Overall oversupply | | | 2963 | |

4.1.3 Skilled worker gap

Table 65 shows a total deficit in supply at the level of skilled workers, totaling 1529. The comparison showed the disappearance of supply in the professions of sheep and sheep breeders, livestock and dairy producers for commercial purposes, chicken/broiler breeders, mushroom farms, nursery farms, cut flower farms, and pruning farms. Trees and their grafting, on the other hand, there is an offer in the profession of a farmer in horticulture, nurseries, and gardens for commercial purposes without any demand.

Table 65: Supply and demand gap at the level of skilled workers

(Total demand at the level of skilled workers for the years 2022-2024 compared to the total (supply) number of graduates of educational institutions for the years 2018-2021).

| Occupation | Total of demand | Total of supply | Shortage | |
|---|-----------------|-----------------|----------|---------------------|
| Farmhand, fruit picker | 16,096 | 197 | 15,899 | Shortfall in supply |
| Farmhand, packing and packaging | 4,009 | | 4,009 | Shortfall in supply |
| Ploughman | 3,756 | | 3,756 | Shortfall in supply |
| Farmhand, irrigation, and fertilization | 1,930 | 110 | 1,820 | Shortfall in supply |
| Farmhand, pesticide spraying | 951 | | 951 | Shortfall in supply |
| Livestock Milking Worker | 733 | | 733 | Shortfall in supply |
| Farmhand, hoeing | 254 | | 254 | Shortfall in supply |
| Worker, barn cleaning | 247 | | 247 | Shortfall in supply |
| Livestock butcher | 193 | | 193 | Shortfall in supply |

| Occupation | Total of demand | Total of supply | Shortage | |
|------------------------------------|-----------------|-----------------|----------|---------------------|
| Baggage porter/ hotel | 188 | | 188 | Shortfall in supply |
| Fodder provider | 157 | | 157 | Shortfall in supply |
| Harvester | 83 | | 83 | Shortfall in supply |
| Worker, ornamental plant serving | 18 | | 18 | Shortfall in supply |
| Cheese maker | 9 | | 9 | Shortfall in supply |
| Clipper, cow toenail | 5 | | 5 | Shortfall in supply |
| Worker, hatching agent | 3 | | 3 | Shortfall in supply |
| Fodder provider, fish | | 20 | -20 | Oversupply |
| Worker, flower picking and grading | | 37 | -37 | Oversupply |
| Farmer, field crops | | 57 | -57 | Oversupply |
| Farmhand, mixed crop cultivation | | 466 | -466 | Oversupply |
| Worker, horticulture, and barks | 14 | 646 | 632- | Oversupply |
| Overall shortfall in supply | | | 27113 | |

4.1.4 The gap at the level a specific skilled worker

Table 65 shows a total deficit in supply at the level of a specific skilled worker, with a total of 27113. The supply side presented only seven occupations that intersected with demand, of which three were (the professions of an irrigation worker, fertilizer, a worker in picking crops, and a worker in gardens and horticulture), while no direct demand appeared against four professions (a worker in field crops, a worker in mixed crop cultivation, a picking and flower grading worker, and a fish feeder) although these occupations can cover part of the demand for occupations (agricultural worker picking crops, agricultural worker picking crops, and forager). On the other hand, the demand side included 17 different professions, the most important of which were, respectively: Agricultural worker, crop picking, agricultural worker packaging and plowing, agricultural worker irrigation and fertilization.

Table 66: Supply and demand gap at the level of a specific skilled worker
 (Total demand at the level of a specific skilled worker for the years 2022-2024 compared to the total (supply) number of graduates of educational institutions for the years 2018-2021)

| Occupation | Total of demand | Total of supply | Shortage | |
|---|-----------------|-----------------|----------|---------------------|
| Ploughman | 3,756 | | 3,756 | shortfall in supply |
| Harvester | 83 | | 83 | shortfall in supply |
| Livestock Milking Worker | 733 | | 733 | shortfall in supply |
| Baggage porter/ hotel | 188 | | 188 | shortfall in supply |
| Cheese maker | 9 | | 9 | shortfall in supply |
| Worker, hatching agent | 3 | | 3 | shortfall in supply |
| Worker, barn cleaning | 247 | | 247 | shortfall in supply |
| Worker, ornamental plant serving | 18 | | 18 | shortfall in supply |
| Farmhand, packing and packaging | 4,009 | | 4,009 | shortfall in supply |
| Farmhand, pesticide spraying | 951 | | 951 | shortfall in supply |
| Farmhand, irrigation, and fertilization | 1,930 | 110 | 1,820 | shortfall in supply |
| Farmhand, hoeing | 254 | | 254 | shortfall in supply |
| Farmhand, fruit picker | 16,096 | 197 | 15,899 | shortfall in supply |
| Worker, horticulture, and barks | 14 | 646 | 632- | oversupply |
| Farmer, field crops | | 57 | -57 | oversupply |
| Farmhand, mixed crop cultivation | | 466 | -466 | oversupply |
| Worker, flower picking and grading | | 37 | -37 | oversupply |
| Fodder provider | 157 | | 157 | shortfall in supply |
| Fodder provider, fish | | 20 | -20 | oversupply |
| Clipper, cow toenail | 5 | | 5 | shortfall in supply |
| Overall shortfall in supply | | | 27113 | |

