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# Tracer Study of Agriculture Vocational Secondary Education in Jordan

FINAL REPORT

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# CONTENTS

# ACRONYMS

| | |
|---|---|
| AKIS | Agricultural Knowledge and Innovation System |
| CEDEFOP | European Centre for the Development of Vocational Training |
| EC | European Commission |
| ETF | European Training Foundation |
| EU | European Union |
| GDP | Gross Domestic Product |
| GoJ | Government of Jordan |
| IFPRI | International Food Policy Research Institute |
| ILO | International Labour Organization |
| JOD | Jordanian Dinar |
| MoE | Ministry of Education |
| OECD | Organisation for Economic Co-operation and Development |
| TVET | Technical and Vocational Education and Training |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNEVOC | International Centre for Technical and Vocational Education and Training |
| USAID | United States Agency for International Development |
| WSA | Water Saving Agriculture |

# INTRODUCTION

Labour markets, and in turn national economies, often present supply-and-demand mismatches, the most important one being a skills mismatch: the skills demanded by employers for each sector and occupation are not necessarily the skills that students develop during their education in related specialties. In the last decade, studies conducted by international bodies like the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Centre for Technical and Vocational Education and Training (UNEVOC), and the European Training Foundation (ETF), indicate that skills mismatches are especially relevant in technical occupations and vocational education. For this reason, technical and vocational education and training (TVET) reforms worldwide try to improve the labour-market relevance orientation of TVET curricula and capacities.

Along with employers' surveys and public-private dialogue, tracer studies are one of the tools available to governments to make their TVET supply more relevant. By means of a survey, tracer studies collect information on the occupations of graduates of a particular TVET programme, typically 6, 12 or 24 months after graduation, and explore the connections between graduates' current professional performance and the learning outcomes of their TVET programmes.

This is the report of the tracer study on former students (2016-2017) from the agriculture stream of the vocational education programmes and schools under the umbrella of the Jordanian Ministry of Education (MoE). The study is framed under the UNESCO Amman Office Regular Programme 'Supporting the Government of Jordan in Implementing its TVET Reform'. Its design and implementation were conducted in close cooperation and coordination with the MoE.

Section A contains information on the programme under assessment. This includes information on the context of the agriculture labour market in Jordan and strategic guidelines adopted by the various parties involved, including the Jordanian authorities, UNESCO, and other international partners. Section B describes the methodology, including an overview of the research approach, and its outreach strategy. Section C presents the main findings of the study, providing a description of former students' occupations, their assessment of the education received, and a list of challenges for each of the research questions. Finally, Section D summarizes the main conclusions drawn from Section C and presents a series of recommendations for further discussion with the MoE.

# A. BACKGROUND

The overall Jordanian labour market is affected by a mismatch between education outcomes and employers' needs, and between education quality and students' expectations. These are compounded by insufficient job creation to absorb the increasing influx of jobseekers, both nationals and migrants (ETF, 2019). These challenges are addressed in the National Human Resource Development Strategy 2016-2025.

Agriculture officially accounts for only 1.8% of the labour market, with a contribution to the gross domestic product (GDP) of 5.6%. However, evidence from the International Labour Organization (ILO, 2018) shows that agricultural work in Jordan is mostly informal and undertaken by low-skilled migrants, mostly of Syrian origin.

In developing countries, agriculture is often hard work with high levels of job insecurity, and is therefore an undesirable profession for young people. Rural youth often aspire to find job opportunities in other sectors and locations and seek to develop skills that can open opportunities in urban areas (Al-Saaideh, 2016; Brown and Majumdar, 2020). Gender disparities, in terms of access to both employment and education, are also present in the Jordanian agricultural sector. There is a need to create more opportunities for women through a range of approaches that includes access to training (Russo et al 2014).

At the same time, the quality of agriculture TVET in developing counties, including Jordan, is often low due to infrastructure deficits (agriculture schools, both for trainees and trainers, require land extension and up-to-date technology) and a lack of suitable trainers to provide knowledge of agricultural science, relevant work experience within the agricultural sector, and training in vocational pedagogies (Russo *et al.*, 2014; ILO, 2018). These challenges hinder countries' capacity to tap into some of the opportunities in current development trends, such as the promotion of the agribusiness sector and the transition to a green economy based on ecological agriculture and proximity markets (ILO, 2018).

Water scarcity presents a growing challenge to the Jordanian agricultural sector. As one of the driest countries in the world, Jordan is particularly susceptible to the effects of climate change, which has already reduced rainfall and increased temperatures (USAID, 2017). Improved water resource management has the potential to both increase agricultural efficiency and create an estimated 8,000 to 15,000 new jobs in agriculture (Russo et al 2014: 38). However, to realise such outcomes it is necessary to invest in water saving agriculture (WSA) practices. Though there is a need for a multifaceted approach that engages a wide range of stakeholders (producers, processors, technical advisors, etc.), the provision of agricultural skills training which includes WSA skills is crucial (Russo et al, 2014).

The Jordanian agriculture sector, particularly horticulture, will face significant additional challenges in the coming years. The sector has been put under additional strain in recent years as a consequence of the Syrian war, which has led to blockages in exports to Eastern Europe, contributing to a declining export market. The factors contributing to the decline also include a lack of knowledge and skills within the agricultural value chain, and limited education opportunities. Indeed, many of the challenges facing the sector are attributable to the lack of agricultural knowledge and innovation systems (AKIS). The role of TVET is seen as key in addressing these challenges (Sixt and Poppe, 2019).

The COVID-19 pandemic has created considerable economic challenges in Jordan. GDP is estimated to have fallen by 23% during the national lockdown period and economic growth rates in the country in 2020 were estimated at between -5.7% to -7.4% (IFPRI, 2020: 1). The crisis has negatively affected the overall labour market with unemployment indicators rising to 19.3% in the first quarter of 2020 and 23% in the second quarter (worldbank.org, 2020).

The crisis has also created additional challenges in the Jordanian agriculture sector. The period coinciding with the lockdown saw negative trends in agriculture sector employment levels, with a 19.6% reduction in employment during the second quarter of 2020 when compared with the second quarter of 2019 (IFPRI, 2020:5). Employers were also met with challenging labour market conditions due to 12,000 foreign workers (across multiple sectors) applying to return home by July 2020, following the Government's decision to facilitate return and not to renew work permits. (menafn.com, 2020 and IFPRI, 2020). It must be noted that as non-Jordanian's constituted 85% of livestock workers and 92% of crop labourers in 2015, the agriculture sector is particularly exposed to such movements of workers (IFPRI, 2020:5). Overall, agriculture was one of the sectors most affected by national lockdown measures, with an estimated decline in productivity of about 15% during the second quarter of 2020 (IFPRI, 2020:5). This decline was partly due to agriculture labour restrictions; there is a high degree of informality in the sector's labour force but only workers with licences were permitted to work during the COVID-19 lockdown, resulting in reduced output. Furthermore, due to constraints on land preparation activities during this time, upcoming harvests are also likely to be affected, with further negative effects on agriculture predicted in the medium term (IFPRI, 2020).

In response to the challenges arising from the health crisis, the Jordanian Ministry of Agriculture is revising and updating the National Agriculture Sector Development Strategy 2016-2025, with the aim of increasing food security and the economic development impacts of agriculture. Likewise, the Green Growth National Action Plan 2021-2025 focuses on sustainable development pathways which should increase Jordan's resilience and aid in its recovery in the face of the pandemic (MoA, 2020).

The education programme under assessment is the agriculture stream of secondary vocational education at the MoE, which is expected to respond to some of the above-described needs. The programme requires ten years of previous education (Grades 1-10) and, although its completion provides direct access to technical colleges and universities, it is designed to allow graduates to directly enter the labour market with

practical knowledge and relevant skills for technical occupations. The programme is taught at 23 schools nationwide, 18 of which are boy's schools and 5 of which are schools for girls.

The support provided by UNESCO to this programme, both through this tracer study and through broader technical assistance, is framed under the UNESCO TVET Strategy (2016-2021) and takes into account UNESCO's recommendations (UNESCO, 2015) on the quality and relevance for TVET. This assistance is clearly aligned with UN Sustainable Development Goal 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'. It is particularly relevant to Target 4.4. of this goal: 'By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship'.

# B. METHODOLOGY

The primary objective of this study was to survey former students and assess their employment situation 24 months after the end of the programme under assessment (Goal 1). Additionally, feedback from former students on their education and their school-to-work transition was collected (Goal 2). As requested by the MoE, in achieving Goal 1, the survey enquired about the status of the former students, differentiating between employment in sectors related to agriculture, employment in sectors not related to agriculture, and further education. For Goal 2, the survey tested different employment drivers related to the quality of education, such as the quality of the schools' equipment compared to that of the employers', and other factors, such as the interest of the student in studying agriculture (as opposed to parents' influence or other circumstances), and the impact of the COVID-19 crisis. The methodology had to take into account the conditions created by the COVID-19 pandemic by ensuring the suitability of the approaches used and making adjustments where necessary, mostly by relying on online communication tools. The main methodological adaptations made are listed in Box 1 and are further described in this section.

