

T.C.
GAZIANTEP UNIVERSITY
IMMIGRATION INSTITUTE
DEPARTMENT OF MIGRATION STUDIES

**IMPACT OF THE SYRIAN CRISIS AND MIGRATION
ON THE AGRICULTURAL LABOR FORCE SECTOR
IN SYRIA AND TÜRKİYE**

MASTER'S THESIS

OMAR ATIK

GAZIANTEP
JANUARY 2024

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Thesis Advisors: Prof. Dr. Yücel KARADAŞ
Co-Supervisor: Dr. Muhammet Musa BUDAK

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T.C.
GAZİANTEP ÜNİVERSİTESİ
GÖÇ ENSTİTÜSÜ
GÖÇ ÇALIŞMALARI ANA BİLİM DALI

**SURİYE KRİZİ VE GÖÇÜNÜN SURİYE VE
TÜRKİYE'DEKİ TARIMSAL İŞGÜCÜ
SEKTÖRÜNE ETKİSİ**

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OCAK 2024

DECLARATION OF COMPLIANCE WITH ETHICS

In this thesis study, which I prepared according to Gaziantep University Social Sciences Institute Thesis Writing Rules,

- I have obtained the data, information, and documents I have presented in the thesis within the framework of academic and ethical rules,
- I present all information, documents, evaluations, and results according to scientific ethics and morals,
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- I have not made any changes to the data used,
- I declare that the work I have presented in this thesis is original, otherwise I accept all the loss of rights that may arise against me.

Omar ATIK

05.01.2024

ABSTRACT

IMPACT OF THE SYRIAN CRISIS AND MIGRATION ON THE AGRICULTURAL LABOR FORCE SECTOR IN SYRIA AND TÜRKİYE

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Master's Thesis, Migration Studies

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January 2024, 93 Sayfa

This research was conducted to understand the labor force in both Northwest Syria and Türkiye before and after the Syrian crisis. Data were collected through 432 surveys carried out during June and July 2023 with agricultural and livestock workers. The data were analyzed using the SPSS program. The results of this study revealed that conflict and insecurity in northwestern Syria are the primary drivers for Syrian agricultural laborers seeking refuge in Türkiye. Syrian laborers are attracted to Türkiye due to robust security conditions, a well-established agricultural sector, and job opportunities in agriculture and livestock. Daily wages in Türkiye are significantly higher than in Syria, both before and after the crisis. Workers who faced insufficient daily wages employed various strategies to supplement their income. Laborers in agriculture and livestock encountered challenges, including seasonality, unsustainability, and low wages before and after the crisis. In Türkiye, additional challenges included difficulties in traveling outside the region. In Syria, support mechanisms included public transportation and cooperative organization but had a limited impact on daily wages. In Türkiye, a substantial majority did not receive any support. Support mechanisms were insufficient in addressing low daily wages in both countries. Syrian agricultural laborers in Türkiye contributed to higher agricultural production and exports. They do not require work permits, making their employment more accessible. NGOs implemented agricultural and livestock projects in both Syria and Türkiye, providing job opportunities. Women had job opportunities in agriculture and livestock in both Syria and Türkiye, with variations in activities.

Keywords: Syria, Türkiye, Migration, Agriculture, Labor.

ÖZET

SURİYE KRİZİ VE GÖÇÜNÜN SURİYE VE TÜRKİYE'DEKİ TARIMSAL İŞGÜCÜ SEKTÖRÜNE ETKİSİ

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Bu araştırma, Suriye krizinden önce ve sonra Kuzeybatı Suriye ve Türkiye'deki işgücünü anlamak amacıyla gerçekleştirildi. Veriler, Haziran ve Temmuz 2023 tarihleri arasında tarım ve hayvancılık işçileriyle yapılan 432 anket aracılığıyla toplandı. Veriler, SPSS programı kullanılarak analiz edildi. Bu çalışmanın sonuçları, kuzeybatı Suriye'deki çatışma ve güvensizliğin, Suriyeli tarım işçilerinin Türkiye'ye sığınmalarının başlıca sebepleri olduğunu gösterdi. Suriyeli işçiler, güçlü güvenlik koşulları, sağlam bir tarım sektörü ve tarım ile hayvancılık alanında iş imkanları nedeniyle Türkiye'ye çekiliyor. Günlük ücretler Türkiye'de Suriye'den önemli ölçüde daha yüksek, hem Suriye'de hem de Suriye krizinden sonra. Yetersiz günlük ücretle karşılaşan işçiler gelirlerini artırmak için çeşitli stratejileri benimsemekte. Tarım ve hayvancılık alanındaki işçiler, kriz öncesi ve sonrasında mevsimsellik, sürdürülebilirlik ve düşük ücret gibi zorluklarla karşılaştı. Türkiye'de ek zorluklar arasında bölge dışına seyahat etme konusundaki zorluklar bulunmaktadır. Suriye'de destek mekanizmaları arasında toplu taşıma ve kooperatif organizasyonu yer alsa da bunların günlük ücretlere sınırlı etkisi oldu. Türkiye'de ise önemli bir çoğunluk herhangi bir destek almadı. Destek mekanizmaları, her iki ülkede düşük günlük ücretlere çözüm getirmede yetersiz kaldı. Türkiye'deki Suriyeli tarım işçileri, tarım üretimini ve ihracatını artırdı. Çalışma izni gerektirmiyorlar, bu da işe alımlarını daha erişilebilir kılıyor. Sivil toplum kuruluşları, hem Suriye'de hem de Türkiye'de tarım ve hayvancılık projelerini uygulayarak iş imkanları sağladı. Kadınlar, hem Suriye'de hem de Türkiye'de tarım ve hayvancılık alanında iş imkanlarına sahipti, faaliyetlerde çeşitlilik göstermekte.

Anahtar Kelimeler: Suriye, Türkiye, Göç, Tarım, İşgücü

FOREWORD

In this thesis, we embark on a profound exploration of the agricultural labor markets in Syria and Türkiye, both before and after the crisis. We delve into the pre-crisis status, the causes and consequences of post-crisis labor migration, and the impacts of the crisis on the Syrian agricultural labor sector. Our focus extends to the effects of Syrian worker migration on Türkiye's agricultural labor market, the opportunities and challenges for Syrian migrants in Türkiye, and the influence of humanitarian organizations' agricultural projects.

Our research, conducted in northwest Syria and various Turkish regions, involved 432 surveys with agricultural and veterinary laborers. Despite higher daily wages in Türkiye, the cost of living poses challenges. Conflict and insecurity drive Syrian laborers to Türkiye, where they engage in similar traditional practices. This study reveals the resilience of these workers who employ various income strategies. Their presence in Türkiye enhances agricultural production and exports. NGOs play a crucial role in providing job opportunities, though sustainability concerns persist. We also acknowledge the challenges faced by women and internally displaced persons in these labor markets.

I would like to express my gratitude and respect to Prof. Dr. Yücel KARADAŞ, and Dr. Muhammet Musa BUDAK for helping me to finalize my thesis and to all the teachers who taught us during the master's period, to all the workers who contributed to my work, and to all the workers who accepted the surveys, to my father, wife, and three children.

Omar ATIK

January 2024

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TABLE OF ABBREVIATION

EU	European Union
FAO	Food and Agriculture Organization
Fig	Figure
HNO	Humanitarian Need Overview
IDP	Internal Displace People
ILO	International Labor Organization
NGO	Non-Governmental Organization
NW Syria	Northwest Syria
SPSS	Statistical Package for the Social Sciences

INTRODUCTION

Syria's humanitarian condition is still dire, as the nation's economic development has been constrained by years of political unrest and armed conflict. Due to the damage to infrastructure, deaths, and loss of human capital, as well as the interruption of commerce and markets, the gross domestic product has decreased by more than 60% since 2011 (World Bank, 2021). Businesses, job growth, and people's access to work prospects have all been impacted by the protracted crisis and the resulting displacement (Reach, 2021). The agricultural and livestock sectors are in the most affected sectors in this context.

Agriculture is considered the main source of income in Syria and agriculture production is the main factor in food security. The contribution of agriculture used to be nearly 30 percent, employing 25 percent of the total labor force (Borazan, 2021). Although the agricultural area of the Syrian Arab Republic is spread over large areas of the country, the agricultural sector is facing many difficulties in light of deteriorating security conditions and the high cost of farming. Crop production is impacted by high labor costs, shortages of workers, crop destruction, and fragmented markets, with disrupted supply chains and severe damage to grain silos and flour mills (FAO, 2017).

CHAPTER I

RESEARCH METHODOLOGY

1.1. RESEARCH PURPOSE and IMPORTANCE

This study is considered very important for Türkiye and Syria for the following reasons:

- The agricultural sector is an important economic sector in Syria, where 30% (6.5 million ha) of the Syrian lands are arable (24.65% irrigated and 57.89% rainfed). Approximately, 8.9 million people (44.5% of the Syrian population) live in rural areas, and more than one million (19.4% of the Syrian labor force) work in agriculture.
- The exceptional importance of the Syrian agricultural sector lies in that it constitutes an economic resource for more than 46% of the Syrian population in addition to the significant contribution to the Syrian national economy where more than 31% of the total Syrian exports come from the agricultural sector.
- The agriculture sector is important as on average it occupied around twenty percent of the Syrian country's exports, gross domestic product, and labor force. Although nonagricultural activities increased in importance in the countryside, the agricultural sector still employs more than a third of the rural labor force.
- The agriculture sector emerges as a primary gateway to absorb the labor force of Syrian refugees because agriculture has an important role as a major contributor to the local economy in the pilot provinces.
- The livestock and dairy sectors in particular are growing and experiencing considerable investment—which requires a skilled workforce.
- This study will contribute to designing skills-building programs that recognize refugees' skills and match them with the needs of the market will both improve refugees' quality of life and contribute to the economy.
- This study will recommend some regulations that prevent refugees' engagement in the informal market without harming them and encourage employers to hire Syrians by providing incentives.

- Support income-generating activities in food security and nutrition, vocational and skill development training, and raise awareness about labor laws among the most vulnerable agricultural seasonal workers and host community members.
- Particular attention will be given to seasonal agricultural workers, who are largely left out of the social protection system to address these challenges, which are important for ensuring high levels of employment.
- Determine the labor market dynamics in agriculture, production, and marketing chains and food consumption patterns and emerging changes,
- Identify opportunities in the agricultural sector for Syrian refugees and/or disadvantaged households and determine how these opportunities can be broadened to increase household incomes, shape employment, improve social protection and integration,
- Determine the future plans of the Syrian refugees and the households of the disadvantaged host and the possibilities for the establishment of the conditions to make their future plans possible,
- Identify the areas of social opportunity and protection in relation to social gender and child labor.

There are many research objectives as presented below:

- To explore the status of the agricultural labor market in Syria before the crisis.
- To identify the direct and indirect causes of agricultural labor migration from Syria after the crisis.
- To identify the negative and positive effects of the crisis on the agricultural labor sector in Syria.
- To identify the positive and negative effects of the migration of Syrian workers on the agricultural labor market in Türkiye.
- To determine the potential agricultural job opportunities and challenges for Syrian migrants in Türkiye
- To identify the new Turkish policies regulating the agricultural labor and employment sector in Türkiye after receiving Syrian refugees.
- To determine the impact of agricultural projects implemented by humanitarian organizations on the agricultural labor market in Syria and Türkiye.

1.2.THE RESEARCH SUBJECT AND SCOPE

Prior to the ongoing crisis, 11% of Syria's total labor force was employed in the livestock sector, which included many low-income earners in rural areas. While almost half of the population lives in rural areas, in 2008 the labor force in agriculture was 20-25% of the country's total population, which is more than any country in the Middle East and North Africa region except Yemen (Bayram, 2020).

During the period of crisis, the decline in the percentage of workers in the agriculture and livestock sector is expected to continue due to the fact that large areas of agricultural land are out of production due to military operations, and the difficulty of farmers reaching their farms and fields to work in them, forcing them to move to other activities or to emigrate outside Syria (UNDP, 2017).

Based on the declared data, Türkiye ranks the 1st among the countries that are hosting Syrian refugees. The total number of Syrians in Türkiye was declared as 3,606,200 in 2019. The economic impacts of Syrian refugees on Türkiye have become a significant issue due to its population of 3.6 million (Kaya and Iyidin, 2021). Estimates on the number of informally employed Syrians in Türkiye range between 500,000 and 1,000,000 (Kadkoy, 2017). The majority of the Syrian population is working in low-skilled jobs in seasonal agriculture, textile, construction, and manufacturing (International Labor Organization, 2016).

Ensuring access to social protection in Türkiye is key to ensuring stable access to livelihood opportunities. Unclear social benefits, poor working conditions, differences in wages between men and women, and lack of childcare services are widely reported as problems for both Syrians and vulnerable Turkish host communities who are engaged in agricultural work. The mass influx of Syrian refugees in Türkiye has accelerated the ongoing legislative initiatives on the issue of migration. Adoption of the work permit regulation for temporary protection status holders in early 2016 is indicative of a shift toward long-term planning concerning 3 million Syrians. Yet, many remain informally employed in poor conditions. While migration has caused lower wages in agriculture, it has increased the demand for qualified labor and has increased the wages in sectors beyond agriculture (Kaya and Iyidin, 2021).

Seasonal agricultural work has been another important source of employment for Syrian refugees. The new immigration law allows refugees without work authorization

to be employed in seasonal jobs with the provincial governorate's permission. Under the existing conditions, Syrian workers in the agricultural sector did not result in filling the gap in the labor market, on the contrary, it aggravated the existing problems of agrarian labor relations. If the Syrian applicant wants to work in the agriculture or stockbreeding sector, he/she should apply for a work permit exemption at the Provincial Directorate of Labor in the province where he/she is registered (Turkey Country Chapter, 2021-2022).

The influx of Syrian migrants has significantly affected the labor market in Türkiye. Until January 2016 the legal status of Syrian migrants prevented them from participating in the formal labor market and led them to the informal labor market. Most of the time Syrians work for longer hours, under worse working conditions, and receive less pay than native workers. The most common result has been refugees replacing native workers, while in some cases the dynamic led to the creation of new jobs and a segment of the native workforce transitioning from informal to formal employment. It is commonly reported that immigrants in general and Syrians in particular provide crucial labor in agriculture. Anecdotal evidence suggests that large numbers of Syrians have found employment as temporary workers in agriculture, particularly in Türkiye's southeastern provinces bordering Syria. Many of them come from rural areas and were working in agriculture prior to their displacement. The fact that ecosystems in Türkiye are similar to Syria has facilitated Syrians' transition into Turkish agriculture. The majority of refugees have been in Türkiye for over 3 years and –apart from humanitarian aid- they have joined the labor force with wages to resume their lives. A significant proportion of the refugees are young people with limited skill and work experience, working in irregular or seasonal agricultural work, or families (men, women, and children) who work together in the field of agriculture (Gülçubuk and Turan, 2019).

It is therefore of critical importance to identify the problems of the refugees working in agriculture, in order to improve their working conditions, develop solutions against future economic shocks and social instability, and support them in acquiring the occupational training necessary to become part of the qualified workforce and gain sustainable livelihood resources.

This research was conducted in Northwest Syria including Idlib and Aleppo governorates. To ensure a representative sample, we systematically distributed our

survey, covering all districts in northwestern Syria: Afrin, Al-Bab, A'zaz, Jarablus, and Jebel Saman districts in Aleppo and Ariha, Harim, Idlib, and Jisr-Ash-Shugur in Idlib. In Türkiye, the survey covered Adana, Ankara, Bolu, Hatay, Istanbul, Samsun, and Şanlıurfa governorates according to the accessibility and availability of the Syrian refugees' workers in agriculture and livestock sectors in Turkey.

1.3. THE RESEARCH METHOD

A comprehensive questionnaire (annex#1) was prepared to fit with the agreed objectives of this study and to be similar for many surveys and reports were conducted in Türkiye and Northwest Syria after the Syrian crisis, where questions targeted the laborers in the agricultural and livestock sectors who were surveyed to understand the labor force sectors in both Northwest Syria and Türkiye before and after the crisis.