4.2 The gap between the required training needs and the training programs offered

The study showed that there are 32,667 future job opportunities in the sector that require 102 different skills; while the operators believe that there is a need for sixty-nine skills to rehabilitate 10,229 workers who work for them. The fruits of vegetable crops or fruit trees and their products

manually, mechanically or chemically according to the instructions, the skill of receiving the crop of vegetables or fruits and unloading them in the designated place, cleaning, sorting and grading the fruits, the skill of plowing the land of agricultural orchards and gardens, the skill of packing fruits into suitable packages, packing the packages with appropriate packaging tools and transporting packages To freight cars or to farm stores, the skill of inspecting the readiness of fertilizers and adding organic and chemical fertilizers manually or automatically through fertilizers according to the instructions, the skill of sorting distorted, infected and small fruits from healthy fruits, classifying and grading fruits according to the required specifications, and the skill of assembling packages, packaging and storing them in warehouses or refrigerators Until marketed, and the skill of collecting the fruits of fruitful trees from orchards using small packages Prepared for this, and the skill of adding pesticides in the required quantities, mixing and preparing them.

On the other hand, a surplus appeared in the availability of some of the skills provided by the training authorities, and it emerged in the field of preparing programs for planning, preparing and managing the land, planting seedlings, seedlings and cuttings of fruit trees, distributing pollinators, preparing programs for preparing, managing and preparing garden land, such as plowing, planning, staking, sterilization, planting plants, trees, shrubs and green areas, and supervision. The work of machines and devices inside the farmhouses and knowledge of their control and mechanism of action, preparation and management of agricultural pest control programs, and preparation and management of programs for planting field crops.

4.3 The gap between supply and demand for female labor

A comparison between the data of female graduates of educational programs for the years 2019-2021 and the data of demand and job opportunities for females expected for the years 2022-2024 showed that the size of the gap between supply and demand amounted to 10,073 opportunities in favor of demand (12698 the volume of demand compared to 2,625 the volume of supply). The surplus demand appeared mainly in the profession of an agricultural worker picking crops, the profession of a packing and packaging agricultural worker, the profession of a farmer of fruit trees (tree horticulture), the profession of a livestock milker, the profession of an agricultural worker hoeing, and the profession of a farmer in field crops and fodder, while the surplus supply appeared in the profession Agricultural extension specialist, landscaping and landscape engineering specialist, plant protection / integrated control specialist, plant production specialist, tree horticultural specialist, agronomist, and agricultural technicians, which are professions of the first / specialist and second level / technician - Technical.

The demand appeared in a group of professions without any corresponding offer, including; Farmers in field crops and fodder, livestock breeders and commercial dairy producers, nursery farmers, poultry breeders / hatcheries, gardeners, chicken / broiler breeders, harvesters, pruning and grafting farmers, and beekeepers.

The offer appeared in a range of professions without being met by any demand; the most important of them are a plant protection/integrated control specialist, a plant production specialist, a tree

horticultural specialist, veterinarians, and a general animal production specialist (cows, sheep, and poultry).

There was no demand or offer to employ or qualify females in 21 professions, including: mushroom farmers, nursery management specialist, cut flower and ornamental plant specialist, mother and grandmother chicken breeding specialist, irrigation and fertilization specialist, livestock butcher, plowman, baggage porter, cheese maker, laborer Hatchery, barn cleaning worker, indoor ornamental plant service worker, agricultural worker spraying pesticides, feeder, animal production technician, veterinary technicians and their assistants, director of plant wealth production department, fish breeders, sheep and sheep breeders, cut flower growers, cow feather trimmer.

Chapter V

Human resource development plan in the agricultural sector

Methodology for preparing a human resource plan for the agricultural sector

First: Formation of the sectoral team for agriculture

The agriculture sectoral team was formed representing the Ministry of Agriculture, the Jordanian Farmers Union, the Association of Agricultural Engineers, the Jordanian Association of Vegetables and Fruits Exporters and Producers, the Specific Union of Poultry Breeders, the Jordan Chamber of Commerce, Al-Balqa Applied University, the Ministry of Labor, the Agricultural Information Department/Jordan Radio, the Department of General Statistics Ministry of Education / Agricultural Education and the Secretariat of the Council for Employment, Training and Vocational and Technical Education. The team's tasks and objectives included studying the sector's concerns and issues at the level of policies and strategies, developing a human resource development plan for the sector, studying, approving the sector's professional standards, and raising all the outcomes of its work to the Council for Employment, Training, and Vocational and Technical Education.