**Survey Design**

The survey design was based on a tracer study guide published by the European Training Foundation (ETF), the European Centre for the Development of Vocational Training (CEDEFOP) and the International Labour Organisation (ILO) (2016) adapted to the official curriculum of the programme under evaluation provided by the MoE (2020). The survey questionnaire allowed for gender disaggregation following international cooperation standards (see Annex I). The survey questions and multiple-choice responses drew on several international references, which provided recommendations, strategies, and frameworks for curriculum design. UNESCO recommendations on quality and relevance of TVET, including on work-based learning, entrepreneurship skills, digital skills and information and guidance (UNESCO 2015); and the UNESCO strategy on TVET (UNESCO, 2016), which stresses the right to education, the principles of equity, inclusiveness and quality, and the importance of lifelong learning, were applied.

The survey questions also drew on the list of lifelong learning key competencies provided by the Reference Framework of Key Competencies (EU, 2006 and later revised in EC 2018). The competencies on the list are literacy; languages; science, technological, engineering and mathematical competencies; digital competencies; personal, social and learning competency; and entrepreneurship competency. Likewise, the Entrepreneurship Competency Framework (EU, 2016) was considered. It defines three competency areas (ideas and opportunities, resources and 'into action') and lists competencies, learning outcomes and proficiency levels. Finally, the survey was informed by the EU Cultural Expression and Awareness

Handbook (EU, 2015), which integrates cultural awareness and expression into strategies and infrastructure in the context of lifelong learning.

*Box I. Research methodology in the context of COVID-19 travel restrictions and health measures*

| Interaction | Description |
|---|---|
| Online Survey | The former students were first contacted by telephone by a research assistant based in Jordan. This was done to inform them on the launch of the survey, ask for alternative contact details if necessary, and encourage participation. Following the phone call, the mobile application WhatsApp was used to provide a link to the online questionnaire, which had been created using the software tool Alchemer. This approach allowed the questionnaire to be accessed on smartphones, tablets, and personal computers. Given the efficiency of this approach, it would have been the preferred method under normal circumstances, though it was also well-suited to the pandemic conditions. |
| Online Focus Groups | Focus groups were conducted online with former students to achieve further analysis of the questions raised in the survey. Discussions were conducted by UNESCO via the video conferencing platform Zoom, which allowed for open discussion between group members and the option of visual contact between participants. The platform was available to download and use free of charge and was accessible via smartphone, tablets, or personal computer. This approach was chosen as an alternative to in-person meetings in response to the health conditions. |
| Online Consultations with UNESCO and MoE | Online communications between the evaluator, UNESCO, and MoE staff were mainly via the videoconferencing platform Microsoft Teams. This allowed for the option of visual contact and discussion among people in several different locations at once, if necessary. This approach was used as an alternative to the evaluator travelling to Jordan for in-person consultations, which was not viable due to travel restrictions and health measures. |

**Data Gathering**

According to the database provided by the MoE, the survey target group (the 2016-2017 cohort of the Agriculture stream of the vocational education programme) amounts to 1,262 former students, of which 211 were females and 1,051 males. Based on statistical standard practice, it was then decided that the size of the sample should be greater or equal to 302 (24% of the population) to provide responses with a margin of error of 5% (at a confidence level of 95%).

Former students were contacted via telephone beginning on 28 October 2020. To ensure high response rates, an introduction to the survey was provided to the students, one by one, by telephone, and a link to the online survey was distributed via WhatsApp to those who were successfully contacted. Communication through the selected channels was carried out in Arabic by a national research assistant in close collaboration and coordination with the UNESCO Amman Office, while the evaluator assisted in the setup

of the various means of communication and in providing English messages, which were translated into Arabic by the research assistant. The software tool used for the survey was Alchemer, which presents some key features for this strategy, such as responsiveness to smartphones, tablets and personal computers, and multilingual design. The outreach began with a pilot survey between the 28 and 29 October 2020, during which 111 students were targeted, 39 students were successfully contacted, 23 filled in the online questionnaire, and 17 of the 23 respondents answered positively as to whether they would be willing to participate in focus groups to further discuss the topics in the survey. All of the 23 respondents were male[1]. This represented a response rate of 15% in 24 hours, and it was decided to advance with the field work.

The field work continued until 23 November 2020 with 404 successful telephone calls, 331 successful WhatsApp messages, and 469 failed contact attempts due to different reasons. The former students successfully contacted by telephone represented 32% of the total population of former students, and 15% of the female population. Responses were recorded from 208 students, 41 (26%) of whom were female. This represents a response rate of 16% (in line with the expectations raised during the pilot survey). Considering the overall population of 1,262 former students, the sample size provides a 6% margin of error.

*Box II. Survey outreach, key figures.*

| | | |
|---|---|---|
| Population: | 1,262 | 17% females |
| Contacts: | 1,204 | 18% females |
| Of which, successful calls: | 404 | 15% females |
| Survey respondents: | 208 | 26% females |
| Error margin: | 6% | |

While the survey outreach was going on, focus groups were held for an in-depth analysis of the same questions raised by the survey. The purpose of the groups was to interpret the survey results and contribute to the final report of the tracer study. In view of the impact of the COVID-19 crisis in Jordan, six online focus groups, with an average of between three and four former students and lasting between 50 minutes and 1 hour 20 minutes, were conducted in Arabic by a national research assistant and the UNESCO Amman team. Discussions of the six focus groups were conducted using the videoconferencing platform Zoom. Two of the groups were comprised of females and four of males. The participants had a range of occupational statuses, reflecting the overall survey sample, including some who were in employment, some in further education, and some who were unemployed. The sessions focused on five main questions aimed

[1] This reflects the category of schools found in the directorates selected for the pilot survey.

at determining the participants' views on their cohort's employment trends and on factors that influenced their own current occupations.

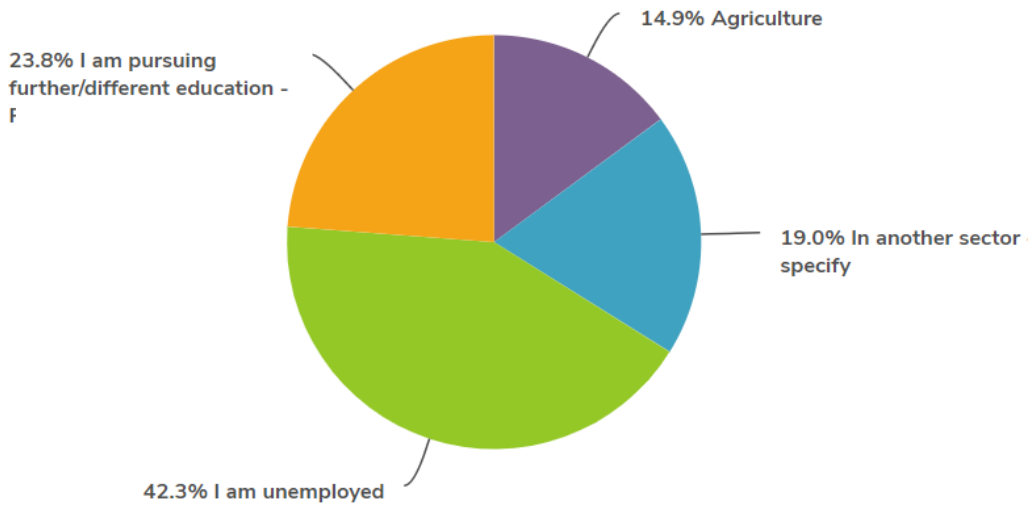
# C. MAIN FINDINGS

This section provides responses to the research questions, drawing on survey data. The findings are grouped into three sections: Section I reports on the current occupations of the former students; Section II reports on how the education was received, mainly from an employability perspective; and Section III explores the challenges related to achieving higher employability.

## I. Former students' occupations

Over 42% of the former students surveyed are currently unemployed, as shown in Chart I.1. The rest are employed (34%) or pursuing further education (24%). Given the professional orientation of a TVET programme, a 42% unemployment rate might seem too high, especially two years after completion of studies. Most of the working respondents are employed in Amman, Irbid and Balqa'.

*Chart I.1. Former students' current occupations (N=168)*



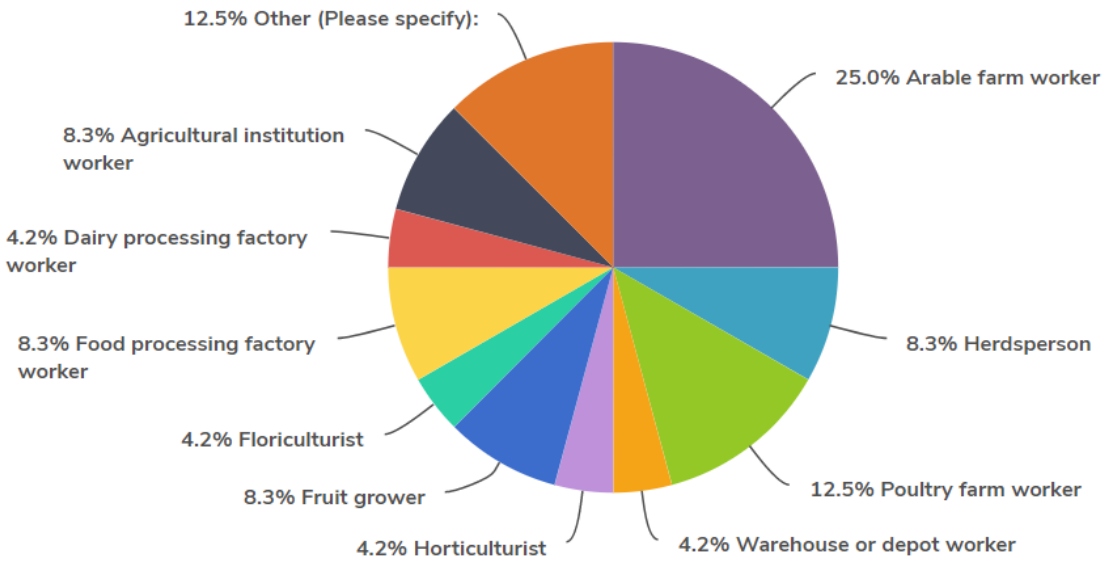

Source: Survey Question 5

**Slightly less than half of the employed former students have a job related to agriculture.**

Within this sector, arable farm work, agricultural institutions, food processing and poultry farm work are the subsectors accounting for the highest percentage of jobs (see Chart I.2). On the other hand, 56% of the employed graduates work in a wide array of non-agricultural activities, including the military, beauty, microbiology, electricity and control, trade, computer science, patient accountability, public security, and

hostelry. The reasons for agriculture former students opting for a different sector are provided in Section C.III.