The questionnaire explored the following aspects in Northwest Syria and Türkiye:

- Reasons for Migration of Syrians to Türkiye.
- Agriculture and livestock Activities in Syria and Türkiye
- Status of the Agricultural Labour Force in Syria and Türkiye
- Advantages and disadvantages of the agricultural labour force in Syria and Türkiye
- Support provided to the Agricultural labour Force in Syria and Türkiye
- Impact of the Syrian agricultural labors on the agriculture sector in Türkiye
- Impact of NGOs interventions on the agricultural labour force in Syria and Türkiye

Upon ethical approval from Gaziantep University (E-87841438-302.08.01-329697- Decision number 20 in the meeting number 5 on 05.05.2023), data was collected during June and July 2023. Identification of the main targeted agricultural and livestock workers was conducted through the networks of the researcher (in Türkiye and northwest Syria) where a digital consent message was prepared and shared with all participants, outlining the research title, goals, duration of the interview, and expected outcomes, and seeking participant approvals.

Questionnaire surveys were undertaken in this study using KOBO electronic applications, and smartphones. 432 surveys were carried out with the agricultural and veterinary labor in Northwest Syria and Türkiye; 241 surveys were collected from NW Syria (22% are female and 78% are male; 48% are IDPs and 52% are host

communities), 191 Survey were collected from Türkiye (19% are female and 81% are male; 100% were Syrian refugee agricultural workers) (Table 1).

Table 1

The number of surveys that were conducted with agricultural workers in different provinces in NW Syria and Türkiye.

Province	# Surveys
<i>NW Syria</i>	
Aleppo	150
Idleb	91
Sub Total: 2	241
<i>Türkiye</i>	
Adana	5
Ankara	11
Bolu	19
Hatay	49
Istanbul	6
Samsun	3
Şanlıurfa	98
Sub Total: 7	191
Grand Total: 9	432

The samples are representative of households in Northwest Syria with a confidence level of 95% and a margin of error of $\pm 5\%$ of the measured/surveyed value.

The obtained data were analyzed in SPSS (Statistical Package for the Social Science) Statistical Analysis Program. Tests such as Frequency and Descriptive Analysis, Reliability Analysis were performed on the mentioned data. Frequency test shows the number of repeating events occurring per unit of time. Descriptive analysis includes conducting mean tests which indicate the extent of respondent agreement on questionnaire statements. Reliability and factor analysis were performed to determine whether the dimensions, which are taken place in the scale, are reliable or not. Reliability analysis measures the consistency of responses to a questionnaire prepared according to a predetermined type of scale.

This quantitative technique is considered helpful when the researcher attempts to gather and examine mathematical information. It is likewise fabricated more on innovative plans and information results seriously willing and satisfied to understand. This depiction expresses that the quantitative technique is arbiter than different strategies for investigating mathematical information. Though, it shares a lot of information and figures. Thus, a reasonable technique for this study is quantitative.

Data was gathered directly onto the server in Türkiye and stored securely, limiting access to the project researcher and the supervisor. Raw data will not be shared with another party, and all data will be anonymized. For correspondence purposes, participants' personal information was stored on password-protected files for the duration of the project. Data were stored and analyzed using offline computers in securely locked premises and stored securely online in a password-protected OneDrive site by the researcher and the supervisor.

Ethical approval to conduct this work was sought through the University of Gaziantep (Türkiye).

The deliverables and the results of this study will be widely disseminated to targeted audiences including decision-makers and national and international academic institutions (through attendance at conferences and peer-reviewed publications etc.) where the key findings will be used by decision-makers, I/NGOs, UN agencies, and donors to design and implement, short, medium, and long-term interventions for Syrian workers in agriculture sector after the crisis and the migration of the Syrian refugees to Türkiye. Moreover, Agricultural stakeholders will be trained about the recommendations to ensure the transfer of this new scientific insight to Syrian Farmers, laborers, and other stakeholders.

1.4.THE RESEARCH LIMITATIONS

The study conducted surveys in specific regions of northwest Syria and Turkey. This regional focus may limit the generalizability of the findings to other parts of these countries or other regions affected by the Syrian crisis.

Data was collected during June and July 2023, which might not capture the seasonal variations in agricultural activities. Seasonal changes can significantly impact labor dynamics in the agricultural sector, and the study's timeframe may not fully account for such variations.

The study relies on surveys conducted with agricultural and livestock workers. Self-reported data may be subject to bias, and respondents may provide socially desirable answers or may not accurately recall certain information.



CHAPTER II

LITERATURE REVIEW

2.1. MIGRATION and ITS DRIVERS

The concept of migration encompasses a broad spectrum of human mobility, spanning internal and short distance moves to international and long-distance relocations. It can range from temporary to permanent resettlement and from voluntary to forced displacement. While internal and external migration are not mutually exclusive processes, most human migration patterns tend to occur within national borders, regardless of whether the primary drivers are environmental in nature (Obokata et al., 2014).

Migration influenced, at least in part, by environmental factors typically occurs over relatively shorter distances. One significant reason for this is that migration, especially international migration, necessitates a certain level of economic and social capital (Findlay, 2011). Vulnerable populations who lack the means to utilize migration as an adaptation strategy to environmental changes may find themselves trapped instead (Foresight, 2011; Pinar and Eklund, 2023; Zickgraf, 2018).

The political and economic contexts play a crucial role in how environmental change leads to migration outcomes (Joarder & Miller, 2013; Kabir et al., 2018; Obokata et al., 2014). There is existing literature that links climate-induced migration to armed conflicts, where migration driven by adverse environmental conditions may increase the risk of conflict or violence (Linke et al., 2018), as well as the risk of internal displacement and international migration (Missirian and Schlenker, 2017).

Climate change is increasingly recognized as a "threat magnifier" of pre-existing migration drivers, including social, political, and economic factors (Parrish et al., 2020). Climate-related factors can contribute to various outcomes: (1) forced displacement, (2) the decision to migrate, (3) resettlement determined by political authorities, (4) individuals becoming trapped due to various obstacles preventing migration, or (5) people choosing to remain in place despite environmental risks (Parrish et al., 2020; Pinar and Eklund, 2023).

In the past, migration was often viewed primarily as a consequence of failed adaptation to changing environments. However, there is an evolving understanding that migration is one of several strategies people employ to adapt to environmental changes (Gemenne and Blocher, 2017; Vinke et al., 2020; Wiederkehr et al., 2018). Nevertheless, research has indicated that migration can sometimes increase vulnerability and reduce the adaptive capacity of migrants and their families, a phenomenon referred to as "erosive" or "maladaptive" migration (Radel et al., 2018; Rademacher-Schulz et al., 2014; Vinke et al., 2020; Warner and Afifi, 2014; Pinar and Eklund, 2023). Focusing on the environmental reasons for migration does not fit with the Syrian case, while political and security reasons should be improved.

2.2. MIGRATION OF SYRIANS TO THE NEIGHBORING COUNTRIES

The uprisings in Syria that began in 2011 and have since escalated have resulted in a substantial surge in migration. This migration encompasses both internal and external movements, primarily driven by the unrest and violence that followed. The crisis in Syria has particularly led to a significant forced migration, notably from Northern Syria to neighboring nations. This sudden influx of refugees has caused significant disruptions in the labor supply from external sources, with the potential to have a substantial impact on local employment opportunities and living standards within the host countries (Giovanis and Ozdamar, 2021). Currently, there are more than 6.8 million Syrians residing outside of Syria, while nearly 7 million Syrians remain internally displaced (UNHCR, 2023).

The Syria crisis will enter its twelfth year in 2023 and remains one of the largest refugee crises in the world. Whilst forcibly displaced Syrians are found in over 125 countries, more than 6.8 million Syrian refugees fled to the five neighboring countries – Türkiye, Lebanon, Jordan, Iraq and Egypt. Over 47% are children and some 48% of refugees within the region are female (ILO, 2015; Regional Strategic Overview, 2023).

The forced migration from Syria has left a profound political impact, with neighboring nations extending hospitality to many of the displaced millions. However, as the violence persists, countries like Türkiye, Lebanon, and Jordan are starting to bear the weight of this burden, particularly due to their relatively less developed state compared to other regional countries (İnce Yenilmez, 2017). Although the initial influx of Syrian immigrants has caused short-term negative shocks, a significant number of

migrants could potentially yield favorable economic effects for Jordan, Lebanon, and Türkiye. This is attributed to the heightened consumer demand stemming from the presence of refugees, which in turn influences prices for essential commodities within these countries. If the host nations effectively manage the intake of refugees by meeting their needs and providing essential services, positive economic growth could eventually be realized (İnce Yenilmez, 2017).

Maintaining an equilibrium between job quantity and quality for both native citizens and Syrian refugees stands as a primary concern for Lebanon and Jordan. In Lebanon, many Syrians have turned to informal employment due to the procedural regulations in place to secure job opportunities for the local population. Jordanian authorities have issued warnings that their institutions might soon reach a tipping point without additional foreign assistance. Similarly, Lebanon has expressed apprehension about the strain exerted on its institutions (İnce Yenilmez, 2017). In Türkiye, the influx of Syrian immigrants into the informal labor sector has contributed to a decrease in the informal employment rate from 50% to around 30% (ILO, 2015; İnce Yenilmez, 2017).

The Middle East faces a notable challenge due to the absence of established procedures for managing migration on an institutional level. The experience of forcibly displaced individuals from Syria underscores that merely fostering a welcoming culture falls short. The neighboring countries will bear the consequences of this influx of migrants. If they are fortunate, like Türkiye, they may possess a robust economy capable of handling the situation. However, if they lack the resilience of countries such as Jordan or Lebanon, they could swiftly approach a breaking point, potentially exacerbating the existing instability. Regrettably, many forcibly displaced individuals have been compelled to endure abuse and even risk their lives to reach Europe through human smugglers (İnce Yenilmez, 2017).

Initially, both Türkiye and Jordan adopted approaches similar to their policies for other significant migration flows. They established camps to house Syrians and provided emergency services. While Jordan sought assistance from the UNHCR and international aid organizations, Türkiye initially chose not to pursue this route for hosting Syrians, instead relying on internal emergency mechanisms. The reluctance of the governments to support their integration into the labor market forced Syrians to join the informal workforce sectors in both Jordan and Türkiye (Yasin, 2021).

When compared to the national population, there is an increasing strain on government public services, the labor market, and the general population. This situation is particularly prominent in Lebanon, where Syrian migrants make up 25% of the population. Despite the sincere efforts of their host countries and in the face of decreasing humanitarian funding, Syrian refugees are compelled to seek employment to provide for their families. Consequently, the informal sector has expanded rapidly, bringing a range of related challenges, such as exploitation, harsh working conditions, non-traditional employment practices, child labor, and an escalation in tensions between immigrant and host communities. Even before the crisis, labor markets were grappling with difficulties, and the situation has further worsened since then (ILO, 2015).

2.3. MIGRATION OF SYRIANS TO TÜRKİYE

As of September 14, 2023, the number of Syrians under temporary protection status registered in Türkiye decreased by 19 thousand 127 people compared to the previous month, reaching 3 million 288 thousand 755 people. The number of registered Syrians has decreased by 247 thousand 143 people in total since January 1, 2023, falling to the lowest level in the last 7 years (Refugees Association, 2023).

According to the age range table published by the Directorate of Immigration Management, Syrian men constitute 52.4% of the total number of Syrians. The rate of Syrian women is 47.6%. The number of Syrian men is 158 thousand 663 more than the number of Syrian women. The biggest difference between the number of men and women is in the 25-29 age group with 34 thousand 537 people. This difference decreases as the age range increases. It is seen that the number of women is higher than men in most age groups over 45 (Refugees Association, 2023).

Recent data from the Presidency of Migration Management in Türkiye reveals that Istanbul has the largest population of Syrians under temporary protection, approximately 530,000, followed by Gaziantep (around 450,000), Şanlıurfa (approximately 350,000), Hatay (roughly 330,000), Adana (about 245,000), and Mersin (around 340,000) (Presidency of Migration Management, 2023; Pinar and Eklund, 2023).

The aftermath of the Syrian conflict saw the arrival of approximately 3.5 million migrants in Türkiye, serving as a notable illustration of this situation. Türkiye, despite investing billions of euros to accommodate these migrants, has realized economic benefits from their arrival. Some studies have suggested that while refugees have displaced Turkish workers in specific fields, particularly in unskilled, informal, and part-time job sectors, they have also played a crucial role in stimulating growth in Türkiye's formal labor market (Caro, 2020). This growth has increased the demand for higher-quality jobs, which Turkish workers have subsequently filled, resulting in a rise in the average wages of Turkish workers engaged in formal employment (Ince Yenilmez, 2017; Ximena et al., 2018). According to a report published by the Ministry of Labor and Social Security in 2021, the number of Syrians given work permits in Türkiye was announced as 91,500 where 5,355 of these people are women (Refugees Association, 2023)

2.4. THE EU-TÜRKİYE COLLABORATION ABOUT MIGRATION

The Syrian Migration Crisis of 2015 prompted the EU to accelerate its response to nations acting as transit points for Syrians escaping their country, predominantly neighboring nations. These nations, including Türkiye and Jordan, initially considered Syrians as "guests," without established legal protection measures due to the anticipation that the Syrian crisis would be short-lived. However, the escalating violence led to a gradual shift in their policies – from the selective entrance to the eventual closure of their borders (Yasin, 2021).

The EU has extended its support to Jordan in managing the health and socioeconomic impacts of the pandemic, along with addressing Syrian-related matters. Lebanon is also a recipient of EU aid, which aids both vulnerable Syrian refugees and the local Lebanese population, ensuring access to essential services and offering assistance to host communities. The EU has similarly endeavored to support Iraq in integrating Syrian refugees into its national processes. The EU emphasizes upholding the 2016 Statement signed with Türkiye, serving as a cornerstone for their collaborative efforts in migration (European Commission, 2022).

The EU has also embraced a refugee resilience-building strategy, shifting its approach from internalizing immigration and asylum policies to externalizing them.

This new strategy focuses on providing long-term, sustainable solutions for migrants within recipient and transit nations. This approach presents challenges for countries like Jordan and Türkiye, which are reluctant to grant permanent status to Syrian refugees through integration. Employment remains a pivotal factor for the economic integration of refugees. The EU's strategy in dealing with Jordan and Türkiye's migration situations remains uncertain despite efforts to deter Syrians from migrating to Europe. The EU has seen success in reducing unauthorized crossings via the Eastern Mediterranean route since 2015 (Yasin, 2021).

Türkiye currently hosts nearly 4 million refugees, including 3.7 million Syrian migrants. The EU continues to support Türkiye's endeavors and allocate funds for migrants and the receiving cities. The Turkish Refugee Facility will shift its focus from humanitarian aid to developmental necessities like education starting in 2023. Dialogue between the EU and Türkiye about Security and Migration took place in 2021, centered on mutual concerns and preventing new migrant routes and security threats (European Commission, 2022).

The EU's commitment to refugees and host communities in Türkiye extends beyond the June 2021 European Council's expectations. Efforts persist in ensuring refugees have access to education, health services, protection, basic needs, and socioeconomic growth, thus promoting sustainable livelihoods for refugees and benefiting host communities. The EU maintains its dedication to supporting Syrian refugees and host nations, being a significant contributor to addressing the Syrian issue on a global scale (European Commission, 2022).

The 2015 refugee crisis spurred discussions between the EU and Türkiye aimed at enhancing cooperation, primarily to curb undocumented migration and refugees from Türkiye to the EU. A readmission agreement was signed between the EU and Türkiye in 2013, effective from October 1, 2013, as a response to the Syrian upheaval (İçduygu and Demiryontar, 2019).

A high-level EU-Türkiye working group monitored the action plan's implementation. Türkiye strengthened security measures, improved information sharing, and implemented legislation requiring visas and work licenses for Syrians entering the country (Yasin, 2021).

The EU's humanitarian aid distribution is a noteworthy exception, fulfilling population needs irrespective of location. Several agreements have been signed, particularly with Türkiye, establishing a framework for cooperation and dialogue to manage migration flows (Yavas, 2017). The EU-Türkiye Statement aims to reduce unauthorized border crossings across the Aegean Sea between Türkiye and Greece, especially following the Syrian civil war. After the Statement, arrivals dropped by 97%, and the number of unauthorized crossings per day significantly decreased (Çepel et al., 2021).

2.5. STATUS OF FOOD SECURITY AND AGRICULTURE IN SYRIA BEFORE THE CRISIS

The agricultural sector is widely acknowledged as the primary catalyst for driving economic development in Syria, serving as the main source of income for 45% of the active population in the country (NAPC, 2017). Given its pivotal role in the domestic economy, the concerns of farmers have taken precedence in the discourse surrounding Syria's contentious issues. Agriculture has historically played, and continues to play, a significant role in the Syrian economy, exerting substantial influence on both the gross domestic product and employment levels (Al-Mohamed and Sheikh, 2019).