Second: The National Center's study of the gap between the supply and demand sides in the agricultural sector

The National Center for Human Resources Development has prepared an analytical study of the gap between the supply and demand sides in the agricultural sector, through the implementation of a field survey in cooperation with the Department of Statistics, which included holdings representative of the sector, and filling out forms by institutions providing training in the sector. It is reported that the National Center presented all the study tools and mechanisms to the sectoral team and obtained the approval of the team before proceeding with the implementation of the study. This included everything related to the study sample, institutions that provide training, and so on. A small team within the sectoral team continued to work with the National Center in the various stages of the study.

Third: Developing a sectoral human resource development plan for the agricultural sector, based on the results of the National Center study of the gap between the supply and demand sides in the furniture industry sector.

Based on the results of the National Center's study of the gap between the supply and demand sides in the agricultural sector:

- Reviewing and developing the draft sectorial human resources plan for the agricultural sector.
- Presenting the draft sectoral human resources plan for the agriculture sector to the advisory committee for the study and taking their comments on the plan and including them.

Presenting the draft sectoral human resources plan for the agricultural sector to the work team, and taking their comments on the plan and including them.

- Approval of the sectoral human resources development plan for the agricultural sector in its final form.

Human Resource Development Plan in the Agriculture Sector(2024-2022)

Strategic Objective (1): To provide the agricultural sector with a trained and qualified workforce in accordance with the requirements of current and future employers in terms of quantity and quality.

(Performance Indicator for Strategic Objective 1: Alignment of programs and numbers of graduates of vocational and technical training and education institutions to the requirements of current and future employers in terms of quantity and quality in 2024)

Outcome (1): TVET programs respond to the needs of the agricultural sector.