*Chart I.2. Employed former agriculture students' sectors of work (N=24)*




Source: Survey Question 6

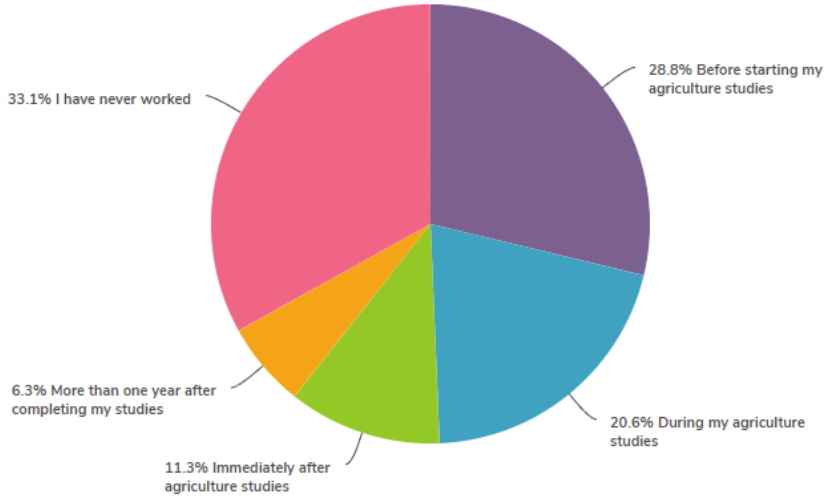
As indicated previously, almost a quarter of the respondents are currently pursuing further education and training. They are found to be doing so in a broad range of fields. Those related to agriculture and food processing were the most popular option. Others chose to study subjects that were broadly related to agriculture, such as veterinary medicine and food and nutrition, while a significant number opted for fields apparently unrelated to agriculture, such as education, graphic design or management information systems. The most common reason for pursuing further studies is the aim of obtaining a university diploma (41%). Those who pursue studies are personally interested in agriculture, while less frequently cited reasons include disliking agriculture (10%) and the difficulty of finding a decent job (8%).

**A third of students have no work experience**

Chart I.3 shows that 33% of former students have never gained work experience, while most graduates who do have work experience found their job before obtaining their TVET certificate.

*Chart I.3. Timeframes related to first work experience*

*When did you have your first work experience? (N=160)*

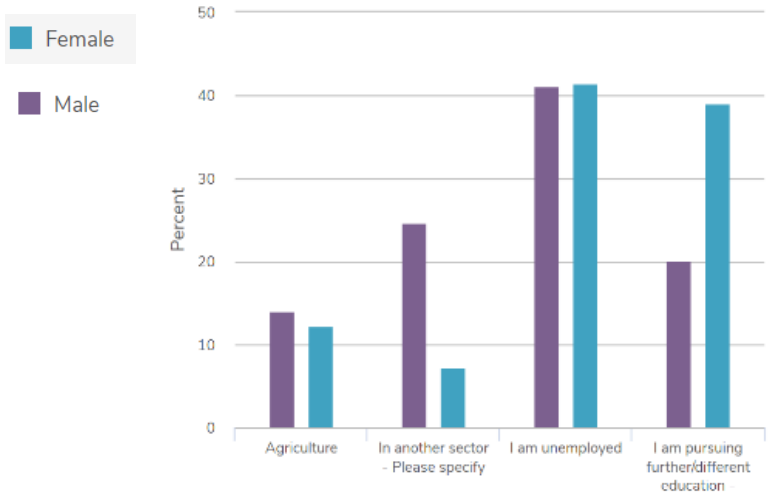



Source: Survey Question 15

**Women are more than twice as likely to pursue education as men**

As shown in Graph I.1, women are more than twice as likely to pursue education as men. The female former students want to obtain university diplomas and all expressed a genuine interest in continuing studies. The male ones, however, although commonly wanting to obtain university diplomas, sometimes opted for further study because they could not find a job or due to losing interest in agriculture.

*Graph I.1. Current occupations by gender*




Source: Survey Question 5

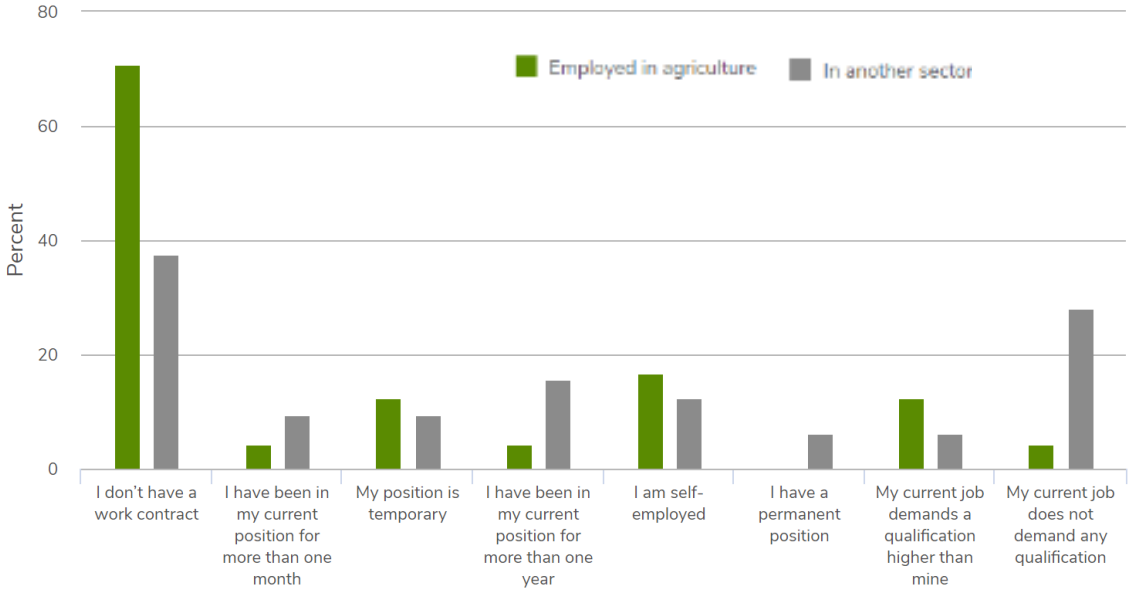
**Employment is often informal**

The average monthly gross income of the former students is 264 Jordanian Dinars (JOD) with a median of 250 JOD. Employees in non-agriculture sectors earn around 30% more than those in agriculture, which is

consistent with them declaring that they chose an alternative sector because they found better conditions there. In the same vein, 13% of the respondents working in agriculture have temporary contracts (versus 10% in other sectors) and 71% do not have any contract (versus 38% in other sectors) (see Graph I.2).

### *Graph I.2. Surveyed former students' work conditions*

*Tick the sentences that correspond to your current situation (N=56)*

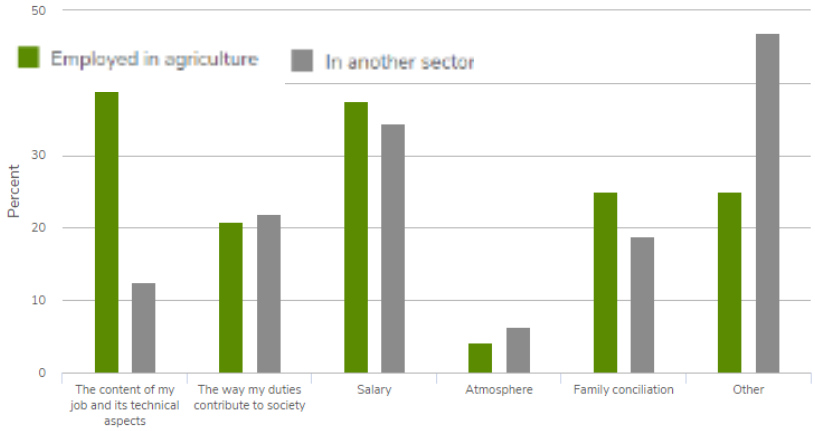



Source: Survey Question 10

However, when asked about their satisfaction with specific aspects of their job, the content and technical aspects are very valued by those employed in agriculture (42%), but not by respondents working in alternative sectors (13%). As shown in Graph I.3, around 35% of the respondents indicated satisfaction with their salary, while they were least satisfied with the work atmosphere.