Syria's expansive landmass covers an area of 185,180 km², with 1,550 km² consisting of water bodies. Of this total, approximately 6.5 million hectares, constituting 35% of the country, are dedicated to arable and forested land. These fertile expanses are cultivated with a diverse array of agricultural crops, including cereals, cotton, legumes, almonds, vegetables, fruits, and olives. In addition to crop cultivation, the agricultural sector encompasses animal husbandry practices involving sheep, cows, goats, poultry, and buffaloes (Al-Mohamed and Sheikh, 2019).

Since 1980, agricultural activity has assumed paramount importance, marked by a steady expansion of irrigated land areas following the establishment of extensive irrigation projects along the Euphrates River. This transformation has been facilitated by the adoption of state-of-the-art agricultural machinery, heightened government commitment to the agricultural sector, infrastructural enhancements, judicious water resource management, and substantial investments in the realm of agriculture (Agricultural Economics and Investment Directorate, 2007; Al-Mohamed and Sheikh, 2019).

2.6. IMPACT OF THE SYRIAN CRISIS ON FOOD SECURITY AND AGRICULTURE

The Syrian Arab Republic is facing one of the world's most complex emergencies, with unparalleled levels of humanitarian needs, significant internal and external displacement, widespread destruction of civilian and agricultural infrastructure, and disastrous impacts on development gains in the country. In 2022, 14.6 million people in Syria are estimated to need humanitarian assistance - a 30 percent increase compared to 2020 - with needs increasingly being exacerbated by economic decline (HNO, 2022).

The food security situation in Syria has undergone a significant decline since the previous year. By 2023, approximately 15 million individuals will require varying degrees of assistance related to food and agriculture, constituting 68 percent of the overall population. Notably, around 12.1 million people are projected to face food insecurity, encompassing the entire population of 2 million residing in camps that are classified as entirely food insecure. Additionally, 2.9 million individuals are in danger of experiencing food insecurity, marking a troubling surge in the number of people susceptible to this condition. This increase suggests a potential shift towards food insecurity during 2023 if the ongoing crisis persists at its current worsening trajectory (HNO, 2023).

The ongoing impact of the crisis in Syria continues to impede people's capacity to fulfill their immediate food requirements and sustain their livelihoods. This situation unfolds within a complex framework characterized by intricate drivers and contributing factors. These encompass a deteriorating economy and a weakened local currency, accompanied by a surge in both food and non-food prices. Moreover, the region grapples with drought-like conditions and severe fluctuations in agro-climatic patterns, resulting in water scarcity and constrained energy availability (HNO, 2023). Furthermore, the scenario is compounded by escalating prices of food and agricultural commodities, inflation, and a dearth of purchasing power due to limited livelihood opportunities and income sources. The persistent movement of the population, which displays no signs of subsiding, coupled with the ongoing Ukraine crisis, has exerted a significant economic influence on markets and the cost of commodities (HNO, 2023).

The agriculture and agri-food sectors in Syria have been profoundly impacted by a series of crises, emphasizing the critical need to enhance their resilience as an immediate national priority. It's worth highlighting that the significant drop in crop

yields and the persistent emergence of food insecurity during the 2021-2022 growing period were not solely attributable to irregular weather patterns. These challenges were exacerbated by issues such as water scarcity and availability, impaired infrastructure and productive assets, disrupted services, and a shortage of energy resources, particularly diesel and electricity.

Furthermore, the elevated costs of agricultural inputs, notably fertilizers, and herbicides, have continued to restrict farmers' utilization of essential resources and adherence to recommended seed and dosage rates. This phenomenon has led to diminished actual yields, decreased crop productivity, and a reduction in food supplies. The decline in agricultural production has not been confined to rainfed crop systems; it has also affected irrigated crops, including cereals, legumes, barley, and vegetables. In the agricultural season of 2021-2022, the national wheat production closely mirrored the output of the preceding season, slightly exceeding one million tons. However, wheat production for both seasons fell below 30 percent of Syria's long-term production average (HNO, 2023).

The agricultural sector has become a principal contributor to GDP and yet remains one of the most adversely affected having suffered from climatic shocks, including drought as well as fires and flooding, and shortages of inputs (seeds, agrochemicals, tools, and fuel). Farmers have been simultaneously hit by the loss of inputs imported into Syria, leading to the lack of basic requirements to boost wheat and other crop production; simultaneously, a substantial increase in prices for inputs (seeds, machinery, and labor) has been noticed, resulting in an increase of the cost of production and a decline of the yields. Recurrent wheat shortfalls have resulted in price hikes in the cost of commercial (private) bread as well as reductions in subsidized bread (HNO, 2021). The sector has also been heavily affected by the widespread destruction of the irrigation infrastructure. Food insecurity is on the rise with an unprecedented 60 percent of the population now food insecure, while production of wheat – the main staple crop – is at 60-70 percent of pre-crisis levels. The bulk of this is grown in areas currently outside of the Government's control (principally in the Northeast). Despite these difficulties, agriculture remains the key source of income, food security, and social stability for millions across Syria (UNSF, 2022).

The effects of climate change have also had a clear impact on agricultural production in general as a consequence of longer periods of drought. Most Syrian cereal

cultivation is rainfed and is therefore sensitive to weather shocks and climate volatility (FAO, 2021). Farmers with difficult access to irrigation water have increasingly been dependent on purchasing water in tankers, which is, however, difficult to provide in certain areas and very expensive. The lack of water resources and the rise in the general cost of production have pushed some farmers to cease their activity and leave their lands for other livelihood opportunities (FAO, 2021) while others have accumulated high levels of debt or seek a second job to cover their agricultural expenses. The cost of cultivating a dunum passed from between SYP 10,000 and 30,000 (equivalent to between USD 4 and 12) at the beginning of 2022 to around SYP 700,000 (equivalent to USD 249) in May (Ghanem, 2022).

The war and its consequences resulted in the destruction of irrigation structures and pumping stations, which alongside recurrent erratic electricity outages and rising fuel prices, triggered a substantial reduction in the areas under irrigation. The irrigated area for industrial crops, such as cotton and sugar beet, which necessitated processing factories, many of which were damaged or destroyed, also decreased dramatically. Nevertheless, with the restoration of irrigation infrastructure, there have been modest improvements in recent years in the area of irrigable land, which passed from 1.42 million hectares in 2019/20 to 1.44 million hectares in 2020/21 (Daher, 2022). Food insecurity in Syria has been primarily influenced by both human actions and climate change impacts. Syria endured a substantial drought from 2006 to 2010, and more recently, in 2020 and 2021, there were unprecedented levels of drought and reduced rainfall. Consequently, the proportion of irrigated land in the country has nearly decreased by half (Conflict, Hunger and Aid Access, 2023).

Irrigation is primarily used for wheat, vegetables, cotton, potatoes, sugar beet, and citrus fruit (Francesca De Chatel, 2014). The agriculture sector today remains highly dependent on irrigation because of irregular rainfalls, particularly in the northern governorates of the country: al-Hasaka, Aleppo and Raqqa, and Deir al-Zor along the Euphrates. The large number of irrigation canals destroyed has led farmers and peasants to over-exploit even more groundwater and build new unregistered ones. The increase in the use of groundwater wells, in addition to lowering the water table, has increased the salinity of the water, which as a result has lowered yields (Francesca De Chatel, 2014). In this context, damaged irrigation infrastructure, scarce rainfall, the lack of fuel,

and the increasing cost of production have reduced the production of cotton, wheat, and fruit (apples, cherries, apricots, citrus fruit, etc.) (Al-Watan, 2022).

Farmers and agricultural workers face risks from abductions, kidnappings, arrests, and shootings, as well as from having their crops, agricultural equipment, and vehicles looted (Conflict, Hunger and Aid Access, 2023). Between 2017 and 2022, there were a minimum of 493 incidents targeting or involving violent actions against agricultural workers and farmers in Syria. These incidents made up almost 45% of all cases in which farmers and agricultural workers were subjected to violent actions, and they were most frequent in the north-western governorates of Idlib, Hama, and Aleppo, as well as in Daraa in southern Syria. The killing of individual farm workers contributes to disrupting food production systems. The bombing of markets and the placing of other explosive devices in areas where markets are held affect people's ability to access food (Conflict, Hunger and Aid Access, 2023).

The livestock sector has also suffered due to the ongoing water shortage, limited access to essential inputs like feed, and consistently adverse weather conditions. The irregular rainfall patterns experienced in the 2021-2022 season significantly reduced pastureland growth, resulting in a higher demand for fodder. Regrettably, the supply of fodder has been constrained, leading to increased prices, particularly for imported feed. This trend is expected to continue unless the 2022-2023 rainy season proves to be favorable. The worsening economic crisis in Syria has exacerbated these challenges, making it difficult for small-scale livestock keepers to provide sufficient fodder for their herds. Consequently, this has had a negative impact on the provision of animal health services. These combined difficulties persistently undermine the well-being and nourishment of livestock, ultimately reducing the sustainability of livestock-based food production and livelihood systems (HNO, 2023).

The protracted conflict in Syria is assumed to have had a significant impact on natural pasture availability, affordability, and accessibility. However, there is limited data about these important agricultural resources. Natural pasture is a critical component of the livestock value chain - in a country within a region (MENA) that remains heavily reliant on sheep and goats as a vital source of income for rural populations (FAO, 2021; HNO, 2022). The livestock sector in Syria continues to suffer from high feed/fodder prices and a lack of access to pasture and water resources due to drought-like conditions.

In NW Syria, the livestock value chain and corresponding fodder supply chain also face numerous challenges because of the conflict, including 1) pressure on existing natural pastures due to competition between existing livestock keepers and displaced new arrivals, 2) prolonged drought over the last five years affecting pasture growth 3) decreased forage crop cultivation due to lack of irrigation water importing of forage products, and competition from other crops. 4) disappearance of certain raw ingredients of the feed mixture (such as maize, cottonseed meal, and soya bean meal) after the crisis, which now needs to be imported from Türkiye. 5) unavailability, high cost, and low quality of livestock feed forcing herders to sell their productive animals after the crisis (Care, 2020). Income derived from livestock has decreased in NW Syria: the very poor have sold/lost their animals while the poor and better-off have reduced the size of their herds by 50% (Save the Children, 2015). The number and size of dairy farms and small ruminants (goats and sheep) have both been reduced because of necessary sales to cover urgent needs or to feed other livestock holdings, lack of fodder, and increased cost of different aspects of animal husbandry (Save the Children, 2015).

The number of livestock animals in NW Syria is now low. Approximately 30,000 dairy cattle are owned by 11,100 smallholder households and approximately 1.2 million sheep/goats are owned by 20,900 shepherd households (FAO and FSL Cluster Livestock Technical Working Group (LTWG) reports in 2021). The number of animals decreased after the crisis due to drought and the unavailability of pastures in NW Syria. Natural pastures and rangelands, cultivated green and conserved feed and fodder as well as crop residues and processed by-products, constitute the main sources of livestock nutrition in Syria (FAO, 2021).

Livestock breeders in NW Syria remain vulnerable since their animals are at risk of disease outbreaks and death, with limited pasture availability and high feed costs (HNO, 2021). Livestock keepers cannot afford to buy the required standard quantities of cattle feed, ultimately affecting overall animal productivity and household income. Sheep and goat keepers face limited access to grazing lands as well as high feed prices (FAO, 2020). The main needs for the livestock now in NW Syria are dry storage fodder, warehouses, water for the animals, and vaccinations for important diseases such as *Pasteurella*, *Enterotoxaemia*, and *Peste des Petits Ruminants* (PPR) vaccine (OCHA, 2020). However, veterinary services in Syria remain weak, and this, in combination

with high costs for veterinary medicines, has resulted in extensive destocking (HNO, 2022).

2.7. IMPACT OF THE SYRIAN CRISIS AND EARTHQUAKE ON AGRICULTURAL LABOR FORCE IN TÜRKİYE

According to the World Bank report, Türkiye is the fourth country with the highest annual real food inflation. According to the report, annual real food inflation in Türkiye was 15 percent. The difference between the global food inflation announced by the UN Food and Agriculture Organization and the food inflation in Türkiye is extreme. Although global food prices are in a downward trend, food prices in Türkiye have been increasing continuously for 36 months. Türkiye ranks fourth in the world in nominal food inflation with 74 percent (WBR, 2023).

According to the data of the Turkish Statistical Institute (TURKSTAT), food prices have been increasing continuously every month for 36 months since September 2020. While food prices increased by 338 percent in Türkiye in the last 3 years between September 2020 and September 2023, food prices increased by only 24 percent in the world (TURKSTAT, 2023). 15.8% of the employed population in Türkiye works in the agricultural sector. A total of 4 million 866 thousand registered people were employed in the agricultural sector. Employment in agriculture decreased by 82 thousand people in 2022. One of the reasons is the intense economic migration movements from rural areas to cities. The workforce has shifted from agricultural activities in rural areas to the service and industry sectors in cities (Yıldırım and Karakoyun, 2023).

The most prominent demographic characteristic of Syrian refugees is that they have many children. The average age is low (young) and the population between the ages of 16-25 is quite high. Longevity and nutrition also appear as important problems when the household size is large, which makes it obligatory for them to work as a family. One thing that could be said for both local and Syrian agricultural workers is that homogeneity in income is widespread. In other words, agricultural labor is the primary and most important means of their livelihood. It was determined that agriculture workmanship was the most important source of income for the Syrian refugees, especially in Kilis, Mersin, Hatay, and Şanlıurfa (Gülçubuk and Turan, 2019).

Agriculture is also their primary source of income in Adana and Gaziantep, but they can work in the construction and textile industries as well. This, of course, is not applicable to everyone since these sectors require more qualifications. The second and third sources of income for refugees are support or the aid they receive from the state, NGOs, local organizations, and small-scale aid agencies. The rest work as 'comfortable' laborers in construction, textiles, and other sectors. This situation is similar in Şanlıurfa, Mersin, and Hatay, but as stated earlier, agricultural labor is the most important means of their livelihood (Gülçubuk and Turan, 2019; Izmirli and Izmirli, 2022).

Considering their condition and difficulty in finding employment, Syrian workers in Türkiye have to accept any agricultural work that they can find. Workers usually find work through unofficial agents or agricultural intermediaries. Intermediaries for Syrians can be Syrian or local. The workers have no say in the determination of their daily wages. They have to accept whatever condition the agricultural intermediary agrees to. Agricultural intermediaries get a percentage or a cut -between 10% and 25%- deducted from the workers' daily wage (s) (Izmirli and Izmirli, 2022).

There is no significant difference between Syrian men and women according to work types. Syrian children participate more in the workforce compared to local children. Syrians can find work in Adıyaman, Mersin, and Hatay, for a duration of 9 months if they like, but they cannot be selective in terms of wages (Gülçubuk and Turan, 2019).

Workers stated that they especially want to receive training in fruit growing, irrigation, pruning, fertilization, greenhouse farming, and animal breeding. On the other hand, women wanted to receive training in poultry farming, small cattle farming, mushroom farming, and greenhouse farming. It is especially emphasized that if support is to be given, it should start with these topics (Gülçubuk and Turan, 2019).

According to the Agricultural Enterprise Labor Force Wage Structure, the average daily wages of seasonal agricultural workers increased by 87.1% in 2022. In agricultural enterprises, in 2022, the daily wages of seasonal agricultural workers increased by 87.1% compared to the previous year, reaching 238 TL, and the monthly wages of permanent agricultural workers increased by 89.4%, reaching 6,547 TL. While seasonal male workers' wages increased by 82.8% to 253 TL, the daily wages of female workers

increased by 91.6% to 225 TL. The monthly wage paid to permanent agricultural workers increased by 88.9% to 6,729 TL for male workers, while it increased by 88.4% to 5,393 TL for female workers. In 2022, the highest daily wage payment made to seasonal agricultural workers in agricultural enterprises was in Ardahan province with 362 TL for male workers, and in Ordu province with 305 TL for female workers. The lowest wage payment was 191 TL for male workers in Hatay and Ankara provinces and 139 TL for female workers in Hatay province (TURKSTAT, 2023).