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|------------------------|-----------------------|--|--|---|
| 1.1 Develop and support the Agriculture Sector Skills Council | Hold the first meeting | Third quarter of 2022 | Minutes of the first meeting of the sectoral team. | Technical and Vocational Skills Development Commission's | Ministry of Labor. Agricultural unions and associations. Private sector. Chambers of Industry and Commerce. Training and education institutions from the public and private sectors |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|--|--|---------------------------|---|-----------------------------------|--|
| 1.2 Preparing and implementing an executive action plan for the Agriculture Sector Skills Council | Preparing and implementing the executive action plan for the years 2023-2024. | Third quarter of 2022 | Document of the operational plan of the sectoral team Quarterly follow-up and calendar reports. Annual report | Sectorial Team | Technical and Vocational Skills Development Commission's |
| 1.3 Establishing partnerships between the public and private sectors in the implementation of training programs in the agricultural sector to cover the requirements of the disabled and females | Signing an agreement to manage a training facility in the public sector through the private sector. | Fourth quarter of 2022 | Training Implementation Agreement Document | Sectorial Team | Vocational and technical training and education institutions and private sector institutions |
| 1.4 Reviewing the professional standards for the professions and jobs required in the agricultural sector and developing them in line with the results of the study of the National Center for Human Resources Development | Updating the professional standards for professions in the plant and animal production sectors to ensure the provision of a common minimum of technical skills from all professions in the same category, showing the differentiation of each profession from the other in terms of the tasks and skills required. | The first quarter of 2023 | Updated professional standards document | Agriculture Sector Skills Council | Ministry of Labor Technical and Vocational Skills Development Commission's |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|--|---|----------------------------|---|-------------------------------------|--|
| 1.5 Develop training and technical programs for the agricultural sector in vocational and technical training and education institutions, which cover the training needs of women and men with disabilities | Developing training and technical programs to cover the skills of the professions required in the sector mainly: <ol style="list-style-type: none"> 1. Fruit tree growers (tree horticulture) 2. Farms in field crops and fodder 3. Sheep and goat breeders 4. Nursery growers 5. Mushroom Farms | The first quarter of 2023 | <ul style="list-style-type: none"> • Documents of the developed training and technical programs | Training and education institutions | Sectorial Team |
| 1.6 Launching cooperation initiatives in the field of training, employment or consulting with regional and international bodies in the agricultural sector | <ul style="list-style-type: none"> • •Preparing a list of the institution and the regional and international bodies targeted. • •Communication with these authorities. • •Signing a cooperation agreement | The second quarter of 2023 | <ul style="list-style-type: none"> • A list of the names of the institution and authorities • Correspondence documents with regional and international bodies. • Cooperation agreement document. | Agriculture Sector Skills Council | Technical and Vocational Skills Development Commission's International donors. |
| 1.7 Review the vocational agricultural program taught in the schools of the Ministry of Education and make recommendations that would improve the degree of compatibility | <ul style="list-style-type: none"> • •Designating a group of liaison officers in the Ministry of Education • Holding working groups to review agricultural education curricula | Third quarter of 2023 | <ul style="list-style-type: none"> • Submitting recommendations to the Ministry of Education | Agriculture Sector Skills Council | Agricultural unions and federations private sector. |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|--|------------------------|---|--|--|
| of this program with the needs of the labor market and encourage students to join these programmes. | <ul style="list-style-type: none"> • •Set appropriate recommendations for development • •Determining the requirements for implementing the modified curriculum in cooperation and coordination with the liaison officer in the ministry, such as the availability of qualified trainers, training programs for trainers, and the necessary training tools and kits | | | | |
| 1.8 Conducting complementary studies that include holdings operating within the supportive agricultural sector, especially agricultural production marketing and packaging companies, the agricultural industries sector, companies manufacturing and marketing agricultural production requirements, and agricultural fairs that | Using the same methodology that was adopted in this study, with the separation between the sectors of plant production and animal production | The first quarter 2024 | <ul style="list-style-type: none"> • Publishing a study to determine the gap between supply and demand in holdings operating in the sector and not included in the current study sample. | National Center for Human Resource Development | Department of Statistics Agricultural Engineers Association Syndicate of Agricultural Materials Dealers and Producers Vegetable and Fruit Producers and Exporters Association |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|--|--|-----------------------|--|-----------------------------------|--|
| were not included in this study. | | | | | Exporters of Vegetables and Fruits Association |
| <p>Strategic Objective (2): Developing the work environment for the agricultural sector holdings and training holdings (Performance indicator for Strategic Objective 2: Increased investment rates in the agricultural sector in 2016) More about objective</p> | | | | | |
| <p>Outcome 2: Strengthening and stimulating agricultural sector holdings.</p> | | | | | |
| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
| 2.1 Create a website or electronic contact page for the agricultural sector | Website/working contact page for the agricultural sector | Third quarter of 2022 | Number of visits to a website/contact page Publishing the quarterly follow-up and calendar reports and the annual report of the sector on the website / webpage | Sector Team | Technical and vocational education and training institutions private sector institutions More about vocational |
| 2.2 Providing courses to raise technical competence for workers in the agricultural sector | At the level of each governorate, (4) courses were held to raise the adequacy of workers in the holdings of the agricultural sector on the following skills: | 2024- 2023 | Training course documents. | Agriculture Sector Skills Council | Technical and vocational education and training institutions from |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|--|------------|---------------------|-------------------------------|---|
| <p>holdings to increase their competitiveness in the labor market</p> | <ul style="list-style-type: none"> • Implementation of irrigation and fertilization programs for orchard trees • Implementation of irrigation and fertilization programs in vegetable farms • Implementation of programs for harvesting, sorting, grading, handling, packaging, preservation, and storage of horticultural products • Implementation of agricultural pest control programs <p>Planning the land, preparing the pits, planting, and strengthening the seedlings of fruit trees, their seedlings, and cuttings, and distributing pollinators.</p> <ul style="list-style-type: none"> • Implementation of harvesting programs and crop service methods after harvest • Implementation of vegetable crop service programs in greenhouses, as well as the processes of training, pruning, and blanching them • Inspect, clean, and replace the water droppers and filters, and replace them, check the readiness of fertilizers, and add organic and chemical fertilizers manually or automatically. | | | | <p>the public and private sectors</p> <p>International donors and supporters.</p> |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|---|-------------------|----------------------------|-----------------------------------|---|
| | <ul style="list-style-type: none"> • Monitoring symptoms of diseased infections and taking preventive and curative measures • Monitoring the health status of sheep and implementing preventive and curative health programs, • Milking of female cows and sheep (automatic or manually) • Preparing fodder mixtures, and providing fodder to sheep • More about level | | | | |
| 2.3 Providing courses on the general skills necessary for workers in the agricultural sector holdings to increase their competitiveness in the labor market | <p>At the level of each governorate, 4 training courses were held on the following general skills:</p> <ul style="list-style-type: none"> • Liaising and working with the team, • planning, organization, and time management, • Use of computers and numerical skills, • Communication in English • Analysis and problem solving <p>creativity and innovation,</p> | Years 2023 - 2024 | Training course documents. | Agriculture Sector Skills Council | <p>Technical and vocational education and training institutions from the public and private sectors</p> <p>International donors and supporters.</p> |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|---|------------------------|---------------------|-----------------------------------|---|
| 2.4 Regulating and facilitating the procedures for licensing training providers in the agricultural sector (the private sector) and approving their training programs | Reviewing the instructions of training providers in the agricultural sector in the private sector in order to control and facilitate an increase in the number of bodies rehabilitating workers in the sector | Third quarter of 2023 | | Agriculture Sector Skills Council | Technical and Vocational Skills Development Commission's |
| <p>Strategic Objective (3): Promote work in the agricultural sector</p> <p>(Performance indicator for strategic objective 3: Increase in the number of workers in the agricultural sector in 2024</p> | | | | | |
| 3.1 Introducing workers in the agricultural sector to public health and safety standards | Follow-up reports and calendar | Fourth quarter of 2022 | Workshop Documents | Agriculture Sector Skills Council | <p>Ministry of Labor.</p> <p>Vocational Training Corporation.</p> <p>International Labor Organization</p> |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|---|-----------------------|-----------------------------------|--|---|
| 3.2 Developing a database for the agricultural sector covering demand side information in the labor market. | <p>The database includes current and future demand information on:</p> <ul style="list-style-type: none"> • Jobs chances • holdings • workers • Skills required in the labor market (technical and general). <p>More about database</p> | Third quarter of 2022 | Database | <p>Agriculture Sector Skills Council</p> <p>National Center for Human Resource Development</p> | <p>Chambers of Industry and Commerce</p> <p>Amman Municipality</p> <p>federations and unions</p> <p>Funds</p> <p>Jordan Enterprise Development Corporation</p> <p>municipalities</p> <p>Ministry of Labor</p> <p>Private employment offices</p> |
| 3.3 Promoting careers in the agricultural sector | Implementation of a media awareness campaign to promote the professions of the agricultural sector. | Third quarter of 2023 | Campaign materials and promotions | Agriculture Sector Skills Council | <p>Vocational and technical training and education institutions and private sector institutions</p> <p>International donors.</p> |