### *Graph I.3. Job satisfaction of former students employed*

*% of graduates who select each aspect as the most satisfying (N=56)*



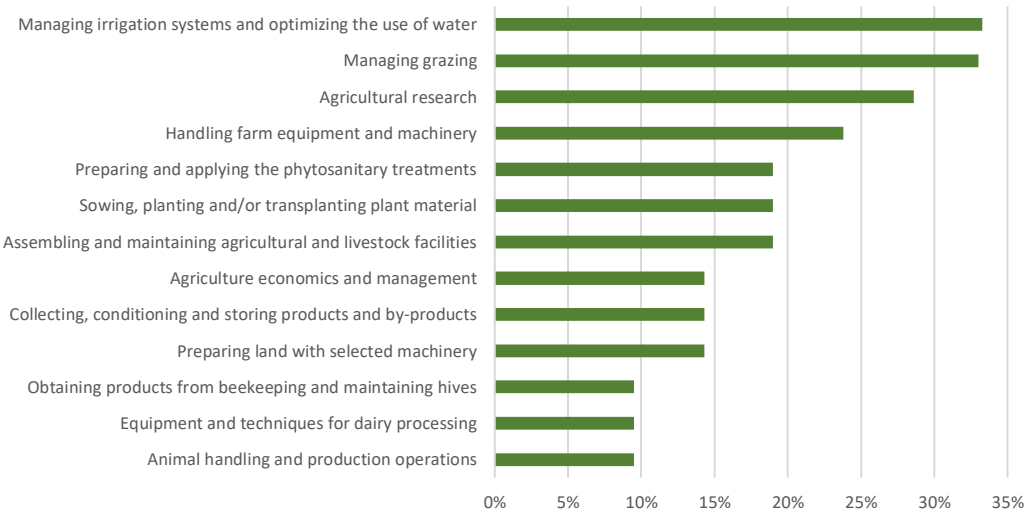

Source: Survey Question 11

**Water management is the most in-demand skill**

According to the respondents that work in the agriculture sector, the technical skills most in-demand from their employers relate to irrigation and water use optimization, agricultural research, and grazing management. On the contrary, the skills that are covered by the curriculum under assessment, such as animal handling, dairy processing, and beekeeping, are not so in-demand in the Jordanian labour market (see Graph I.4).

### *Graph I.4. Most in-demand technical skills*

*% of respondents employed in agriculture who select a skill as most-demanded (N=21)*

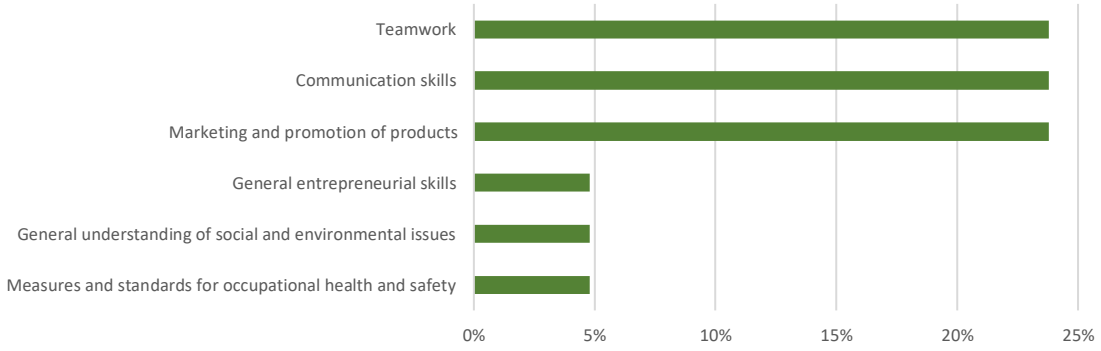



Source: Survey Question 18

The survey has also enquired about the labour-market relevance of some general and entrepreneurial skills. Results show that teamwork, communication, and marketing and promotion are the most in-demand skills, while environmental, social and health-and-safety issues are not so important for employers (see Graph I.5).

### *Graph I.5. General and entrepreneurial skills most in-demand from employers in the Jordanian agriculture sector*

*% of respondents employed in agriculture who select a skill as most-demanded (N=21)*




Source: Survey Question 18

## II. Assessment of education programmes

This section considers the former students' opinions on their secondary school agriculture education, mainly from the perspective of employability.

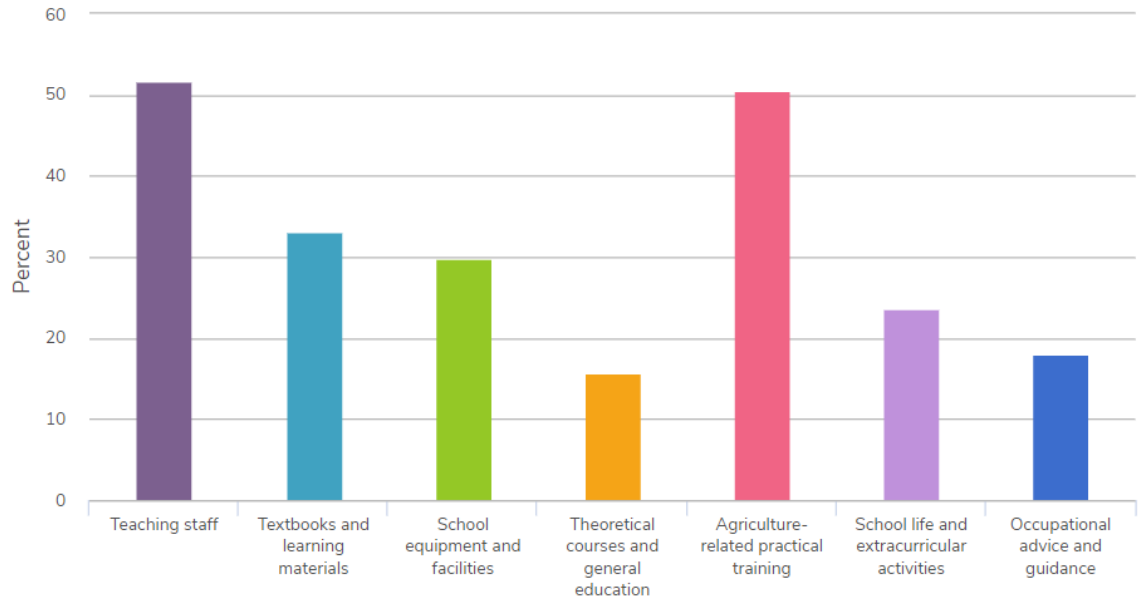
**Former students are moderately satisfied with the quality of the education received**

Of the surveyed former students, 48% assessed the quality of education received as high or very high in general terms. When asked to score the programme on a scale of 1 to 5, the average score was 3.5.

As shown in Graph II.1, the most highly appreciated aspects were the teaching staff and the practical training, with positive feedback from around half of those surveyed. On the other hand, theoretical and general courses, and occupational advice and guidance, are the least highly appraised aspects. Reflecting the low appraisal of theoretical courses and overall education, several focus group participants commented that the curriculum was particularly long, overly complex, and in need of revision to make it more up-to-date. This view was shared by some who are currently in higher education, suggesting that reluctance to commit to academic study was not behind the opinion.

*Graph II.1. Satisfaction with the quality of certain aspects of education*

*Please indicate which aspects of the education received you were most satisfied with (N=178)*




Source: Survey Question 2

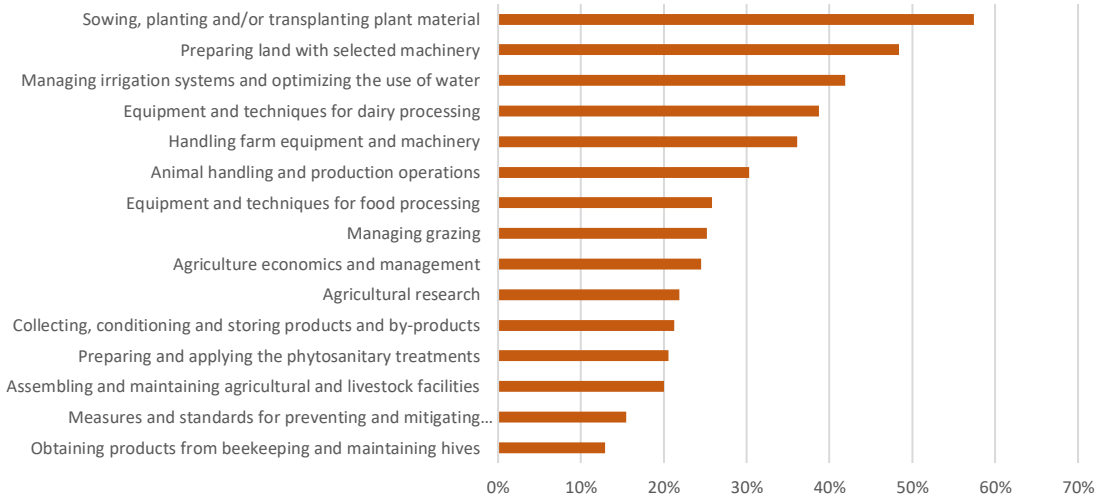
Additionally, those surveyed agreed that there is of room for improvement. , particularly in the areas of practical knowledge and the need to upgrade equipment and teaching materials. More than 60% of the respondents believe that teachers should have more practical experience in agriculture; schools should have larger demonstration plots and facilities for practical training; school equipment needs to be upgraded according to the market needs; and teaching materials need to be updated.