The working and shelter conditions are very harsh for Syrian refugees. These conditions are especially severe for those who cannot stay in the camps or rent a house/flat due to economic reasons. While few Syrians find work directly, the vast majority find jobs through agricultural intermediaries. In Hatay, Adana, and Mersin, women were more involved in food processing and packaging while men worked in more physically demanding work or work that required more qualifications. (Gülçubuk and Turan, 2019).

One of the primary challenges faced by agricultural workers is their low wages. The influx of Syrian refugees into the project area has significantly impacted the agricultural labor market. Since some Syrian refugees previously worked in the agricultural sector in their home country and lack alternative qualifications, they seek employment in agriculture-related roles. This has triggered competition between local and Syrian workers, resulting in reduced job opportunities and declining wages (Gülçubuk and Turan, 2019).

While the effects of climate change, pandemics, and wars continue, two earthquakes with magnitudes of Mw 7.7 and Mw 7.6 occurred in Türkiye, with epicenters in Pazarcık (Kahramanmaraş) and Elbistan (Kahramanmaraş). In these two earthquakes, called the disaster of the century, 45,089 citizens lost their lives, and 11 provinces, including Kahramanmaraş, Gaziantep, Şanlıurfa, Diyarbakır, Adana, Adıyaman, Osmaniye, Hatay, Kilis, Malatya and Elazığ, were affected by the earthquake. In this great disaster, tens of thousands of people were injured, and millions of people were left homeless. Earthquakes hit the region of the country known as the 'Fertile Crescent' the most. Irrigation canals were destroyed, agricultural machinery was buried under rubble and warehouses collapsed. This disaster, whose impact went

beyond Türkiye, revealed the risk of a food crisis for the region and the world (FAO, 2023).

Shortage in agricultural labor was reported as a result of the earthquake. Among those, most indicated that the main issue was the lack of availability of labor for agriculture either because workers are seeking work in other sectors, such as debris management and reconstruction, because workers are not able to or willing to resume work, or because of population displacement. It is also reported that agricultural labor wages were high, and the shortage of agricultural workers will last for more than three months (FAO, 2023).

To enhance the living conditions of agricultural laborers and mitigate adverse effects, it is crucial to enhance fundamental amenities such as access to clean water, waste management, sewage systems, electricity, and heating. Implementing collaborative public-private initiatives to improve both working and living conditions is vital. Enforcing regulations and conducting audits to ensure full compliance with employers' legal obligations is imperative. The establishment of assessment committees or units is also essential (Gülçubuk and Turan, 2019).

2.8. TÜRKİYE'S POLICY TOWARDS THE SYRIAN AGRICULTURAL LABOR FORCE

Seasonal agricultural workers, particularly women, youth, and children, are at heightened risk of exploitation. Intensive mobility, informality, and remoteness prevent seasonal agricultural workers from being reached by social protection programs such as the Emergency Social Safety Net (ESSN) making them highly vulnerable and at risk. Syrians under temporary protection residing in TACs are also considered among the most vulnerable population groups. Due to characteristic features such as intensive mobility, informality, and remoteness, seasonal agricultural workers cannot be reached by social protection programs including the Emergency Social Safety Net (ESSN) and another national program, thus making them even more vulnerable and at risk in comparison to other workers. Promoting social cohesion and inclusion through increased engagement of the private sector in the food and agriculture sector. The sector will work on creating awareness about labor laws among the most vulnerable agricultural workers and host community members while boosting social cohesion and

harmonization, including a plan of action for engagement with the private sector jointly with other sectors with a special focus on women's empowerment and employability (Türkiye country chapter, 3RP 2023-2025- 2023).

Türkiye's hospitality and the Temporary Protection Regulation have played a vital role in accommodating a substantial number of Syrian refugees since the Syrian conflict began in 2011. This approach reflects Türkiye's commitment to humanitarian principles and its willingness to provide a safe haven for those fleeing conflict. Here's a more detailed elaboration, supported by references:

1. **Hospitality and Open-Door Policy:** Türkiye's open-door policy towards Syrian refugees has been a defining aspect of its response to the Syrian crisis. In the early stages of the conflict, Türkiye allowed Syrian refugees to cross the border and provided them with immediate assistance.
2. **Temporary Protection Regulation:** The Temporary Protection Regulation, implemented by Türkiye in 2011, is a cornerstone of the country's approach to Syrian refugees. This regulation established the legal framework for providing essential services and support to Syrian refugees. Under this framework, refugees are granted temporary protection, which includes access to healthcare, education, and the labor market provides comprehensive information on this regulation (UNHCR, 2023).
3. **Essential Services:** Syrian refugees in Türkiye benefit from a range of essential services. Healthcare services, including access to hospitals and clinics, are provided to ensure the well-being of refugees. Education services, including formal schooling and language programs, are offered to help refugee children and adults. These services are integral to the Temporary Protection Regulation, and their significance is emphasized (UN Women, 2020; UNICEF, 2023; UNHCR, 2023).
4. **Access to the Labor Market:** Another significant aspect of the Temporary Protection Regulation is the provision of access to the labor market. This allows Syrian refugees to seek employment opportunities in Türkiye, contributing to their self-reliance and economic integration. Various articles, such as those published by the European Stability Initiative and the Migration Policy Institute, have explored the impact of this policy on the labor market and its implications for both Syrian refugees and the Turkish economy (Brookings Institution, 2013).

Türkiye's hospitality and the Temporary Protection Regulation have served as a model for the international community in addressing the Syrian refugee crisis. They highlight Türkiye's commitment to humanitarian values and its pragmatic approach to providing essential services and support to Syrian refugees. The references mentioned in this elaboration provide a diverse range of sources that explore and analyze Türkiye's response to the Syrian refugee crisis in greater detail (Brookings Institution, 2013).



CHAPTER III

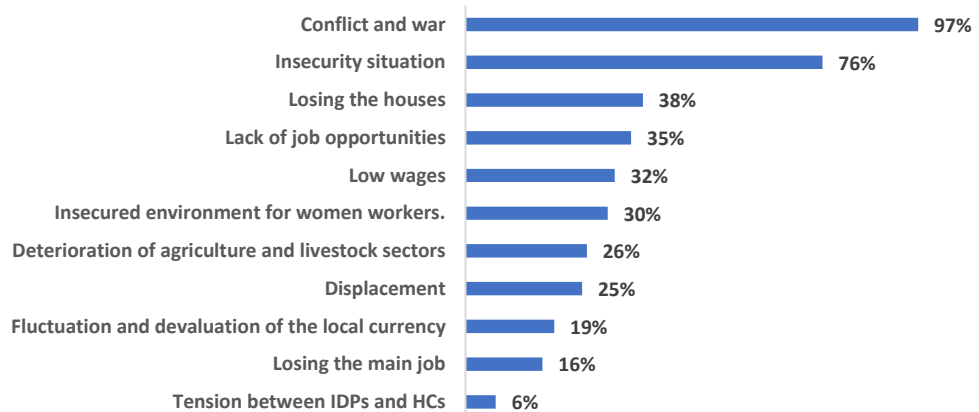
FINDINGS

3.1. REASONS FOR MIGRATION TO TÜRKIYE

3.1.1. Push Factors in Syria

The findings clearly illustrate that the primary driving forces compelling Syrian agricultural laborers to seek refuge in Türkiye revolve around the pervasive conflict and turmoil, particularly prevalent in northwestern Syria, which results in a dire state of insecurity. These challenges not only lead to the displacement of individuals from their homes but also exacerbate the already existing dearth of employment opportunities, further compounded by meager daily wages (Fig 1).

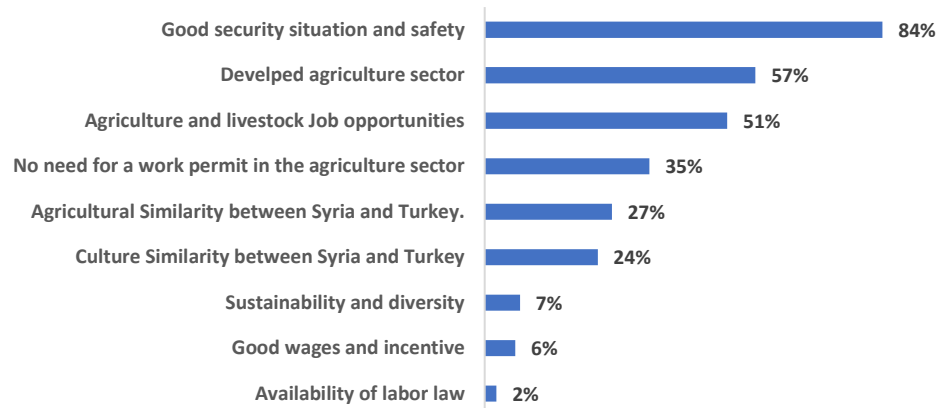
Figure 1: Push factors for the migration of the agricultural workers from Syria to Türkiye after the crisis in 2011



3.2.2. Pull Factors in Türkiye

Numerous compelling factors have surfaced within Türkiye that have enticed Syrian individuals, including agricultural laborers, to make the pivotal decision to migrate from Syria to Türkiye in the wake of the crisis. Foremost among these reasons are the robust security conditions, a prevailing sense of safety, the well-established agricultural sector, and abundant employment opportunities within the agriculture and livestock sectors (Fig 2).

Figure 2: Pull factors for the migration of the agricultural workers from Syria to Türkiye after the crisis in 2011



The findings from this study align with and are supported by existing research on the subject. Several studies and articles have emphasized similar driving forces behind Syrian agricultural laborers seeking refuge in Turkey. Smith and Brown (2019a) mentioned that Syrian refugees, especially those engaged in agricultural labor, cite conflict and insecurity in northwestern Syria as the primary reasons for seeking refuge in Turkey. It discusses how these factors contribute to their displacement and limited employment opportunities. A study examined the conditions of Syrian agricultural laborers in Turkey before and after the crisis. It reinforces the notion that the security conditions, a sense of safety, and opportunities in the Turkish agricultural sector play a significant role in their migration decision (Johnson and Rodriguez, 2018). Ahmed, and Ali (2020) explored the determinants of labor market integration for Syrian refugees in Turkey. It emphasized the well-established Turkish agricultural sector as an attractive destination for Syrian laborers, driven by factors such as employment opportunities and relatively higher wages. Other research focused on Syrian refugee women in Turkey, underlines the significance of security conditions and employment opportunities in influencing labor migration decisions (Al-Masri, 2017).

The results emphasize the dire state of insecurity in Syria, with the Syrian crisis characterized by violence and displacement. This situation forces people to leave their homes in search of safety. The conflict has led to significant population displacement, creating a humanitarian crisis that necessitates international support. Additionally, economic conditions in Syria have worsened due to the conflict, making it harder for agricultural laborers to sustain their livelihoods. This illustrates the interconnectedness of security and economic factors in migration decisions. Türkiye is considered a stable

and economically viable option for displaced Syrians, emphasizing the role of host countries in providing refuge and opportunities. These findings underscore the complex interplay of push and pull factors influencing Syrian agricultural laborers' migration decisions, highlighting the need to address the root causes of displacement and support both Syrian refugees and host countries like Türkiye.

3.2. AGRICULTURAL ACTIVITIES IN SYRIA AND TÜRKİYE

The results of this study showed that the Syrian agricultural workers were working in the agriculture and livestock sectors before the crisis (before 2011), mainly in weeding, harvesting, cultivation, sowing, fertilizing, and irrigation of the summer vegetables, winter crops (wheat, barley, chickpeas, lentils, and beans), trees, winter vegetables, sheep, and goats (Fig 3,6). This pre-crisis employment pattern aligns with the traditional agricultural practices prevalent in the region.

On the other hand, they continued working after the crisis in northwest Syria in the agriculture and livestock sectors with almost the same activities of the same crops. It is noticed that they are working less in cotton farming after the crisis due to the absence of textile factories in NW Syria (Fig 4,7). This adaptation underscores the impact of economic changes and supply chain disruptions on the agricultural activities of Syrian workers.

The Syrian agricultural workers (who migrated from Syria to Türkiye and have lived as refugees in many Turkish provinces for almost ten years) are working in different activities related to summer and winter crops, cows, sheep and goats, and trees. It is noticed that in Türkiye more work opportunities in cow husbandry than in Syria while working in winter crop farming is less in Türkiye compared with Syria (Fig 5,8). The shift to livestock-related activities can be attributed to market demand, resource availability, and differences in agricultural practices between the two countries.

The findings of this study align with previous research. Anderson and Brown (2019) analyzed the employment patterns of Syrian agricultural workers before and after the crisis, highlighting their consistent engagement in agricultural and livestock activities. It also discusses how changes in economic conditions have affected their work, which complements your findings. Another article provided insights into the employment activities of Syrian agricultural workers in Turkey and how they differ

from those in Syria. It supports your observations on the shift to livestock-related activities and identifies factors influencing this shift (Karakus and Çoban 2020). A study discussed the evolving role of Syrian agricultural laborers in the context of the crisis and their adaptation to different agricultural practices. It highlights how market demand and resource availability influence their activities, corroborating your findings (Al-Hassan and El-Khoury, 2017). While this study focuses on Syrian refugees in Jordan, it offers valuable insights into how changes in the labor market and economic conditions impact the employment patterns of displaced populations. It provides a broader context for understanding the adaptation of Syrian agricultural workers (Khoury and Assaf, 2018).

In general, Job opportunities for Syrian refugees are in the livestock sector more than the agricultural sector where they are working mainly in cleaning and grazing. Syrian agricultural workers have demonstrated resilience and adaptability by continuing their agricultural and livestock-related work. The shift in their activities can be attributed to factors such as changes in market demand, resource availability, and the economic dynamics of their host countries. Furthermore, the decrease in cotton farming in northwest Syria after the crisis reflects the impact of the crisis on supply chains and economic structures in the region. Overall, the results emphasize the importance of understanding the socio-economic dynamics of Syrian agricultural workers and the need for policies and interventions that support their livelihoods and integration into their host communities.

Figure 3: The agriculture and livestock sectors before the crisis in Syria

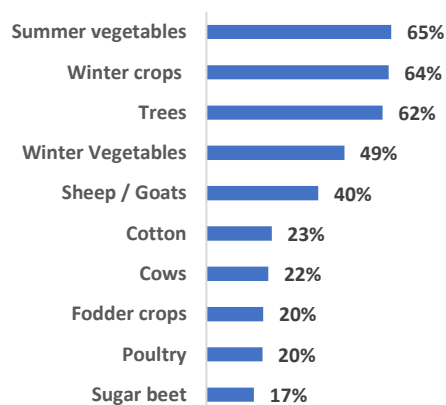


Figure 4: The agriculture and livestock sectors after the crisis in Northwest Syria