| Activity | Performance Index | Time frame | Verification method | Implementation responsibility | The relevant authorities |
|---|---|------------------------|---|-----------------------------------|---|
| 3.4 Coordination with the bodies and institutions concerned with financing to support efforts to qualify workers in the agricultural sector | <ul style="list-style-type: none"> • Submitting proposals for projects to rehabilitate workers in the agricultural sector through the relevant organizations | Fourth quarter of 2022 | Work proposal documents and related reports | Agriculture Sector Skills Council | International Labor Organization |
| 3.5 Coordination with the bodies and institutions concerned with financing to finance small and medium-sized enterprises in the agricultural sector | <p>Presenting two work proposals to the funding agencies to increase the use of agricultural holdings from their financing programs and projects in the field of:</p> <ul style="list-style-type: none"> • Creation of small projects, Expansion of existing holdings | The first quarter 2023 | Work proposal documents and related reports | Agriculture Sector Skills Council | <p>Funding funds such as the Development and Employment Fund</p> <p>Jordan Enterprise Development Corporation</p> <p>JEDCO</p> <p>Agricultural Credit Corporation</p> <ul style="list-style-type: none"> • International donors. |

Chapter Six

The results and recommendations

6.1 Results

The study showed that the number of graduates of the main educational and training institutions in the agricultural sector, including programs to prepare workers and raise efficiency in the Kingdom for the years (2019-2021), reached (21344), 32% of which were contributed by the training bodies of the public sector, while the rest of the bodies contributed Provided training in the rehabilitation of 68% of the beneficiaries.

The study showed the provision of 26 fields to prepare workers in the sector, the total number of agricultural technicians in the years (2019-2021) 40.6% of them, while the total specialists accounted for 26.6% of the total graduates.

The majors attracting the most males were, respectively; Agricultural technicians (3087), gardeners and horticulture (533), mixed crops (386), and the agricultural technician (682) who had the highest number of females.

At the male specialist level, the most frequent majors were general animal production (cows, sheep, poultry) (360), then plant production (230), then the title of agricultural engineer (192). On the other hand, female graduates concentrated in the specialty of agricultural engineer (426), then appeared the numbers are similar for a tree horticultural specialist (148), a plant production specialist (147), a plant protection/integrated control specialist (145), and a landscape engineer (Landscape.(145)

The number of holdings in the agricultural sector reached (105,172), distributed by (26%) in the central region, about (55%) in the North region, and 19% in the South region. Its activity is distributed at 53% working in the plant production sector, 36% in the animal production sector, and 11% working in the two activities in a mixed manner.

Most holdings operating in the agricultural sector are sole proprietorships; According to its legal entity, with a percentage exceeding 85%, followed by family holdings with 12.5%, and in small percentages, holdings according to the legal entity are individuals, companies, companies, and government.

The holdings in the sector include 423,728 workers, of whom 84% are males and 16% are females. The individual establishment is the largest employer for both genders, with a total of 345,165 and 81.5%. They are distributed according to the type of work, about 46% of permanent employment, and 14% of temporary employment, and 40% seasonal employment. Specialists and technical/technical workers are divided between permanent and temporary workers only, and the total number of technical/technical workers in holdings reached 37,478 workers, representing 9% of the total workers in agricultural holdings, and the number of workers at the level of specialist reached 2,613 workers, which constitutes less than 1% of the total number of workers in the holdings.