**Only one of fifteen technical skills in the curriculum was acquired by more than fifty percent of the students**

Despite the overall score given by the students to their education programme, when assessing its learning outcomes skill by skill, the responses were rather negative. As shown in Graph II.2, one of 15 technical skills related to the curriculum and considered in the survey were acquired by more than 50% of the former students. This was sowing, planting and/or transplanting plant material. Moreover, skills related to beekeeping, environmental management and assembling and maintain facilities have all been acquired by less than 20% of the students.

*Graph II.2 Technical skills acquired by former students*

*% of respondents who select a skill as acquired (N= 155)*

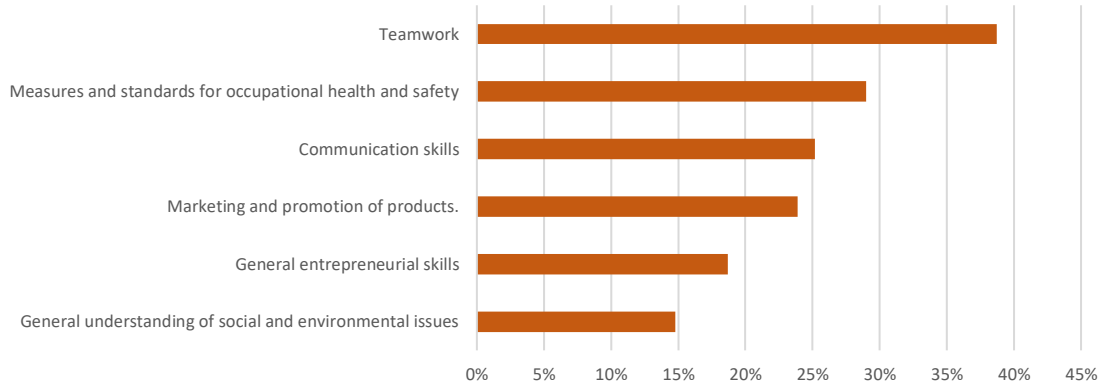



Source: Survey Question 18

Students' feedback on general and entrepreneurial skills was also negative with less than 50% of the respondents saying they had acquired general and entrepreneurial skills, with teamwork being the most frequently mentioned (39%) (see Graph II.3). The survey findings on the low rate of skills acquisition in communication (25%) were mirrored by findings from focus groups during which the number of participants who said they had not developed their social skills through their agricultural education outnumber those who said they had by five to one. Several mentioned that this contrasted with university, where they had been able to develop such skills.

### *Graph II.3. General and entrepreneurial skills acquired by former students*

*% of respondents who select a skill as acquired (N=155)*

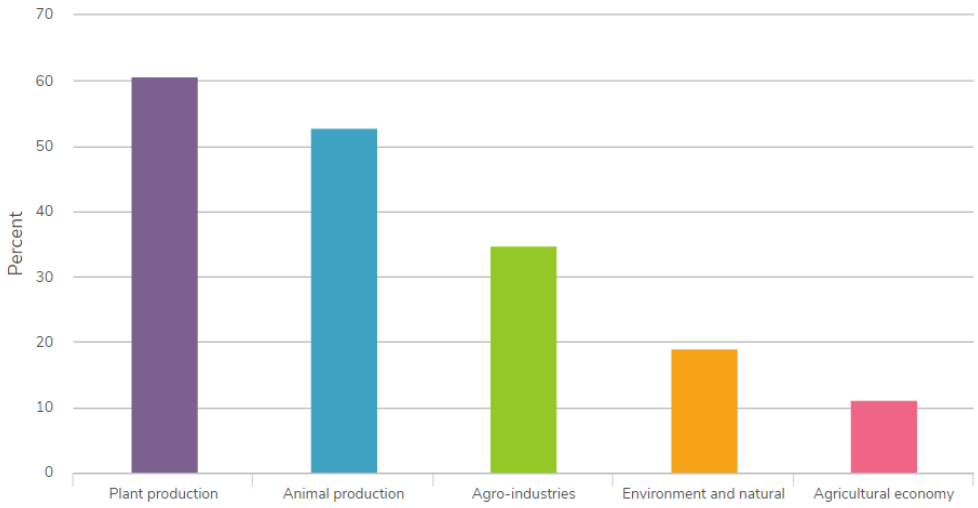



Source: Survey Question 18

Looking at broader skill areas, plant production is the area that the greatest number of former students reported having developed most fully (60%), followed by animal production and agro-industries (see Graph II.4).

### *Graph II.4. Key competencies developed as a result of the education*

*% of former students who select an area as most developed as a result of the education (N=93)*

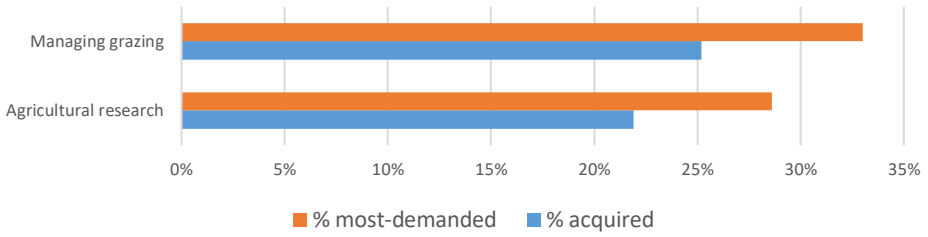



Source: Survey Question 4

The main mismatches between skill demand and supply concern grazing management, a skill acquired by only 25% of students, and agricultural research, which was acquired by 22% (see Graph II.5). According to former students, these are two of the three most in-demand skills. Marketing and facility maintenance also receive more attention from companies than TVET schools.

*Graph II.5. Mismatch between acquisition of skills by students and demand by employers*

*% of respondents (N=164)*




Source: Survey Question 18

# III. Employability Challenges

This section explores the obstacles to higher employability among the former agriculture students.

**Lack of quality job opportunities, despite the interest of students**

When asked about the reasons for working in sectors unrelated to their agriculture education, most survey respondents argued that they found better job conditions in their chosen sector. In focus groups, positive views about employment prospects in the sector were very rarely expressed. Participants often felt discouraged about their prospects in the sector, judging the opportunities to be too few and of poor quality, and perceiving that agriculture was viewed as a poor career path in Jordanian society. A 'blemish culture' was indicated by one student (i.e. a negative perception of agricultural work and people who work in the sector), while four male agricultural students all currently in higher education agreed that they did not receive support from relatives, or society in general, to continue in the agriculture sector and felt discouraged by the lack of opportunities. Several focus group participants perceived there to be limited opportunities in the agriculture sector in general.

Despite negative employment prospects, according to the survey, only 13% of the students working in a different sector declared that their interests have changed, and according to focus groups, those who opted for further education tended to study a field broadly or directly related to agriculture. Moreover, as shown in Graph I.2, workers of the agriculture sector are clearly more satisfied with the content and the technical aspects of their jobs, than those of other sectors.

**Forty percent struggle to transition to work, which depends on personal contacts**

The school-to-work transition was considered challenging by 47% of the respondents, while only 20% found it to be easy. It is also remarkable that those with no experience prior to entry into the education programme found personal contacts to be the most effective job-seeking mechanism, while channels related to the employment policy (the VET institutions, internship programmes, or the employment offices) were mentioned less (30%). Additionally, only 18% of respondents were satisfied with the occupational advice and guidance that they received. The challenge perceived by many respondents and the importance of

personal contacts was reflected in the responses given by several focus group participants who said they considered there to be few opportunities for agriculture students in the agriculture sector unless they were provided through family businesses.

**Technical skills and practical training**

There is a correlation between the type of agricultural jobs that are found by former students (Section I), and their self-assessment of technical skills development (Section II). First, skills related to plant production were best assessed (60%) and it was found that 41% of occupations in the agriculture sector relate to plant production, including arable farming, horticulture, fruit growing and floriculture. Second was animal production (52%), with 21% of occupations falling into this grouping, which comprised poultry farm workers and herders. Third was agro-industries (34%), with 12.5% of occupations being in dairy or other food processing.

Having the correct conditions to develop the skills is also important. Focus group responses indicate that students want more time to develop technical skills. As previously highlighted, several former students commented that they would like to have had more practical training, whereas only one said they would have preferred greater emphasis on theoretical work. This suggests that, though 50% of survey respondents reported satisfaction with the practical component of their education (Section II), the amount of time dedicated to it may not be optimal, with potential implications for skills development and employability.

Furthermore, as reported in Section II, some of the aspects of the education that are more negatively assessed by former students are directly connected to technical skills development; only 30% were satisfied with their school's equipment and facilities. Meanwhile, more than 60% thought that teachers should have more practical experience, demonstration plots should be larger, and equipment and materials should be upgraded.

**Employers' low interest in the diploma**

As reported in Section I, a third of former students have never gained previous work experience. Furthermore, most graduates who do have work experience found their job before obtaining the TVET certificate. This indicates that the possession of a secondary diploma has not made a significant difference to employability. Moreover, nearly 70% of the respondents indicated that prospective employers showed no interest in their vocational education certificate; and the difference in employment rates among those who have completed their education and those observed for non-completers is not significant.