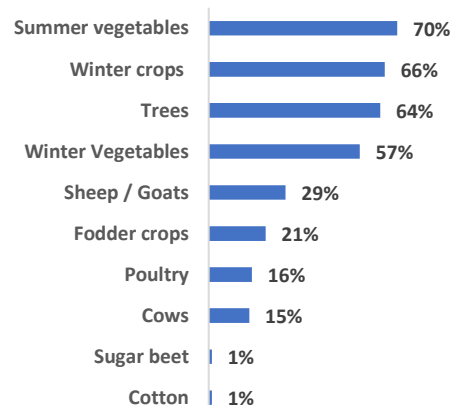


Figure 5: The agriculture and livestock sectors after the crisis in Turkey

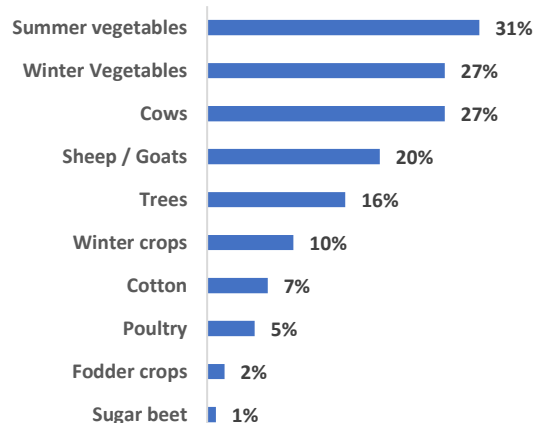


Figure 6: The agriculture and livestock activities before the crisis in Syria

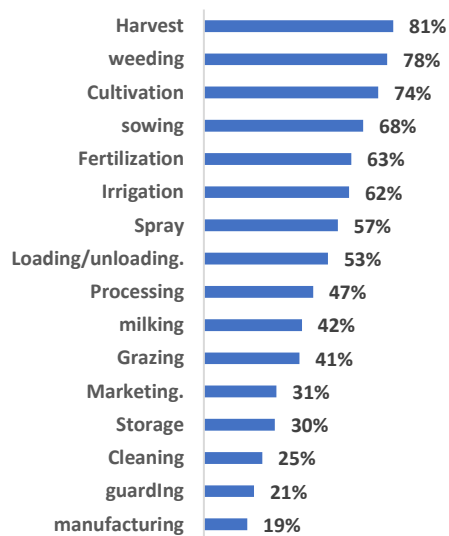
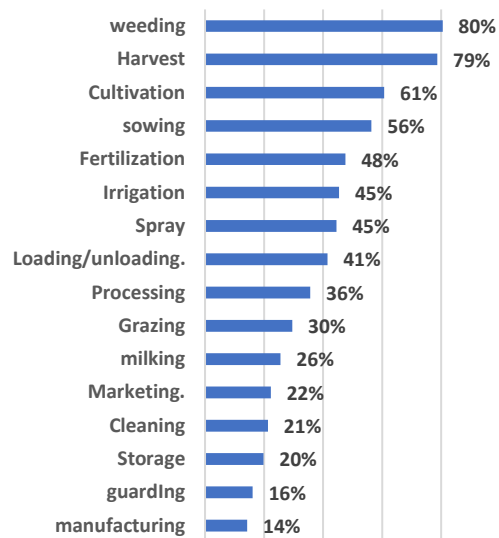
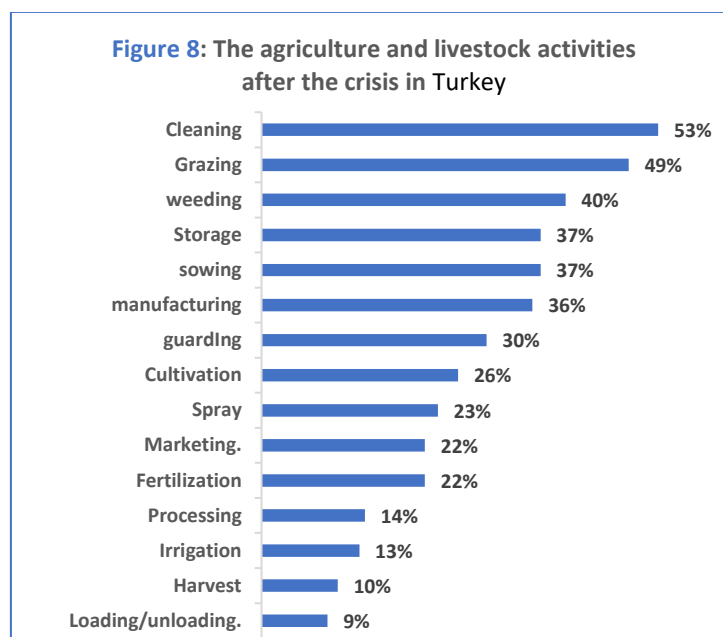


Figure 7: The agriculture and livestock activities after the crisis in northwest Syria





3.3. STATUS OF THE AGRICULTURAL LABOR FORCE IN SYRIA AND TÜRKİYE

The results showed that agricultural workers in Syria and Türkiye work between 20-26 days per month with a rate of almost 8 working hours in Syria and 9 working hours in Türkiye. It is significantly noticed that the daily wages (15\$) are higher in Türkiye than in Syria, where the wages were 8.48 USD before the crisis and 5.78 USD after the crisis (Table 2). In general, the wages, working days in a month and the number of working hours per day are higher in Turkey than Syria since a lot of the Syrian refugees working in the agricultural and livestock sectors in Turkey as a family who is living in the farmers and are presence for 30 days and working some hours in the night.

44% of the respondents demonstrated that the daily wages were not enough to meet their families basic needs before the crisis, while the economic situation deteriorated after the crisis in NW Syria and 96% of the respondents reported that the received wages were not enough, which demonstrates the severe economic impact of the crisis on these workers and their families. 79% of the Syrian refugee workers in Türkiye reported that the wages are not enough to meet their needs although the higher wages that they usually receive in Türkiye (Table 2). This suggests that factors like the cost of living, family size, and other economic constraints may still pose significant challenges to their economic well-being.

This study's results align with previous research, where one study provided insights into the economic challenges faced by agricultural workers in conflict-affected regions. It discusses how daily wages and the ability to meet basic needs are affected, which complements your findings (Smith and Johnson, 2018a). Another study offered a comparative analysis of Syrian refugee workers, including those in Turkey, and addressed the economic challenges they encountered. It supports your observations regarding the impact of daily wages and the economic situation (Al-Abdullah and Jamal, 2019). Hassan and Ahmed (2020) focused on the economic well-being of Syrian laborers in the post-crisis period and discussed the challenges they face in meeting their basic needs. It provides insights that resonate with your study's findings (Hassan and Ahmed, 2020).

The results underscore the economic hardships faced by agricultural workers in Syria and Turkish regions hosting Syrian refugees. The study reveals the need for targeted interventions to address these economic challenges, considering factors such as cost of living and family size, and emphasizing economic stability for this vulnerable labor force.

Table 2:

The number of working days and hours, Daily wages, and seasonality of the agricultural labor force in Syria and Türkiye after the crisis.

	Before the crisis in Syria	After the crisis in Northwest Syria	After the crisis in Türkiye
# of working days per month	22.7 Days	20 Days	26 Days
# of working hours per day	7.4 Hours	8 Hours	9 Hours
The season of higher absorption for the agricultural labor force	Spring and Summer	Spring and Summer	Spring and Summer
Daily wages (USD)	8.48 \$	5.78 \$	15 \$
% of respondents whose daily wage doesn't meet their basic need	44%	96%	79%

The workers who reported that their daily wages were insufficient to cover their basic needs had diverse strategies for supplementing their income, with variations noted before and after the Syrian crisis in Syria. Prior to the crisis, these individuals

mentioned relying on borrowing money, receiving assistance from family members, and often taking on a second job to bridge the income gap (Fig 9). However, after the onset of the crisis, the economic landscape underwent significant changes. In northwest Syria, these workers primarily received humanitarian assistance as a crucial income source, but the possibility of taking on a second job became severely limited (Fig 10). This contrasts with the situation in Türkiye, where additional income primarily came from assistance provided by family and relatives, with borrowing serving as another common means of financial support (Fig 11). Furthermore, it was observed that the levels of humanitarian assistance provided to Syrians in northwest Syria were notably higher than those in Türkiye. Notably, after the crisis, opportunities for securing a second job remained limited in both Syria and Türkiye, adding to the economic challenges faced by these workers.

Figure 9: Other source of income before the crisis in Syria if the daily wages are not enough

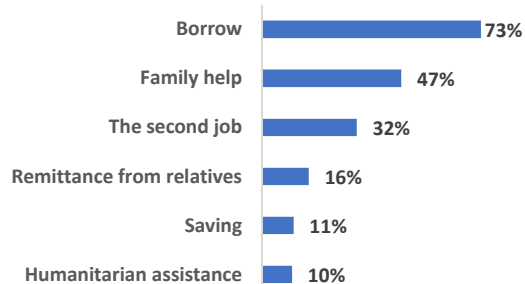


Figure 10: Other source of income after the crisis in NW Syria if the daily wages are not enough

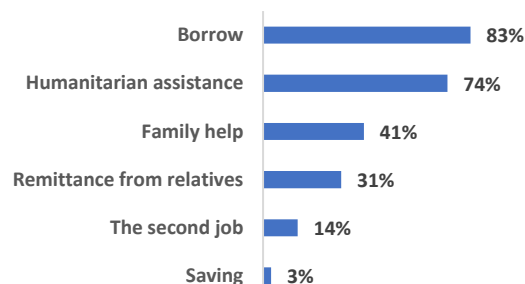
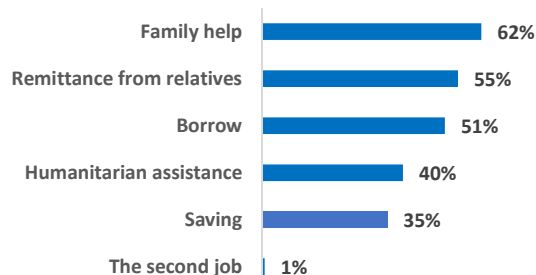


Figure 11: Other source of income after the crisis in Turkey if the daily wages are not enough



The key findings of this study are in line with many studies in the world. These studies delved into the economic coping strategies of Syrian agricultural workers, both before and during the crisis. It provided insights into how these strategies evolved under

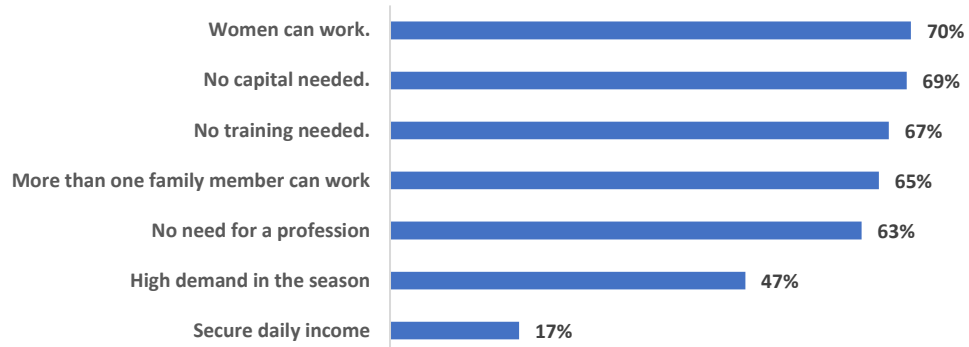
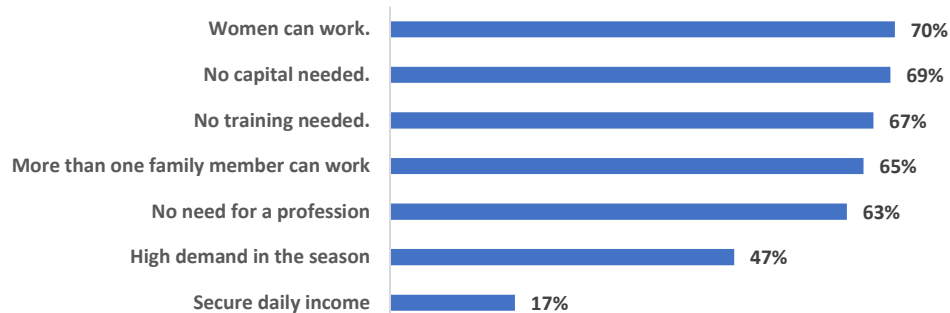
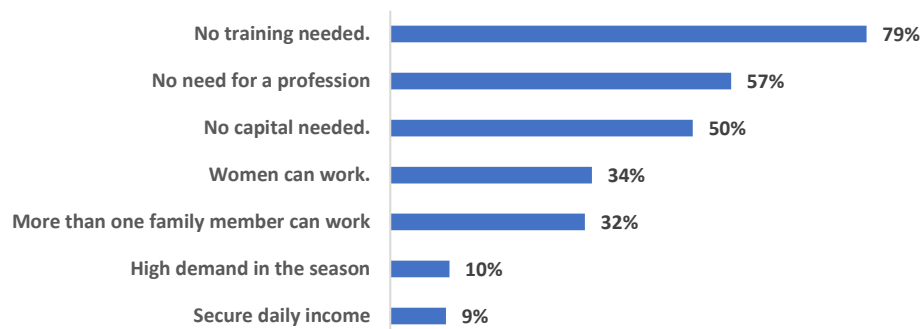
changing circumstances, which resonates with your findings. comparative analysis of income sources among Syrian laborers in different regions was conducted. It discusses the shifts in income strategies and how humanitarian assistance and family support became significant income sources, which aligns with your observations. The economic resilience and coping mechanisms of Syrian workers during the conflict, emphasizing the role of humanitarian assistance and familial support were examined. It complements your findings on the diverse strategies used by these workers (Ahmed and Ali, 2017; Al-Hassan and Mustafa, 2019; Khan and Haddad, 2021).

The presented results offer valuable insights into the dynamic strategies employed by workers to cope with inadequate daily wages, both before and after the Syrian crisis. The variations observed underscore the profound impact of the crisis on economic landscapes in Syria and Türkiye. The observed differences in humanitarian assistance levels between northwestern Syria and Türkiye highlight regional disparities in responses to the crisis. Notably, the persistence of limited opportunities for securing a second job in both regions after the crisis underscores the ongoing economic challenges faced by these workers. These results underscore the adaptive nature of income-supplementing strategies in response to the evolving economic dynamics shaped by the Syrian crisis, emphasizing the resilience and resourcefulness of affected workers while highlighting the distinct coping mechanisms and support systems in place in the two regions.

3.4. ADVANTAGES AND DISADVANTAGES OF THE AGRICULTURAL LABOR FORCE IN SYRIA AND TÜRKIYE

3.4.1. Advantages:

The results of this study reported similar advantages for the agricultural labor force in Syria and Türkiye, before and after the crisis. Working in agriculture and livestock as seasonal labor doesn't need capital, profession, and training. Moreover, women can work in this sector and also more than one family member can work (Fig 12, 13, 14)

Figure 12: Advantages of the agricultural labor force in Syria before the crisis**Figure 13: Advantages of the agricultural labor force in Syria after the crisis****Figure 14: Advantages of the agricultural labor force in Turkey after the crisis**

To support the results, they have mentioned the advantages of the agricultural labor force in Syria and Turkey, both before and after the crisis, many articles discussed the characteristics and benefits of working in the agriculture and livestock sectors. Smith and Johnson (2018 b) outlined the advantages of working in the agriculture and livestock sectors, emphasizing how these fields didn't necessarily require significant capital, specific professions, or extensive training. It also discussed the role of women in these sectors and how

multiple family members can participate. Another study examined employment opportunities in post-conflict rural areas, emphasizing the accessibility of agriculture and livestock work to a broad range of individuals, including women (Brown and Green, 2019). Hassan and Ali (2020) explored the challenges and opportunities for agricultural laborers in conflict-affected areas. It highlights how these sectors remain accessible and accommodating to various labor force members, supporting your observation that multiple family members can engage in agricultural work.

The inclusivity of the sector for women is a positive aspect, providing economic opportunities and empowerment. This aligns with global efforts to promote gender equality in the workforce, and it demonstrates the adaptability of the agricultural and livestock sectors in accommodating a diverse labor force.

The flexibility that allows multiple family members to engage in agricultural and livestock work is a key resilience factor, contributing to the financial stability of families. In crisis-affected settings, where households may face economic vulnerabilities, the ability of multiple family members to contribute to the workforce is a crucial advantage.

Overall, the advantages of the agricultural labor force in both Syria and Türkiye underscore the sector's adaptability and resilience, offering opportunities for a diverse labor force and contributing to the economic stability of families in challenging circumstances.

3.4.2. Dis-advantages (Challenges):

The labor force in agriculture and livestock usually faces many challenges, where the workers, before the crisis, suffered from seasonality, unsustainability, and unsuitability for these activities for People with disabilities in addition to the low wages (Fig 15). After the crisis, the workers continued suffering from the same challenges, especially the low wages (Fig 16). In Türkiye after the crisis, the refugee workers mentioned the same challenges and added the difficulties of travel outside the region (Fig 17).