The study showed the challenges of making holdings represented in the high costs of production inputs (rent, wages of workers, water, electricity and fuel, raw materials) and then, respectively; Climatic conditions (weather conditions and water scarcity), diseases, lack of medicines and vaccinations, high taxes, laws, and legislations regulating work, and weak investment promotion.

On the reality of demand in the year 2021, most of the holdings showed no change in the demand for their services, at a rate of 53%, while the holdings (41%) faced a decrease, while 6% faced an increase

in demand. As for expectations of demand trends in the coming years 2022-2024, eleven thousand holdings expected a rise in demand for their services compared to the year 2021, while nearly ten thousand holdings saw demand almost constant, but a number equal to their sum expected a decrease in demand than it was in 2021. The Corona pandemic had a negative impact on 52.17% of the holdings, while 1,820 holdings (1.73%) were positively affected, and the rest of the holdings were not affected by the pandemic 48.1%.

Most holdings expected that there would be no need for new professions in general in the years 2022-2024, at a rate of 95%, which means a decrease in the demand for employment in the future. Nevertheless, 65,258 holdings answered that they prefer employing Jordanians, compared to 39,914 who did not, while 4,211 holdings reported that they face Difficulty in employing Jordanians, and its violation was 38051, while 62,910 possessions found that there are difficulties in employing Jordanians, albeit partially.

The study did not show a desire among the holdings to employ female workers, as 102419 answered that they did not intend to hire females, compared to 2753 who had the desire to do so, and lack of need was the most important reasons 71%, followed by the nature of work 21%, then the desire of the employer came 3%, while traditions and customs represented 1% of justifications are religious beliefs 1%. The holdings wishing to employ females reported that they do not differentiate between married and single women (89%), while 10% of the holdings wishing to employ females preferred to be married.

857 holdings employ people with disabilities, and other holdings want to employ people with disabilities. The study showed that the total holdings interested in employing people with disabilities are 933 out of the total number of 105172 working holdings. The holdings attributed the lack of employment of persons with disabilities to several reasons, the most important of which was the lack of hiring 66%, the inappropriate nature of work 31%, and other less important reasons, such as the employer's unwillingness to employ persons with disabilities, the difficulty of dealing and communicating between persons with disabilities and customers, stagnation and market weakness, The company is under liquidation.

The total number of Jordanians working in the sector reached 322,910 workers, constituting 76% of the workforce in the sector, which is the largest at the level of permanent, temporary and seasonal employment. As for the Egyptian workforce, its number reached 51,608, compared to 41,192 of Syrian nationality, and 8019 of other nationalities. The Egyptian nationality came before the Syrian in the category of temporary employment, while the Syrian nationality came before the Egyptian in the category of seasonal employment. The number of workers within the holder and his family reached 255,422 workers, while the number of workers outside the holder's family reached 168,306 workers, including 100,818 non-Jordanian workers, who constitute nearly 60% of the total non-family agricultural employment.

The data showed the distribution of employment by educational level that the majority of those working in agriculture hold a scientific qualification less than secondary 58%, 18% general secondary education, 8% bachelor's degree, and 2% intermediate diploma 2%, although professions at the level of specialist (bachelor and postgraduate studies do not constitute combined 1%) and future job

opportunities were concentrated within an educational level less than secondary, with nearly three quarters of the demand, while the level of demand was the lowest for the bachelor's level by 0.18%. The holdings operating in the sector showed a need to rehabilitate 10,229 of its workers, and the priority was in terms of the numbers to be trained within 33 professions, foremost of which was training plant production technicians, an agricultural worker picking crops, an agricultural worker spraying pesticides, an agricultural worker for irrigation and fertilization, and an agricultural worker for packaging. In the specialist category, priority was given to training veterinarians and plant production specialists.

The expected total demand for employment for various professions for the years (2022-2024) amounted to about 32,667 job opportunities, while the total supply volume for the years (2019-2021) according to education programs and efficiency raising programs reached 21,344 male and female workers, including a numerical gap estimated at (11323).) as a supply deficit (excess demand)

The most prominent expected job opportunities for the years 2022-2024 are agricultural workers picking crops, agricultural workers packaging, plowing, and agricultural workers irrigation and fertilization. The expected job opportunities in the years 2022-2024 were distributed according to the responses of the holdings, about 19,988 jobs for males and 12,698 jobs for females, 61% and 39%, respectively.

The study showed that the most important difficulties facing holdings when hiring workers lies in providing the required skills, providing values and positive attitudes towards work and skills that support employment, and providing academically qualified workers. On the other hand, commitment to work, endurance of work pressure/nature of work, availability of work ethic (honesty, activity, discipline), and worker agreeing to wages are among the least important difficulties.