**Gender**

Focus groups confirm that a lack of perceived options outside of further education, versus percieved opportunities related to education, have a significant influence on female former students' decision to stay in education. As seen in Section I, female former agriculture students are twice as likely as males to choose further education. Several female focus group participants agreed that having a university certificate is a 'weapon' for women in Jordan which opens up important opportunities. On the contrary, limitations were

identified for women in the labour market, expressed in the views that 'men can find a job anywhere and can work anywhere, anytime. Females cannot be placed anywhere or work anywhere'. Negative ideas about the prospects of women in the agricultural labour force were expressed by several male former students . Some considered there to be a 'shame culture' for women working in agricuture and that difficult working conditions and phyiscal ability factors made the path more difficult for females. It was not clear from responses whether such issues were perceived by female former students but the prevalence of such views among male counterparts may be indicative of a more broadly encountered attitude in the sector, which could constitute a further deterent to female agriculture graduates.

**The impact of COVID-19**

Finally, it must be mentioned that the ongoing COVID-19 crisis might have contributed to the low employment rates found by the survey. Half of the unemployed respondents declared that their employment situation was negatively affected by the pandemic.

The COVID-19 crisis has affected the employment of more than half of the respondents, with the impact being more damaging in agriculture (65%) than in other sectors (56%), which is consistent with an ILO quick assessment on the impact of the crisis on Jordanian companies (Kebede *et al.*, 2020). Respondents said that their employment had been affected by the crisis in a variety of ways. These included a general reduction in demand for products and workers; restrictions in movements of people and goods and disruption to work caused by lockdown measures; and reductions in salaries and more precarious employment conditions. Some lost their jobs as a result of the crisis and others who were self-employed have seen their business drastically reduced or lost. It is notable that a number of students mentioned the psychological strain caused by the crisis when asked how their employment had been affected.

# D. CONCLUSIONS AND RECOMMENDATIONS

**Summary of conclusions:**

Analysis of the results provided in Section C leads to the following conclusions:

- The COVID-19 pandemic might have affected the occupation data collected by the tracer study, with more than half of the former students facing employment difficulties that they relate to the ongoing crisis. These responses are consistent with other assessments that found a higher impact of the COVID-19 crisis in Jordan on agriculture sector.
- That said, the employment rate of this tracer study, conducted two years after completion of the programme, is low (34%). The unemployment rate among graduates is (42%). Moreover, focus groups revealed that those students opting for further education (24%) do so mostly due to their negative employability prospects.
- Those who are in work are almost equally distributed between agriculture and other sectors, reinforcing the idea that there is a mismatch in the agriculture labour market.
- The occupation results/tracer of former students differ when dissagregated by gender. Women are more than twice as likely to pursue education as men (40%), and they tend to do so because of a genuine interest in continuing studies, according to focus groups.
- The employment conditions of the minority of former students who found a job are precarious. Overall, half of workers do not have contracts. Those employed in agriculture work as freelancers, with temporary contracts or without contracts, more frequently than those who are not, and they have lower earnings on average. Indeed, students are attracted by better job conditions found in other sectors, while those who stay in agriculture appreciate their job's content and technical aspects to a larger extent than those who switch field.
- With regard to the agriculture education programmes, respondents are moderately satisfied with their quality, with teaching staff and practical training being the most valued aspects, along with the quality of training materials. However, former students believe there is a room for improvement with regard to technical skills by upgrading equipment and facilities, enhancing teachers' practical experience, and devoting more time to practical training.
- Moreover, the survey indicates that technical skills development at school does influence employability. It has been found that 62% of the students that have succeeded in finding a job in agriculture hold a position related to the skills areas that are better addressed by the curriculum according to the survey: plant production with a 60% of approval, and animal production with 52%. This suggests that new employability opportunities could be explored by enhancing skills

directly related to other niches of employment, such as agro-industries, where currently only 12.5% of former students find jobs.

- The challenges in finding a relevant job do not seem to be overcome with institutional support. During the school-to-work transition, students do not find support from their schools or formal employment intermediation. Moreover, they declare that employers do not value their diploma.
- Finally, and despite the above-listed challenges, former students show a high interest in their field of specialization. When opting for further education, they tend to pursue studies in related fields. When opting for another sector, they show a lower interest in the technical aspects of their job's content.

**Recommendations linked to the labour market**

Some of the previous conclusions suggest that policy action is required in the demand-side of the agriculture labour market to favour growth and employment, as well as improving working conditions. This would include the GoJ's efforts to support employment in the Jordanian agriculture sector, in particular in light of the impacts of COVID-19. In the following paragraphs, only conclusions that refer to the supply-side of the labour market are taken into consideration, as they lead to recommendations that connect with issues under the scope of the MoE. Such recommendations are provided only to guide further discussion of the MoE:

*Infrastructure and equipment*

- The MoE could review schools' equipment and facilities to facilitate the acquisition of technical skills. In particular, larger demonstration plots and facilities and upgraded school equipment and teaching materials could be considered.

*Curriculum*

- More time could be dedicated to practical training to support in the development of technical skills.
- The curriculum could also be reviewed to reinforce the training related to some technical skills. A specific focus could be put on the skills that are most in-demand from employers. These include irrigation and water use optimization, agricultural research, grazing management, and farm equipment handling.
- Similarly, some general skills, including teamwork, communication skills, and marketing, could be reinforced in the curriculum. This would be in line with UNESCO recommendations (2015) on the importance of foundational and transversal skills development during TVET studies.
- In more general terms, the focus put on the different skill areas and employment trends in the agriculture sector could be compared. The current focus is on plant production and animal

production, and not on agro-industries, while technological progress tends to reduce employment in primary activities, and create new opportunities in transformative activities.

- Further support could be provided for graduates' school-to-work transitions. This could include internships, counselling, career management training, and employment intermediation.

*Teachers*

- The level of practical experience could be reinforced among teaching staff, for example by investing in practical training for teachers or incorporating agriculture sector representatives for some lessons or subjects. UNESCO (2015) recommendations on TVET advocate for teachers obtaining work experience in enterprises as part of ongoing training and professional development plans.

*School-Business Cooperation*

- A communication campaign among employers could be conducted to improve perception of agriculture TVET and share the specific value of the secondary certificate provided by the MoE.
- Considering the curriculum design challenges, further consultation with the private sector during curriculum design could be considered. This would be consistent with UNESCO recommendations (2015) concerning the use of public-private partnerships to identify skills needed through, for example, studies, observatories, and sector skills councils.

*Female Students*

- Promoting the agriculture stream among girls will increase their enrolment. Communication in this respect, could put an accent on opportunities for higher education. Additionally, the support provided in school-to-work-transition should pay special attention and count on gender specialists to provide adapted counseling for female graduates, considering that their job prospects are more challenging than those of males.

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# ANNEX I. Survey

## Tracer Study of Agriculture Vocational Secondary Education in Jordan

WELCOME MESSAGE

You have pursued Agriculture Secondary Education in recent years. This survey is to collect your opinion on the education received and how it has helped you in your professional career. At the end of the survey, you will have the opportunity to ask for the survey results. Please click 'next' to start the survey and to advance to each question. The entire survey will take around 5 minutes and only a few questions marked with a red asterisk ( * ) are mandatory.

A. YOUR EDUCATION

**1. How do you assess the overall quality of the education received? Please, rate your studies from 1 (very low quality) to 5 (very high)**

| Value | Percent | Count |
|---|---|---|
| 1 | 10.7% | 19 |
| 2 | 6.2% | 11 |
| 3 | 34.8% | 62 |
| 4 | 24.2% | 43 |
| 5 | 24.2% | 43 |
| | Totals | 178 |

**2. Please indicate which aspect(s) of the education provided you are MOST satisfied with. Multiple answers possible**

| **Value** | **Percent** | **Count** |
|---|---|---|
| Teaching staff | 51.7% | 92 |
| Textbooks and learning materials | 33.1% | 59 |
| School equipment and facilities | 29.8% | 53 |
| Theoretical courses and general education | 15.7% | 28 |
| Agriculture-related practical training | 50.6% | 90 |
| School life and extracurricular activities | 23.6% | 42 |
| Occupational advice and guidance | 18.0% | 32 |
| | Total | 396 |

**3. Please indicate your degree of agreement with the following recommendations on how to improve agriculture education in Jordan. Please, rate from 1 (Strongly disagree) to 5 (Strongly agree)**

| | 1 | 2 | 3 | 4 | 5 | Responses |
|---|---|---|---|---|---|---|
| | Row % | Row % | Row % | Row % | Row % | Count |
| Teachers should have more practical experience in agriculture | 11.2% | 5.1% | 18.0% | 16.3% | 49.4% | 178 |
| The schools should have larger facilities for practical training and demonstration plots | 7.9% | 3.4% | 11.8% | 14.6% | 62.4% | 178 |
| The schools' equipment needs to be upgraded according to the market needs | 9.0% | 3.4% | 7.3% | 12.4% | 67.8% | 177 |