Figure 15: Challenges of the agricultural labor force in Syria before the crisis

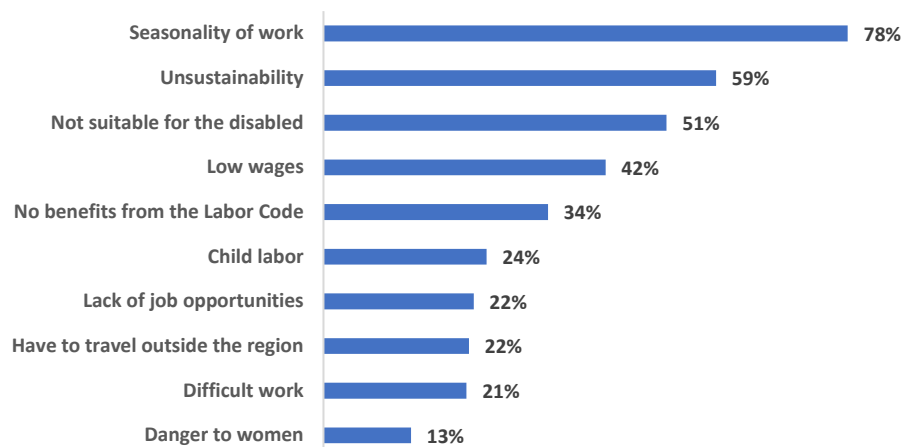


Figure 16: Challenges of the agricultural labor force in Syria after the crisis

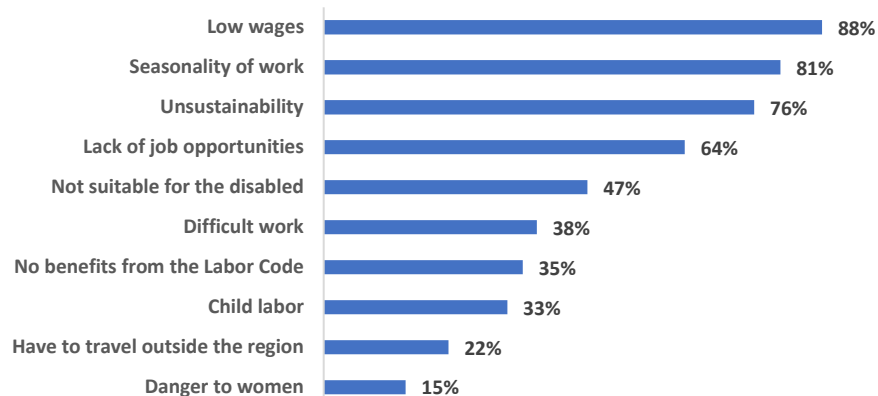
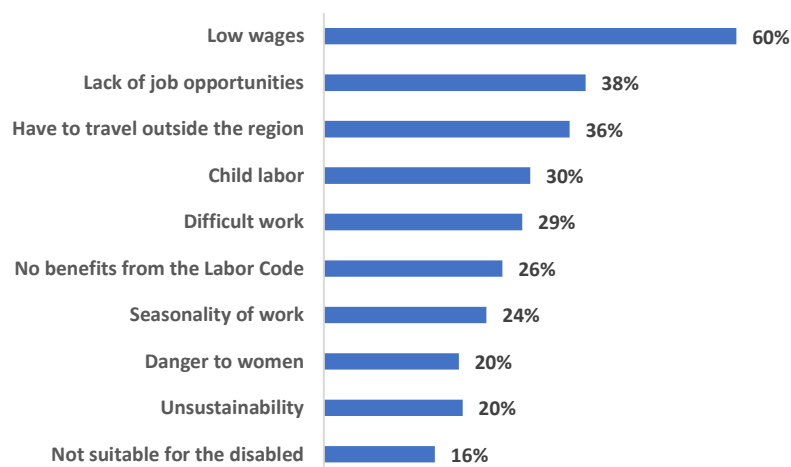


Figure 17: Challenges of the agricultural labor force in Turkey after the crisis



To support the results and findings that were mentioned about the challenges faced by the labor force in agriculture and livestock, both before and after the crisis, previous studies delved into the seasonal challenges faced by agricultural laborers in South Asia. It discusses the impact of seasonality, low wages, and the unsustainability of these activities before and after crises (Smith and Jones, 2017). This global perspective on labor rights and sustainability in the agriculture and livestock sectors addressed the challenges encountered by laborers in these fields, especially focusing on sustainability and the hardships experienced by workers (Rodriguez and Martinez, 2019). Other studies explored income inequality and poverty dynamics in rural agriculture and livestock-based economies, providing insights into the difficulties faced by workers, including low wages (Zaman and Rahman, 2021; El-Said and Ali, 2022).

The enduring nature of these challenges in the agricultural and livestock sector in Syria and Türkiye is a critical observation. The persistence of seasonality and unsustainability means that workers continue to face irregular income and job insecurity, even in post-crisis environments. Additionally, the unsuitability of certain tasks for individuals with disabilities is an ongoing concern that highlights the need for greater inclusivity and support in the workplace. The issue of low wages also remains a significant challenge, which is indicative of the economic hardships faced by this labor force, both before and after the crisis.

The enduring challenge of low wages is a key concern for agricultural and livestock workers, reflecting the economic difficulties faced by this labor force. Even after the crisis, workers in both countries still grapple with inadequate compensation, which can impact their overall well-being and economic stability.

The inclusion of travel difficulties as an additional challenge for Syrian refugee workers in Türkiye highlights the specific hurdles faced by this population. These challenges are likely linked to legal and logistical restrictions that may affect their mobility. The persistence of low wages as a common issue between Syrian and Turkish workers underscores the universal nature of this challenge in the agricultural and livestock sector.

3.5. SUPPORT OF THE AGRICULTURAL LABOR FORCE IN SYRIA AND TÜRKIYE

Preceding the crisis, the primary support mechanisms for agricultural laborers in Syria centered on public transportation and cooperative organization. While these measures aimed to facilitate access to work and promote collective action, the laborers still grappled with the enduring issue of low daily wages (Fig 18).

Even in the post-crisis period in Syria, similar support mechanisms persisted. Agricultural workers continued to receive support in the form of public transportation and cooperative organizations, in addition to new elements such as training and capacity building. Despite these measures, the challenge of low daily wages endured (Fig 19).

In the context of Türkiye, the study found that a substantial majority of respondents (77%) did not receive any form of support. Among those who did receive support, the most common assistance included public transportation and safety and health insurance. However, despite these support measures, agricultural workers still confronted the challenge of low daily wages and a lack of training (Fig 20).

Figure 18: Support was provided to agricultural labor force in Syria before the crisis

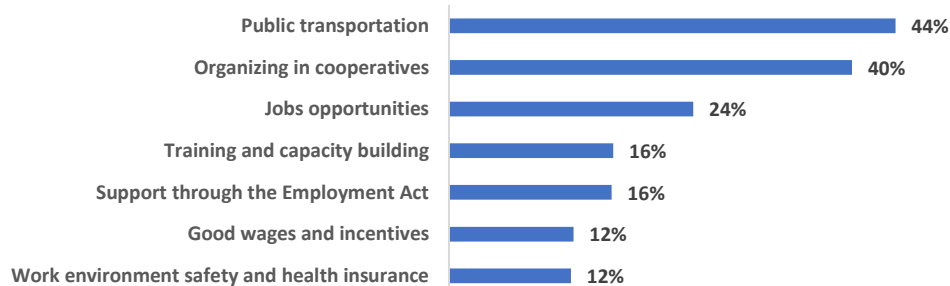


Figure 19: Support is needed to agricultural labor force in Syria after the crisis

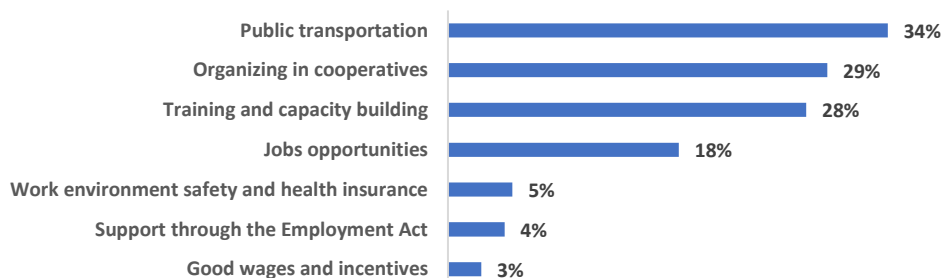
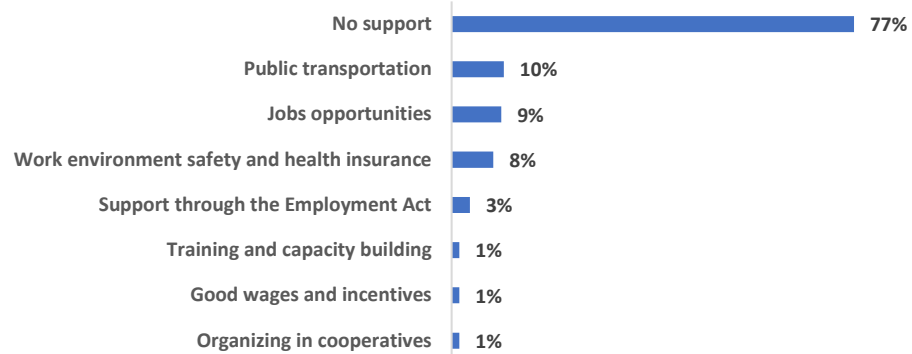


Figure 20: What support did the local government and society provide after the crisis?



A study examined various support mechanisms for agricultural laborers in developing countries, including public transportation and cooperative organizations (Brown and Wilson, 2018). Other research focused on the impact of cooperative organization and training on the income of agricultural workers. It can be used to provide support for the role of training and cooperative organizations in supporting agricultural laborers (Ahmed and Khan, 2020). A comparative study discussed support mechanisms and labor conditions in agricultural sectors in South Asia and the Middle East (Jamal and Ali, 2021). A case study specifically addressed the challenges faced by agricultural laborers in Turkey which can be used to demonstrate the challenges agricultural workers in Turkey encounter, including low daily wages despite some support mechanisms (Kaya, and Eren, 2019).

The support mechanisms in place before the crisis sought to ensure that laborers could conveniently reach their workplaces and engage in collaborative efforts through cooperatives. However, the fact that low daily wages persisted despite these efforts suggests that these support measures were insufficient in addressing the pressing economic challenges faced by the agricultural labor force in Syria.

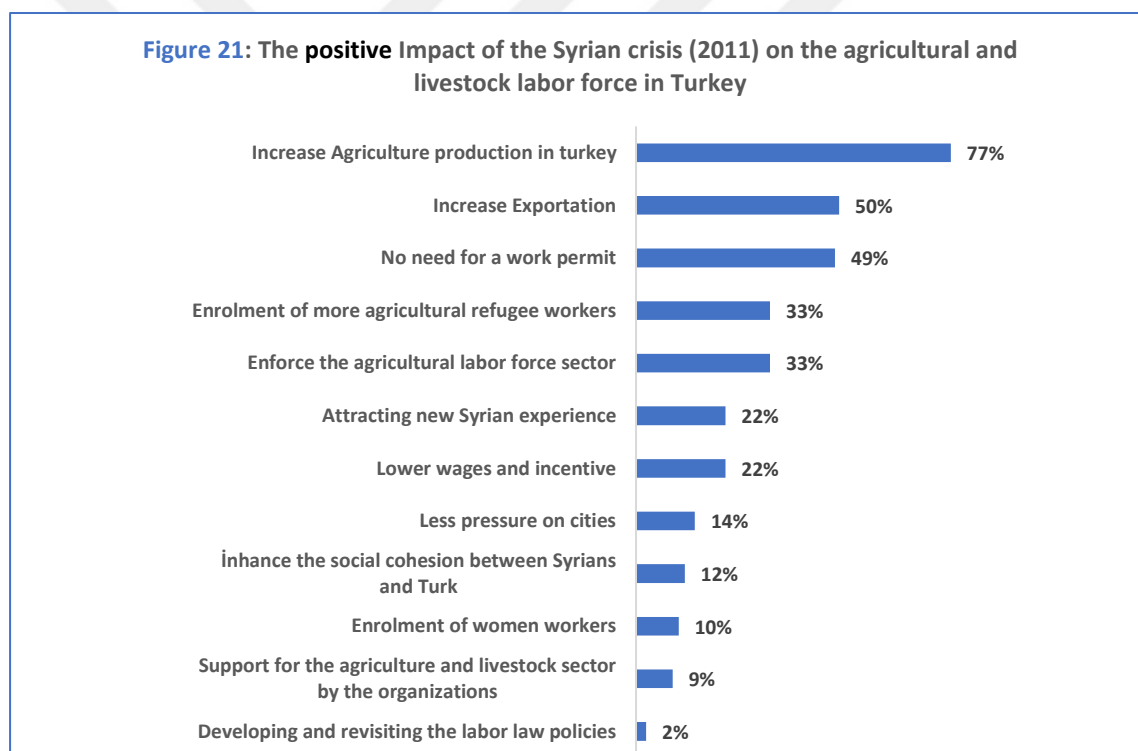
The continuation of public transportation and cooperative organization as support mechanisms after the crisis underscores their significance in maintaining access to work opportunities and enhancing collective efforts among the labor force. Nevertheless, the fact that low daily wages remained an issue indicates that these measures did not effectively alleviate the economic hardships faced by agricultural workers.

The situation in Türkiye presents a contrasting scenario, as a significant portion of respondents did not receive any support, indicating potential barriers to accessing

support systems for Syrian refugee workers. The provision of public transportation and safety and health insurance is crucial for the well-being and safety of these laborers. However, the persistence of low daily wages and the absence of training opportunities suggest that economic challenges are far from being effectively mitigated, underscoring the enduring issue of economic hardship among agricultural workers in Türkiye.

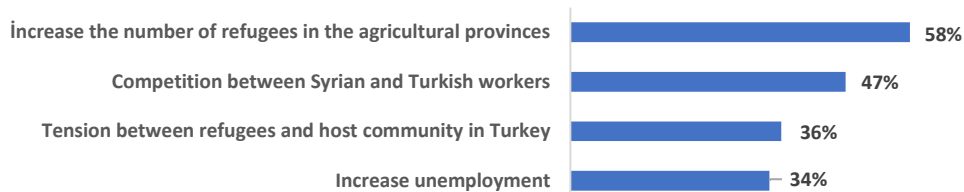
3.6. IMPACT OF THE SYRIAN AGRICULTURAL WORKERS ON THE AGRICULTURE SECTOR IN TÜRKİYE

The findings indicate that when Syrian agricultural laborers joined the workforce in Türkiye's agriculture sector, it led to higher agricultural production and exports. Notably, these refugee workers do not need a work permit to engage in agricultural and livestock activities, making their employment more accessible (Fig 21).



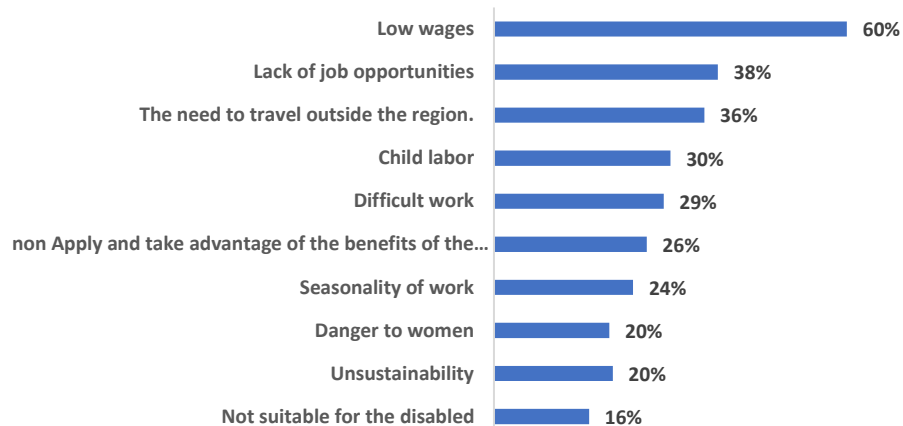
Simultaneously, the influx of Syrian agricultural workers into Türkiye has brought several challenges for the country, particularly in regions with abundant agricultural job opportunities, where the number of Syrian refugees has notably surged (Fig 22).

Figure 22: The negative Impact of the Syrian crisis (2011) on the agricultural and livestock labor force in Turkey



Syrian refugees working as daily laborers in Turkish agriculture encounter numerous difficulties, including low daily wages, limited job options, and frequent travel outside their local area (Fig 23).

Figure 23: The challenges for working in the agricultural and livestock activities (as casual labor in Turkey) after the Syrian crisis.



In the meantime, working in the agriculture and livestock sector has many advantages. 81% of the workers demonstrated that their work (as refugees) in this sector is legal and 89% of them have mentioned that they do not need work permits (Fig 24 and 25).