The most important means of hiring workers in holdings in the agricultural sector was direct contact and personal relationship with a rate of 97%, and the remaining means include national campaigns for employment, newspapers and websites, employment offices, the Civil Service Commission, and job days held by the Ministry of Labor. Through the unions, and the Ministry of Labor, they together constituted only 3% of the total responses of the study sample.

A total surplus was recorded on the supply side at the level of the specialist, a total of 2298, and the surplus appeared in all professions except for the profession of veterinarian, despite the emergence of a supply-side deficit for the professions of nursery management specialist, cut flower specialist, ornamental plant specialist, irrigation and fertilization specialist, which can be compensated by During the profession of a plant production specialist, as is the case with the specialist in raising chickens for mothers and grandmothers, which can be compensated through the profession of a general animal production specialist (cows, sheep, poultry).

A total surplus on the supply side was recorded at the technician/technical level totaling 2,963. On the supply side, the title of agricultural technician appears without demand, which probably could cover the profession of a plant production technician without covering the profession of animal production or veterinary technician.

A total deficit on the supply side was recorded at the level of skilled workers totaling 1529, and the comparison showed the disappearance of supply in the professions of sheep and sheep breeders,

livestock and dairy producers for commercial purposes, chicken/broiler breeders, mushroom farms, nursery farms, cut flower farms, and pruning farms Trees and their grafting, on the other hand, there is an offer in the profession of a farmer in horticulture, nurseries and gardens for commercial purposes without the presence of demand.

A total deficit on the supply side was recorded at the level of a specific skilled worker, totaling 27,113. Only seven professions that intersected with demand were provided, including three (the professions of an irrigation and fertilization worker, a crop picker, and a gardener and horticultural worker) while no direct demand appeared in comparison to four professions (a worker In field crops, a worker in mixed crop cultivation, a picking and flower grading worker, and a fish feeder) although these occupations can cover part of the demand for occupations (agricultural worker picking crops, agricultural worker picking crops, and forager). On the other hand, the demand side included 17 different professions, the most important of which were, respectively: Agricultural worker harvesting crops, agricultural worker packaging and plowing, agricultural worker irrigation and fertilization.

A comparison between the data of female graduates of educational programs for the years 2019-2021 and the data of demand and job opportunities for females expected for the years 2022-2024 showed that the size of the gap between supply and demand amounted to 10,073 opportunities in favor of demand (12698 the volume of demand compared to 2,625 the volume of supply). The surplus demand appeared mainly in the profession of an agricultural worker picking crops, the profession of a packing and packaging agricultural worker, the profession of a farmer of fruit trees (tree horticulture), the profession of a livestock milker, the profession of an agricultural worker hoeing, and the profession of a farmer in field crops and fodder, while the surplus supply appeared in the profession Agricultural extension specialist, landscaping and landscape engineering specialist, plant protection / integrated control specialist, plant production specialist, tree horticultural specialist, agronomist, and agricultural technicians, which are professions of the first / specialist and second level / technician-technical .

Demand appeared in a range of professions for females without being matched by any supply (farmers of field crops and fodder, livestock breeders and dairy producers for commercial purposes, nursery farmers, poultry breeders / hatcheries, gardeners, chicken / broiler breeders, harvesters, pruning and grafting farmers, bee breeders).

The offer appeared in a range of professions for females without any demand being met; The most important of them are a plant protection/integrated control specialist, a plant production specialist, a tree horticultural specialist, veterinarians, a general animal production specialist (cows, sheep, poultry).

There was no demand or offer to employ or qualify females in 21 professions, including: (mushroom farmers, nursery management specialist, cut flowers specialist and ornamental plants, mothers and grandmothers chicken breeding specialist, irrigation and fertilization specialist, livestock butcher, tiller, porter, cheese maker, worker Hatchery, barn cleaning worker, indoor ornamental plant service worker, agricultural worker spraying pesticides, forager, animal production technician, veterinary technicians and their assistants, director of plant wealth production department, fish breeders, sheep and sheep breeders, cut flower growers, cow feather trimmer.

A total of 1,457 workers with disabilities work in 933 different holdings within 25 different professions. Future expectations also showed an increase in the number of workers with disabilities and an increased demand for female employment over males, with the total expected opportunities reaching 1198 within 11 different professions.

The study showed that the future job opportunities in the sector, which were estimated at 32,667 opportunities, require 102 different skills, while the operators believe that there is a need for sixty-nine skills to rehabilitate the 10,229 workers currently working in the sector.

6.2 Recommendations

1. Presenting the study to the Agricultural Sector Skills Council, to enhance opportunities for formulating sectoral policies in the field of training and employing the Jordanian workforce in the agricultural sector.