**4. Please indicate in which areas of agriculture you find yourself to be BEST trained. Multiple answers possible**

| Value | Percent | Count |
|---|---|---|
| Plant production | 56.3% | 98 |
| Animal production | 56.9% | 99 |
| Agro-industries | 33.9% | 59 |
| Environment and natural resources | 17.2% | 30 |
| Agricultural economy | 11.5% | 20 |

## B. YOUR OCCUPATION

**5. In what sector are you currently working?**

| Value | Percent | Count |
|---|---|---|
| Agriculture | 14.9% | 25 |
| In another sector - Please specify | 19.0% | 32 |
| I am unemployed | 42.3% | 71 |
| I am pursuing further/different education - Please specify | 23.8% | 40 |
| | Totals | 168 |

**6. Within the agriculture sector, please indicate which of the following categories best matches your job. Multiple answers possible.**

| **Value** | **Percent** |
|---|---|
| Arable farm worker | 25.0% |
| Herdsperson | 8.3% |
| Poultry farm worker | 12.5% |
| Warehouse or depot worker | 4.2% |
| Horticulturist | 4.2% |
| Fruit grower | 8.3% |
| Floriculturist | 4.2% |
| Food processing factory worker | 8.3% |
| Dairy processing factory worker | 4.2% |

| | |
|---|---|
| Agricultural institution worker | 8.3% |
| Other (Please specify): | 12.5% |

**7. What is your job title?**

…

**8. Why did you choose to work in a sector other than agriculture?**

| Value | Percent | Count |
|---|---|---|
| Because I found better job conditions in a different sector | 43.8% | 14 |
| Because my interests have changed | 12.5% | 4 |
| Because I don't feel well trained for the agriculture sector | 6.3% | 2 |
| Other (Please elaborate): | 37.5% | 12 |
| | Totals | 32 |

**10. Concerning other work conditions, please tick the sentences that correspond to your current situation. Multiple answers possible.**

| Value | Percent | Count |
|---|---|---|
| I don't have a work contract | 51.8% | 29 |
| I have been in my current position for more than one month | 7.1% | 4 |
| My position is temporary | 10.7% | 6 |
| I have been in my current position for more than one year | 10.7% | 6 |
| I am self-employed | 14.3% | 8 |
| I have a permanent position | 3.6% | 2 |
| My current job demands a qualification higher than mine | 8.9% | 5 |
| My current job does not demand any qualification | 17.9% | 10 |
| | Total | 70 |

**11. Please chose the aspects of your job you are MOST satisfied with. Multiple answers possible.**

| Value | Percent | Count |
|---|---|---|
| The content of my job and its technical aspects | 25.0% | 14 |
| The way my duties contribute to society | 21.4% | 12 |
| Salary | 35.7% | 20 |
| Atmosphere | 5.4% | 3 |
| Family conciliation | 21.4% | 12 |
| Other | 37.5% | 21 |
| | Total | 82 |

**12. Why did you decide to pursue further/different education?**

| **Value** | **Percent** | **Count** |
|---|---|---|
| I could not find a decent job | 7.7% | 3 |

| | | |
|---|---|---|
| I did not like agriculture | 10.3% | 4 |
| My aim is to obtain a university diploma | 41.0% | 16 |
| Other - Please specify | 41.0% | 16 |
| | Totals | 39 |

**13. Has your employment situation been negatively affected by the COVID-19 crisis?**

| Value | Percent | Count |
|---|---|---|
| Yes - Please elaborate | 51.2% | 84 |
| No | 48.8% | 80 |
| | Totals | 164 |

## C. THE SCHOOL-TO-WORK TRANSITION

**14. To what extent would you assess your school-to-work transition as easy?**

| Value | Percent | Count |
|---|---|---|
| 1 | 34.0% | 54 |
| 2 | 13.2% | 21 |
| 3 | 33.3% | 53 |
| 4 | 5.7% | 9 |
| 5 | 13.8% | 22 |
| | Totals | 159 |

**15. When did you have your first work experience?**

| Value | Percent | Count |
|---|---|---|
| Before starting my agriculture studies | 28.8% | 46 |
| During my agriculture studies | 20.6% | 33 |
| Immediately after agriculture studies | 11.3% | 18 |
| More than one year after completing my studies | 6.3% | 10 |
| I have never worked | 33.1% | 53 |
| | Totals | 160 |

**16. What was the most successful method for finding your first job?**

| Value | Percent | Count |
|---|---|---|
| Through my school | 14.2% | 15 |
| Through an internship | 14.2% | 15 |
| Through the Internet | 5.7% | 6 |
| Through employment agencies | 1.9% | 2 |
| Family, friends and personal networks | 51.9% | 55 |
| Other - Please specify | 12.3% | 13 |

| | | |
|---|---|---|
| | Totals | 106 |

**17. Were the employers that interviewed you interested in the vocational education certificate in agriculture?**

| Value | Percent | Count |
|---|---|---|
| Yes | 18.4% | 29 |
| No | 41.8% | 66 |
| I have not approached any employers | 39.9% | 63 |
| | Totals | 158 |

## D. SKILL ASSESSMENT

**18. According to your experience, which of the following skills and competencies are most demanded by employers in the Jordanian agriculture sector? Multiple answers are possible**

| Value | Percent |
|---|---|
| Sowing, planting and/or transplanting plant material | 36.8% |
| Marketing and promotion of products | 34.8% |
| Preparing land with selected machinery | 34.2% |
| Managing irrigation systems and optimizing the use of water | 32.3% |
| Assembling and maintaining agricultural and livestock facilities | 31.0% |
| Teamwork | 29.0% |
| Agricultural research | 28.4% |
| Handling farm equipment and machinery | 27.7% |
| Managing grazing | 24.5% |
| Equipment and techniques for dairy processing | 23.2% |
| Agriculture economics and management | 23.2% |
| Equipment and techniques for food processing | 21.9% |
| Communication skills | 20.0% |
| Collecting, conditioning and storing products and by-products | 18.7% |
| General entrepreneurial skills | 18.7% |
| Animal handling and production operations | 18.1% |
| Measures and standards for occupational health and safety | 16.8% |
| Measures and standards for preventing and mitigating environmental risks | 15.5% |
| Obtaining products from beekeeping and maintaining hives | 15.5% |
| Preparing and applying the phytosanitary treatments | 14.8% |
| General understanding of social and environmental issues | 12.9% |
| Other - please elaborate | 3.9% |

**19. Please indicate which of those skills and competencies were acquired by you during your agriculture secondary education. Multiple answers are possible**

| **Value** | **Percent** |
|---|---|

| | |
|---|---|
| Sowing, planting and/or transplanting plant material | 57.4% |
| Preparing land with selected machinery | 48.4% |
| Managing irrigation systems and optimizing the use of water | 41.9% |
| Teamwork | 38.7% |
| Handling farm equipment and machinery | 36.1% |
| Equipment and techniques for dairy processing | 32.9% |
| Animal handling and production operations | 30.3% |
| Measures and standards for occupational health and safety | 29.0% |
| Equipment and techniques for food processing | 25.8% |
| Managing grazing | 25.2% |
| Communication skills | 25.2% |
| Agriculture economics and management | 24.5% |
| Marketing and promotion of products. | 23.9% |
| Agricultural research | 21.9% |
| Collecting, conditioning and storing products and by-products | 21.3% |
| Preparing and applying the phytosanitary treatments | 20.6% |
| Assembling and maintaining agricultural and livestock facilities | 20.0% |
| General entrepreneurial skills | 18.7% |
| Measures and standards for preventing and mitigating environmental risks | 15.5% |
| General understanding of social and environmental issues | 14.8% |
| Obtaining products from beekeeping and maintaining hives | 12.9% |
| Other - please elaborate | 3.2% |

### 20. In which governorate are you employed?

| Value | Percent | Count |
|---|---|---|
| Amman | 34.0% | 17 |
| Balqa’ | 6.0% | 3 |
| Madaba | 4.0% | 2 |
| Jerash | 8.0% | 4 |
| Irbid | 28.0% | 14 |
| Karak | 14.0% | 7 |
| Tafieleh | 2.0% | 1 |
| Ma’an | 2.0% | 1 |
| Aqaba | 2.0% | 1 |
| | Totals | 50 |

### 21. Please select the name of your school.

| Value | Percent | Count |
|---|---|---|
| Abdullah II bin Al Hussein W. S. For Boys | 3.5% | 5 |
| Amaya W.S. Boys | 0.7% | 1 |
| Badia Professional For Boys | 2.1% | 3 |
| Deir Abi Said W/Sh/2 for Boys | 6.3% | 9 |
| Good High School Professional For Boys | 1.4% | 2 |
| Hattin professional for boys | 14.1% | 20 |
| High School /U/Girls | 7.7% | 11 |
| Hofa Al-Mazar Secondary/U/Benin | 4.2% | 6 |
| Ibn Rushd W St. Boys | 3.5% | 5 |
| Majid Adwan U For Boys | 3.5% | 5 |
| Meadow Bathroom W Professional For Boys | 4.9% | 7 |
| Prince Hamza bin Al Hussein W. S. For Boys | 3.5% | 5 |
| Prince Zeid bin Al Hussein Professional | 9.2% | 13 |
| Princess Haya bint Al-Hussein W. S. For Girls | 5.6% | 8 |
| Secondary Boys' Green | 2.1% | 3 |
| Um Jawsa W/Boys | 4.2% | 6 |
| Wadi Al Rayyan Comprehensive High School For Boys | 12.0% | 17 |
| Zamalia W/S For Girls | 7.7% | 11 |
| Shobak Agricultural School | 3.5% | 5 |
| | Totals | 142 |