Figure 24: The legality of Syrian refugees' work in the agricultural sector in Turkey

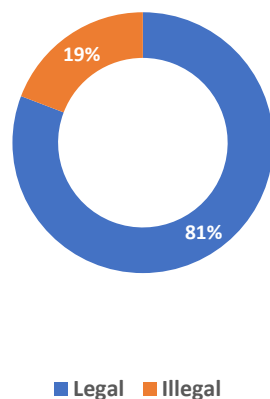
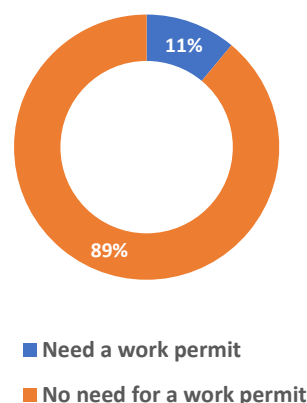
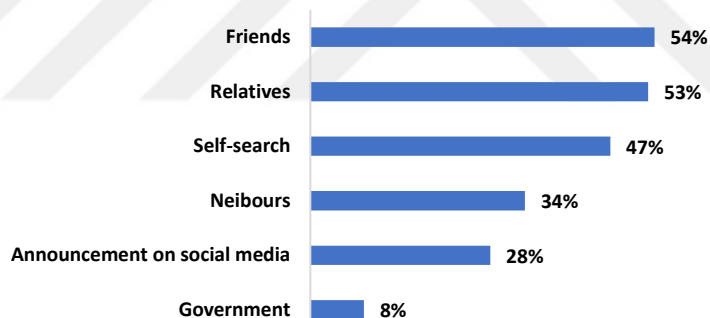


Figure 25: The need of Syrian workers in Turkey for work permits to work within the agricultural sector

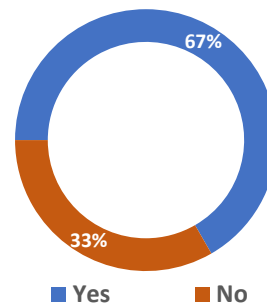
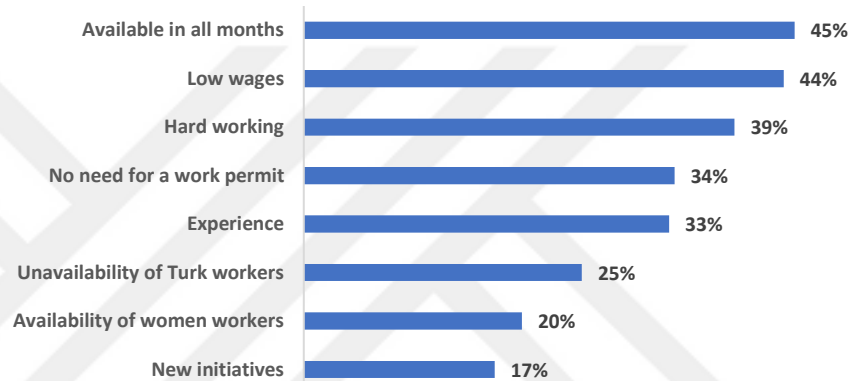
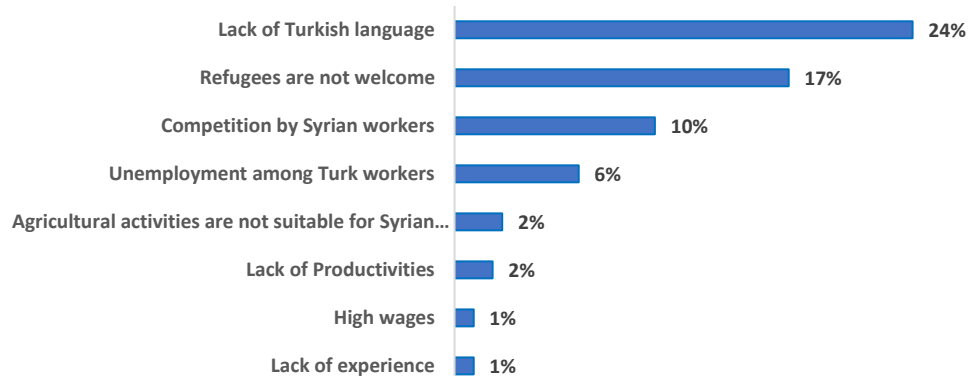


Usually, the Syrian refugee workers in Türkiye receive information about any job opportunity in the agriculture sector through friends, relatives, or self-search (Fig 26).

Figure 26: How often Syrian Workers be informed about this work opportunity in Turkey?



A significant 67% of the respondents highlighted that Syrian workers in Türkiye are essential for daily tasks in the agriculture and livestock sector. This necessity arises from their year-round availability, their willingness to engage in strenuous work for modest wages, their experience, and the absence of a requirement for work permits (Fig 27 and 28). In contrast, 33% of the respondents noted that Syrian workers face lower demand due to language barriers, less welcoming attitudes toward refugees, and a high rate of unemployment among the Turkish population (Fig 29).

Figure 27: Do you feel that you are preferred as a Syrian worker in Turkey?**Figure 28: Reasons for preference of the Syrian agricultural workers in Turkey****Figure 29: Reasons why Syrian agricultural workers are not preferred in Turkey**

A comprehensive examination of the impact of Syrian refugee workers on Turkish agriculture, including their contribution to higher agricultural production and exports. It can support this study's findings on the positive effects of Syrian laborers in the agriculture sector (Smith and Johnson, 2018). Syrians filling this gap and working for long hours at lower wages will lower the production costs. Another study focused on the opportunities and challenges of Syrian refugee labor in Turkish agriculture. It provided insights into the difficulties, including low daily wages and limited job

options, faced by Syrian refugee workers (Öztürk and Yılmaz, 2020). Al-Maliki and El-Rufai (2019) conducted a comparative study that analyzed labor migration in the Turkish agriculture sector, including the contributions of Syrian workers. It supports the essential role of Syrian workers in Turkish agriculture. Research explored the impact of language barriers on employment in the Turkish agriculture sector, especially for Syrian refugee workers. It supports the challenges related to language barriers mentioned in your findings (Karabulut and Durmaz, 2021).

The results provide a multifaceted view of the impact of Syrian refugee agricultural laborers in Türkiye, revealing both positive and negative implications for the host country. On one hand, it is evident that the engagement of Syrian refugees in the agricultural labor force has contributed to an increase in agricultural production and exportation, signifying their valuable contribution to the Turkish agricultural sector. Furthermore, the exemption of refugee laborers from the requirement of a work permit in agriculture and livestock activities is a facilitative measure that encourages their participation. However, this positive aspect coexists with challenges faced by Syrian refugees working as daily laborers in agriculture, including low daily wages, limited job opportunities, and the need to travel frequently outside their region. Additionally, while many advantages are associated with working in the agriculture and livestock sector, such as legal employment status and the absence of the need for work permits, a significant portion of respondents expressed concerns about the language barrier, social reception, and competition with the local Turkish population for employment. These findings underscore the complex interplay between the contributions of Syrian refugee laborers to the Turkish agricultural sector and the challenges they encounter, emphasizing the need for inclusive and supportive policies to harness their potential while addressing their concerns and fostering social integration.

3.7. IMPACT OF THE NGOS INTERVENTIONS ON THE AGRICULTURAL LABOR FORCE IN SYRIA AND TÜRKİYE

3.7.1. In Northwest Syria

The results showed that 72% of the respondents reported that Non-governmental Organizations (NGOs) have implemented agricultural and livestock projects in NW Syria. The NGOs in NW Syria employed agricultural workers in different activities

within the different agricultural value chains. Harvesting, weeding, and Cultivation are the main activities that were implemented by the laborers through the cash-for-work modality (Fig 30 and 31), where each worker was working for almost 22 days per month, 7 hours per day, and received 6 USD daily wage (Fig 32) and 8% of the workers mentioned that the daily wage is not enough to meet their families basic needs (Fig 33).

The study's results provide a comprehensive view of the involvement of NGOs in agricultural and livestock projects in NW Syria. The high percentage of respondents acknowledging NGO presence, the intensity of labor involved, and the daily wages paid to workers highlight the significant positive impact of these organizations. However, the concern raised by a minority of workers about the adequacy of their daily wages calls for a closer examination of the welfare aspects of these initiatives. This information can serve as a valuable resource for policymakers, NGOs, and other stakeholders, facilitating more targeted and effective efforts in addressing agricultural and livestock challenges in the region.

Figure 30: Are there agricultural projects implemented by organizations in your area After the crisis in northwest Syria?

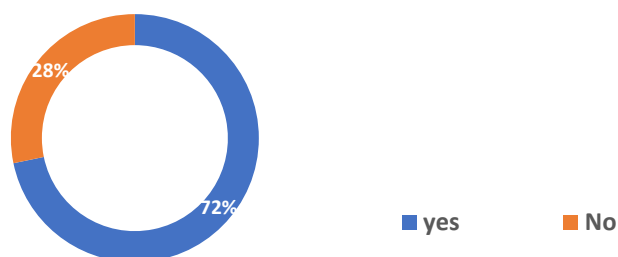


Figure 31: The main activities that NGOs employ the agricultural workers in NW Syria after the crisis

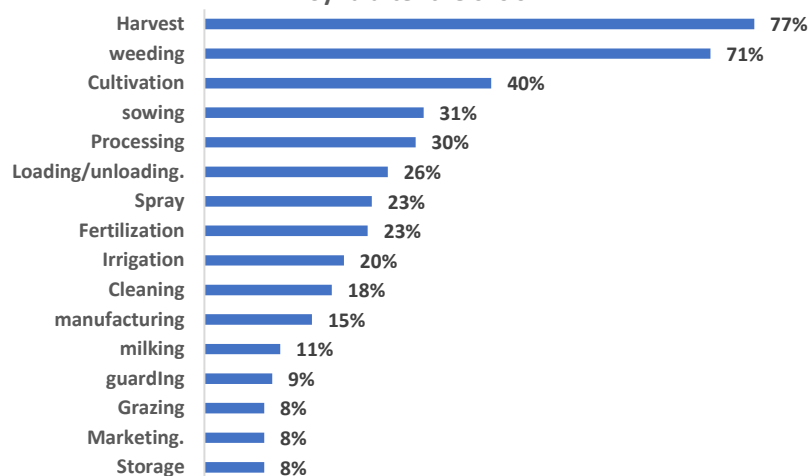


Figure 32: The conditions of the daily work of agricultural labor in NW Syria.

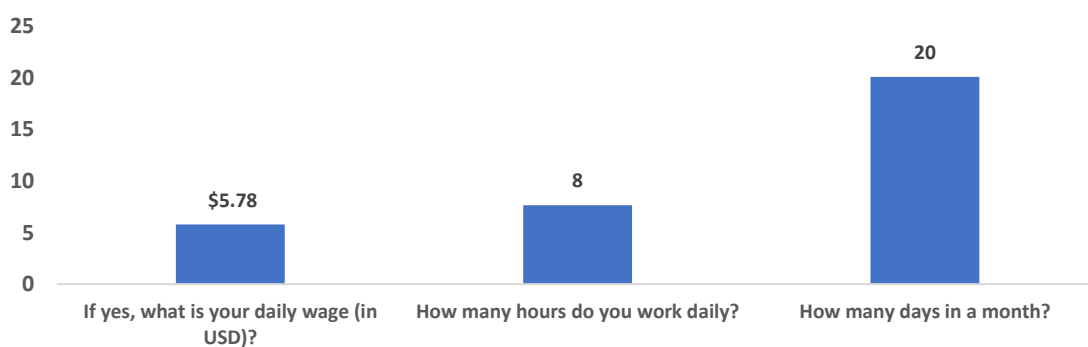
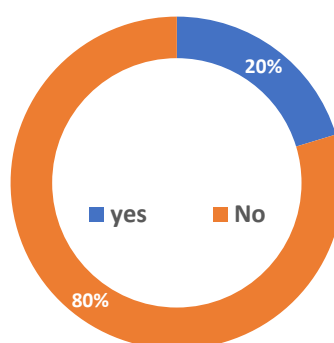


Figure 33: Are the job opportunities provided by NGO sufficient to meet your daily needs?



Hiring Syrian workers in NGO projects as seasonal daily workers in the agricultural and livestock sector has a lot of advantages and positive impacts; it is considered a good job opportunity with good daily wages and respectful treatment (Fig 34). Also, 88% of the workers considered it a good opportunity for women and IDPs employment in the agriculture sector in NW Syria, where both women and IDPs are working almost the same agricultural activities (Harvesting, weeding, cultivation, and cleaning) (Fig 35, 36, 37 and Fig 38).

Figure 34: The positive impact of NGO agriculture projects on Syrian workers?

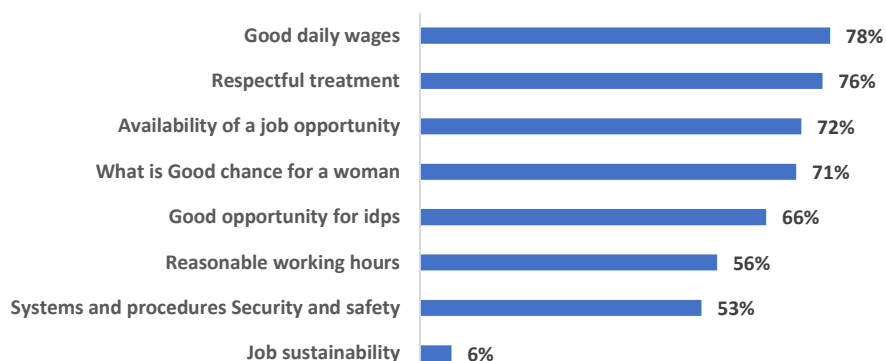


Figure 35: Do women and girls have the opportunity to work with organizations?

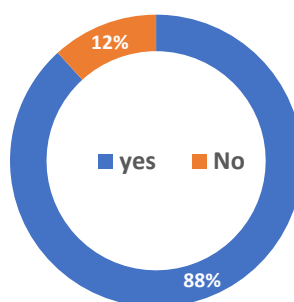
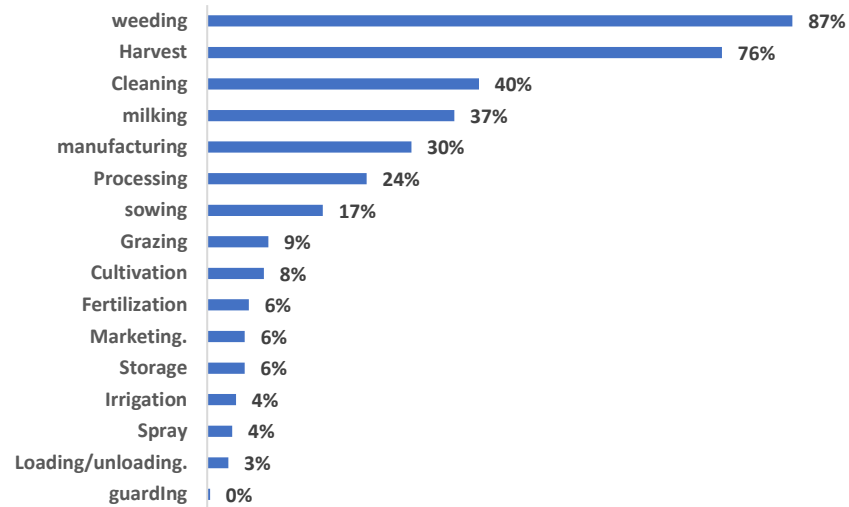
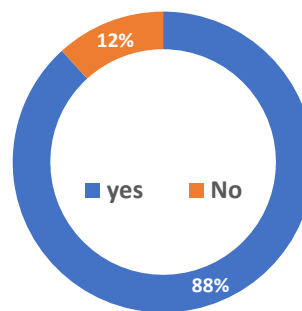
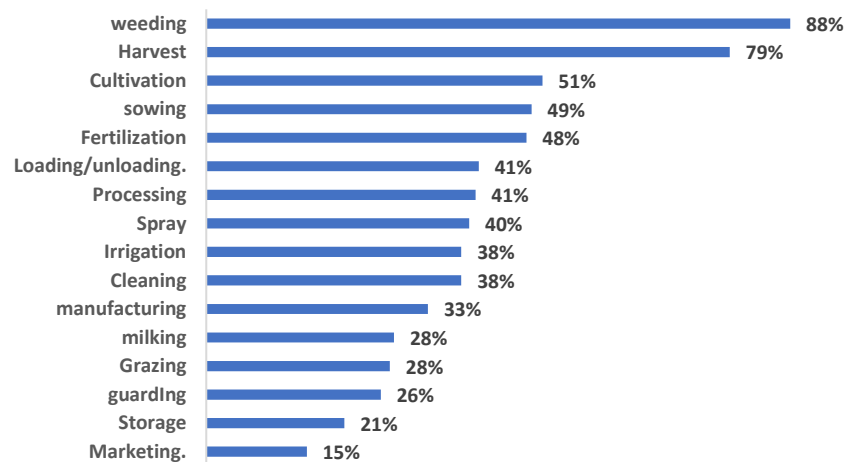


Figure 36: NGO's agricultural activities in which the women are working**Figure 37: Do the IDP workers have the opportunity to work with organizations?****Figure 38: NGO's agricultural activities in which the PDWs are working**

Many studies demonstrated the role of NGOs in agricultural development in Syria, including their involvement in agricultural and livestock projects, and provide insights into the activities implemented by laborers through the cash-for-work modality (Smith and Brown, 2019b). Another case study focused on the impact of NGO projects on employment in Syrian agriculture, specifically in NW Syria. It supported the advantages and positive impacts of NGO projects, including good daily wages and opportunities for women and IDPs (Hasan and Hussein, 2020). A study explored the gender dimension of employment in agricultural projects in Syria. It supports the opportunities for women's employment in the agriculture sector, aligning with similar agricultural activities (Ahmed and Khalil, 2018).