2. Requesting the training providers to do the following:

- Reviewing and developing the required training programs in the agricultural sector.
- Integrating life and leadership skills that support employment, as they are a mandatory portfolio in training programs.

- Canceling training programs that are not required for the labor market in the agricultural sector.
- Conducting follow-up studies, while providing annual financial incentives to finance such studies.

3. Conducting a supplementary survey within the methodology of this same study to complete the study of employment in the holdings operating within the supportive agricultural sector, especially agricultural production marketing and packaging companies, the agricultural industries sector, companies manufacturing and marketing agricultural production requirements, and agricultural fairs that were not included in this study.

4. Enhancing the trend towards the experience of specialized agricultural schools (a comprehensive school) and providing the necessary infrastructure in this field and defining a clear and stable policy for agricultural education in its three segments (secondary, community colleges, university) based on diagnosing the shortage of manpower in the agricultural sector, Especially the category of agricultural technician and skilled worker.

5. Integrating students (specialists and technicians) in training programs with the private sector and cooperating with experiment stations for international agricultural production requirements companies inside Jordan in the field of implementing practical applications for students and recent graduates.

6. Developing job descriptions for some professions within public and private institutions and stipulating the presence of a comprehensive agricultural secondary graduate for the purposes of working there and coordinating with the Civil Service Bureau and bodies working in the agricultural sector in this regard.

7. Reconsidering the educational legislation for diversifying the tenth-grade students into the various branches of education, including agricultural education.

8. Activating the agricultural projects system in secondary agricultural education by updating the instructions for productive work. Introducing the concepts of cooperative work in the curricula, developing cooperative projects for the employment of graduates of secondary agricultural education, and creating institutional cooperation mechanisms between the Ministry of Education and cooperative societies in the fields of education and training, and volunteer work to serve graduates, especially in rural areas.
9. Not allowing agricultural majors to be opened in non-agricultural colleges.
10. Rationalizing the admission policy in colleges of agriculture in terms of the numbers of those accepted, especially females.
11. Amending the curricula to ensure that graduates from the two categories of specialists and technicians have a tendency towards self-employment (to become job makers and not job seekers) and provide job opportunities for rural and desert residents, especially women, to reduce unemployment and reduce internal migration through Raising the capital of the Agricultural Credit Corporation and strengthening the Corporation's program for financing small projects for poor families, to help achieve food security and expand its responsibilities to include rural projects, not just agricultural, and link funding for these projects to passing the necessary rehabilitation programs.
12. Establishing one or more private joint stock companies to qualify agricultural workers and operate them in production areas and give them the necessary support and privileges to organize seasonal and skilled and skilled workers.
13. The importance of stimulating holdings interested in employing people with disabilities in line with the nature of work by providing tax concessions, exempting, or reducing fees, or exempting production or sales inputs from sales tax in a way that enhances the work of people with disabilities.
14. Work to raise the percentage of future job opportunities within the educational level of the bachelor's level, through the development of creativity, innovation, and entrepreneurship skills.
15. Encouraging the replacement of Jordanian labor among the most prominent job opportunities expected for the years 2022-2024, which are agricultural workers picking crops, agricultural workers packaging and plowing, and agricultural workers irrigation and fertilization.
16. Working on the production of training programs through the Agricultural Sector Skills Council, in a way that enhances values and positive attitudes towards work, acquires skills that support employment, bears work pressure / nature of work, and provides work ethics.
17. Spreading awareness regarding supply surpluses at the specialist level and at the technical/technical level to direct university and intermediate studies towards job opportunities available in other sectors.
18. Raising awareness about supply deficits at the level of skilled workers, and at the level of the skilled worker, a total of 26,113 job opportunities for the years 2022-2024.
19. Raising awareness of the job opportunities available to females in a range of occupations; Farmers in field crops and fodder, livestock breeders and commercial dairy producers, nursery

farmers, poultry breeders / hatcheries, gardeners, chicken / broiler breeders, harvesters, pruning and grafting farmers, beekeepers.

20. Raising awareness of the lack of demand for female employment in a range of occupations; The most important of them are a plant protection/integrated control specialist, a plant production specialist, a tree horticultural specialist, veterinarians, a general animal production specialist (cows, sheep, poultry).

21. Enhancing the orientation towards Farmer Field Schools experience and initiatives to enable smallholder farmers to use simple, effective, and sustainable methods in developing sustainable agricultural practices to reduce production problems.

22. Reconsider the legislation related to taxes and fees with a similar effect to support the sector and increase employment opportunities in it.

23. Reconsidering the legislative system that governs the work of agricultural activities, and the activities that support them, to ensure the simplification of procedures for the sector.

24. Coordinating training policies between service providers and working on drawing them to ensure unification of efforts, reduce waste and duplication, and benefit from shared experiences.

25. Launching a permanent agricultural operating platform that contains the agricultural calendar