### 22. Have you completed your agriculture secondary education?

| Value | Percent | Count |
|---|---|---|
| Yes | 83.3% | 130 |
| No | 16.7% | 26 |
| | Totals | 156 |

**23. Please select your gender**

| Value | Percent | Count |
|---|---|---|
| Male | 73.7% | 115 |
| Female | 26.3% | 41 |
| | Totals | 156 |

**24. Please select your nationality**

| Value | Percent | Count |
|---|---|---|
| Jordanian | 96.8% | 150 |
| Other (please specify) | 3.2% | 5 |
| | Totals | 155 |

**25. Do you have any special disabilities?**

| Value | Percent | Count |
|---|---|---|
| Yes - please specify | 3.9% | 6 |
| No | 96.1% | 148 |
| | Totals | 154 |

**26. Regarding your decision to study agriculture, which of these statements most closely applies to you?**

| Value | Percent | Count |
|---|---|---|
| I decided to study agriculture based on my personal preferences | 83.8% | 129 |
| I decided to study agriculture based on the preferences of others (e.g. family) | 16.2% | 25 |
| | Totals | 154 |

**27. Please use this space to add any additional comments that you consider relevant:**

**28. If you wish to receive and comment on the survey results, please click the box below and provide your telephone number or email**

| Value | Percent | Count |
|---|---|---|
| I would like to be informed of the survey results and discuss with other UNESCO staff and other fellow graduates on the quality of relevance of the education receive | 100.0% | 117 |

**29. Email or tel. n**

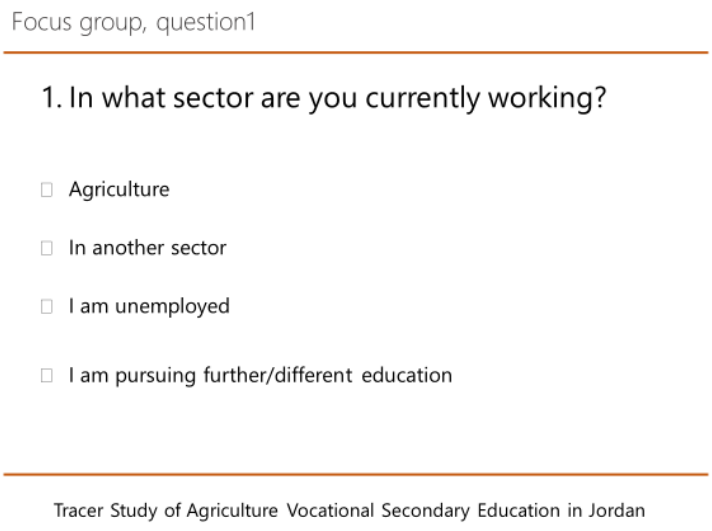
# ANNEX II. Focus groups proposal

In order to build on the results collected so far, it is recommended that focus groups are conducted. Each group should reflect a different category of former student upon the basis of two criteria: gender and occupation. As per Graph I, these selection criteria will result in eight groups:

- Female former students:
    1. Working in the agriculture sector
    2. Working in a different sector
    3. Unemployed
    4. Pursuing further education
- Male former students:
    5. Working in the agriculture sector
    6. Working in a different sector
    7. Unemployed
    8. Pursuing further education

The structure of the focus group could consist in three questions raised by the researcher and supported by three power point slides. Question 1 will ask participants to describe their current occupation. Question 2 will invite them to comment on the distribution of the whole cohort across different occupations and considering gender differences. Question 3 will enquire on the determinants of the participants current occupation.

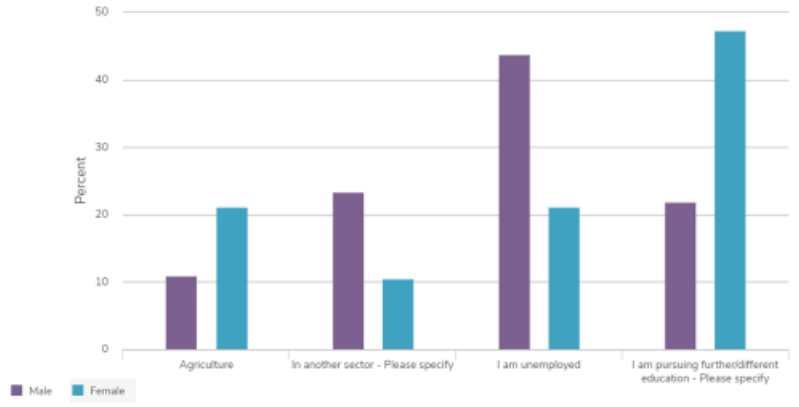
## I. Please describe your current occupation



## II. Please comment on the employment distribution of your cohort

Focus group, question 2

Please comment the employment of the whole 2016-17 cohort:
- Why so many agriculture former students work in a different sector?
- Why is unemployment so high among men?
- Why do you think women tend to pursue education so frequently?




Tracer Study of Agriculture Vocational Secondary Education in Jordan

## III. The determinants of your current occupation

Focus group, question 3

Which of the following factors have had a stronger influence on your current occupation:

- ☐ Your technical skills and practical training received (including the practical experience of your teachers and the facilities and technical equipment of your school)
- ☐ General skills developed during your education
- ☐ Work conditions in the agriculture sector in comparison to other sectors
- ☐ Your interest in agriculture in comparison to other interests
- ☐ Support during school-to-work transition (differentiate personal vs. institutional support)
- ☐ Your gender

# ANNEX III. Education quality assessment by Schools

**Overall quality. Students rating from 1 (very low quality) to 5 (very high).**

| Schools | How do you assess the overall quality of the education received? |
|---|---|
| Abdullah II bin Al Hussein W. S. For Boys | 3,3 |
| Amaya W.S. Boys | 0,0 |
| Badia U Professional For Boys | 2,0 |
| Deir Abi Said W/Sh/2 for Boys | 3,3 |
| Good High School Professional For Boys | 2,0 |
| Hattin w/professional for boys | 3,4 |
| High School /U/Girls | 3,9 |
| Hofa Al-Mazar Secondary/U/Benin | 3,7 |
| Ibn Rushd W St. Boys | 3,6 |
| Majid Adwan U For Boys | 2,4 |
| Meadow Bathroom W Professional For Boys | 3,3 |
| Prince Hamza bin Al Hussein W. S. For Boys | 3,8 |
| Prince Zeid bin Al Hussein Professional | 3,4 |
| Princess Haya bint Al-Hussein W. S. For Girls | 4,0 |
| Secondary Boys' Green | 3,7 |
| Shobak Agricultural School | 3,8 |
| Um Jawsa W/Boys | 3,5 |
| Wadi Al Rayyan Comprehensive High School (Boys) | 2,9 |
| Zamalia W/S For Girls | 3,9 |

Source: Survey question 1

**How to improve education quality. Students agreement with recommendations from 1 (strong disagreement) to 5 (strong agreement).**

| Schools | Teachers should have more practical experience in agriculture | The schools should have larger facilities for practical training and demonstration plots | The schools' equipment needs to be upgraded according to the market needs | The teaching materials need to be updated |
|---|---|---|---|---|
| Abdullah II bin Al Hussein W. S. For Boys | 4,6 | 4,4 | 4,2 | 4,2 |
| Amaya W.S. Boys | 5,0 | 5,0 | 5,0 | 5,0 |
| Badia U Professional For Boys | 3,0 | 3,3 | 3,7 | 3,7 |
| Deir Abi Said W/Sh/2 for Boys | 4,6 | 4,2 | 4,2 | 3,8 |
| Good High School Professional For Boys | 4,0 | 3,0 | 3,0 | 3,0 |
| Hattin w/professional for boys | 4,3 | 4,5 | 4,7 | 4,5 |
| High School /U/Girls | 3,9 | 4,4 | 4,5 | 4,1 |
| Hofa Al-Mazar Secondary/U/Benin | 3,3 | 4,0 | 4,7 | 4,7 |
| Ibn Rushd W St. Boys | 4,2 | 4,2 | 4,0 | 4,6 |
| Majid Adwan U For Boys | 3,4 | 4,0 | 2,6 | 2,6 |
| Meadow Bathroom W Professional For Boys | 3,3 | 4,1 | 4,6 | 4,7 |
| Prince Hamza bin Al Hussein W. S. For Boys | 3,8 | 3,8 | 4,4 | 4,4 |
| Prince Zeid bin Al Hussein Professional | 3,7 | 4,1 | 4,7 | 4,7 |
| Princess Haya bint Al-Hussein W. S. For Girls | 3,4 | 4,1 | 3,9 | 3,9 |
| Secondary Boys' Green | 4,7 | 4,3 | 4,0 | 4,3 |
| Shobak Agricultural School | 3,8 | 4,8 | 5,0 | 4,0 |
| Um Jawsa W/Boys | 4,3 | 4,8 | 3,8 | 4,7 |
| Wadi Al Rayyan Comprehensive High School (Boys) | 3,9 | 4,3 | 4,4 | 4,1 |
| Zamalia W/S For Girls | 3,8 | 4,7 | 4,7 | 4,8 |

Source: Survey question 3