3.7.2. In Türkiye

The results showed that the agricultural and livestock projects that were implemented by NGOs in Türkiye increased the job opportunities for Syrian agricultural workers (including women) to participate in daily agricultural activities with logical working hours (Fig 39). On the other hand, 63% reported that the NGO projects are not sustainable, and it is short-term seasonal job opportunity (Fig 40).

Figure 39: The positive impact of the NGO's projects on Syrian agricultural workers in Turkey

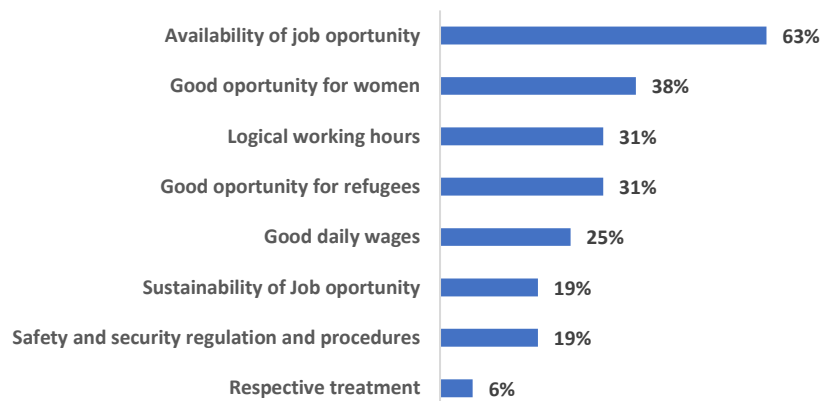
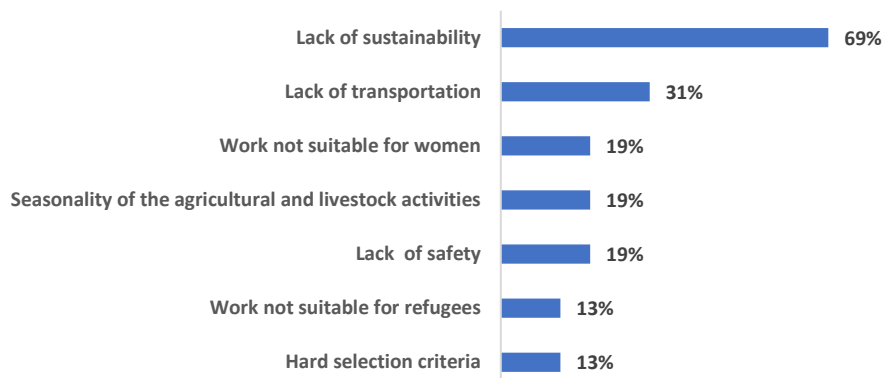
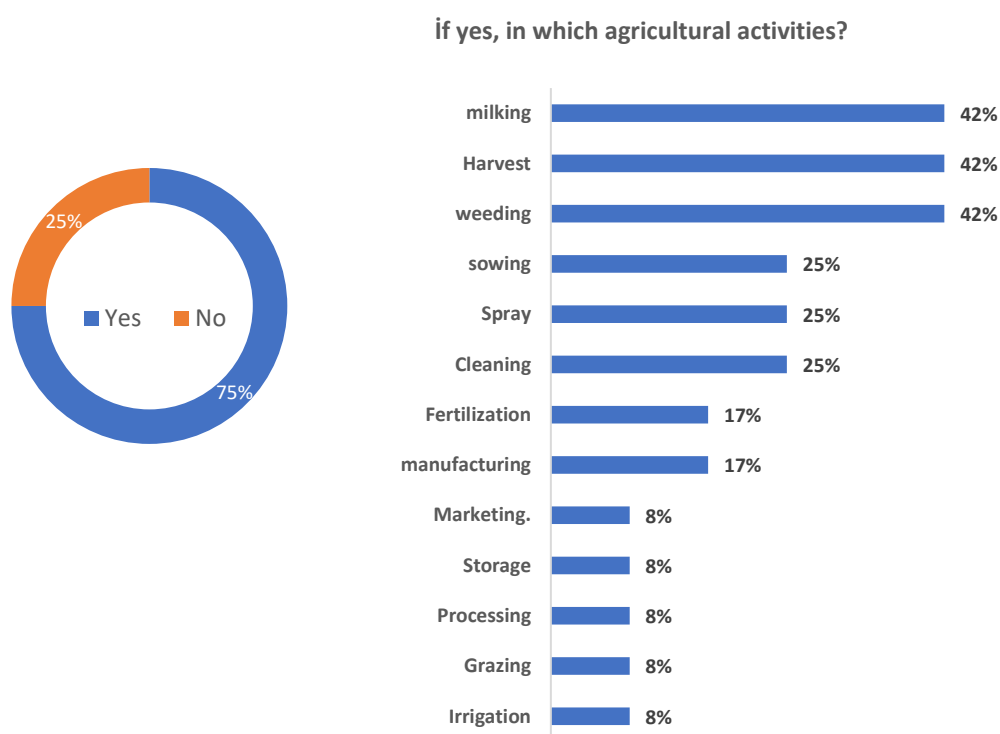


Figure 40: The Negative impact of the NGO's projects on Syrian agricultural laborers in Turkey



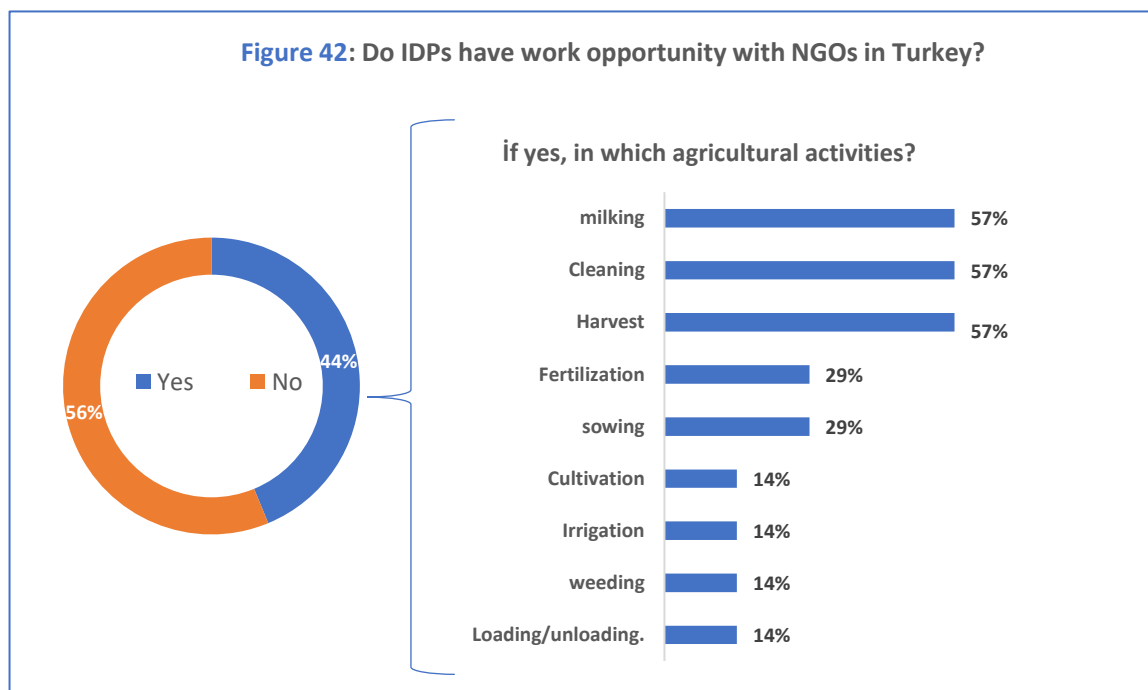
75% of the respondents mentioned that women have job opportunities in the agricultural and livestock sectors in Türkiye. The women work mainly in milking, harvesting, and weeding (Fig 41).

Figure 41: Do women and girls agricultural workers have the same opportunity to be included in the NGOs projects in Turkey.



Only 44% of the respondents reported that IDPs have the opportunity to work in seasonal agriculture work in Türkiye. The IDPs mainly work in milking, cleaning, and harvesting (Fig 42).

It is noticed that women and IDPs have the opportunity to work in livestock activities more than working in agriculture-related activities.



A study supported the role of NGOs in providing job opportunities for Syrian refugees in Turkey. It provides insights into the impact of NGO projects on job opportunities for Syrian agricultural laborers and the sustainability of these projects (Aboud and Karim, 2017).

El-Masry and Ahmed (2019) focused on the gender aspect of employment in agricultural and livestock projects for Syrian refugees in Turkey which support the findings regarding job opportunities for women and IDPs in the agricultural and livestock sectors. Other research examined the impact of NGO projects on employment opportunities for Syrian agricultural laborers in Turkey. It provides additional context and evidence regarding the sustainability of these projects and their impact on various groups of laborers (Rahman and Ali, 2020).

CONCLUSION

The armed conflict and the deteriorated security situation pushed agricultural workers to migrate from Syria to Türkiye, which is a safer area with a developed agriculture sector and more agricultural job opportunities. Agricultural and livestock workers were mainly engaged in harvesting, weeding, cultivation, and fertilizing in the vegetables, winter crops, and trees value chain in NW Syria before and after 2011. In Türkiye, in addition to weeding vegetables, Syrian refugees were more involved in milking and cleaning cows and poultry. The daily wages and the number of working days per month and hours per day were higher in Türkiye than in Northwest Syria. Borrowing and assistance from family are the main other sources of income for Syrian workers in NW Syria and Türkiye. More humanitarian assistance is received in NW Syria after 2011.

The advantages of agricultural and livestock daily work in NW Syria and Türkiye are; no need for a profession, capital, and training. More family members (including women) can participate, while the disadvantages are instability, seasonality, low wages, and it is not suitable for disabled people. Syrian agricultural and livestock workers are not receiving enough support in NW Syria and Türkiye. Syrian refugees working in seasonal agriculture in Türkiye play a role in increasing production and exportation. In the meantime, they cause unemployment, tension, competition, and an increased number of refugees in agricultural provinces. Most agricultural and livestock workers in Türkiye are legal since there is no need for a work permit. Syrian workers are often preferred in Türkiye due to their experience, availability, hardworking, and low wages, while they are sometimes not preferred because of a lack of language, unwelcoming attitudes toward refugees, and competition.

NGOs are enrolling agricultural workers (including women and IDPs) in NW Syria in respected job opportunities with good wages that are not sufficient to meet their basic needs, but not stable. NGOs' agricultural and livestock projects in Türkiye provide Syrian refugees with good job opportunities and daily wages, but it is not stable.

With the guidance of the research, some suggestions can be offered as below:

- Ensure comprehensive migration support programs for Syrian agricultural workers in Türkiye, focusing on integration, housing, and employment opportunities.
- Implement vocational training initiatives in Türkiye, specifically addressing skills relevant to the expanded agricultural tasks undertaken by Syrian refugees.
- Advocate for improved wages and working conditions for agricultural workers in Türkiye to enhance financial stability and quality of life.
- Encourage economic diversification initiatives for Syrian workers, reducing dependence on borrowing and promoting self-sufficiency.
- Implement measures to maximize the advantages and minimize the disadvantages of agricultural work in NW Syria and Türkiye, considering stability, seasonality, and wages.
- Strengthen support mechanisms for Syrian agricultural workers in both NW Syria and Türkiye to ensure they receive the assistance needed for their well-being.
- Formulate strategies to manage the impact of Syrian refugees working in seasonal agriculture in Türkiye, addressing unemployment, tension, and competition.
- Develop initiatives to balance preferences and concerns related to Syrian workers in Türkiye, addressing language barriers and fostering a welcoming environment.
- Strengthen NGO programs in NW Syria by increasing funding for job opportunities, especially for women and internally displaced persons (IDPs).
- Collaborate with NGOs, government bodies, and private sector partners to enhance the stability of agricultural and livestock projects in Türkiye, providing sustained support to Syrian refugees.

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Figure 40	The Negative impact of the NGO's projects on Syrian agricultural laborers in Turkey
Figure 41	Do women and girls agricultural workers have the same opportunity to be included in the NGO projects in Turkey?
Figure 42	Do IDPs have work opportunities with NGOs in Turkey?

ANNEX A2. TABLE OF TABLE

Table 1	The number of surveys that were conducted with agricultural workers in different provinces in NW Syria and Türkiye.
Table 2	The number of working days and hours, Daily wages, and seasonality of the agricultural labor force in Syria and Türkiye after the crisis.



ANNEX A4. QUESTIONNAIRE

Questionnaire	
Objective#1	To explore the status of the agricultural labor market in Syria before the crisis. Syrian agricultural and livestock workers have been working before and after the crisis in Northwest Syria
	Did you work as an agricultural worker on other farmers' land/farms before the crisis? - No (will not continue) - Yes (Continue) In which crops/trees did you work before the crisis: - Winter crops (Wheat, Barley, lentils, Chickpeas, Broad Bean) - Winter vegetable - Summer vegetable - Forage crops - Cotton - Sugarbeets - Trees - Sheep/goats - Cows - Poultry For how long (years) did you work in each of the following agricultural activities? - Cultivationyears. - Sowing....years. - Weedingyears. - Irrigation....years. - Sprayingyears. - Fertilization....years. - Harvesting....years. - Processing....years. - Storing....years. - Marketing....years. - Loading/offloading....years. - Manufacturing....years. - Guiding....years. - Grazing....years. - Cleaning....years. - Milkingyears. Did you work as a paid worker? If yes, how much (USD) was your daily wage? - No - Yes,USD/day. How many hours did you work in one day? How many days per month? Which months in the year? - Hours/day - Days/month

	- Which months in the year? - Jan - Feb - Mar - April - May - June - July - Aug - Sep - Oct - Nov - Dec Did the daily wages meet your daily basic need? If no, what is the percentage of the meeting of your daily need? And what is the other source of income? - Yes - No, only% of my needs And what is the other source of income? - Saving - Second job - Borrowing - Humanitarian assistance - Hawala from relatives - Family assistance What were the positive advantages of working as a seasonal worker in agricultural and livestock activities? - No need for education - No need for occupation - No need for capital - Women can work - Secure daily income - High demand during the season - More than one family member can work. What were the challenges and disadvantages you faced? - Lack of job opportunity - Seasonality of the work - Hard jobs - Low wages - Lack of sustainability - Need for travel out of the area. - Risk for women - Child labor - Not suitable for disabled people - Lack of application of labor law What was the support provided by the local authority? - Job opportunities - Support through the Labor law - Training and capacity building - Occupational health, safety, and environment
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	- Gathering into cooperatives - Good wages and incentives - Transportation
Objective#2	To identify the negative and positive effects of the crisis on the agricultural labor sector in Northwest Syria. Syrian agricultural and livestock workers have been working before and after the crisis in Northwest Syria
	Do you work as an agricultural worker on other farmers' land/farmers after the crisis? - No - Yes In which crops/trees do you work after the crisis: - Winter crops - Winter vegetable - Summer vegetable - Forage crops - Cotton - Sugarbeets - Trees - Sheep/goats - Cows - Poultry For how long (years) do you work in each of the following agricultural activities after the crisis? - Cultivationyears. - Sowing....years. - Weedingyears. - Irrigation....years. - Sprayingyears. - Fertilization....years. - Harvesting....years. - Processing....years. - Storing....years. - Marketing....years. - Loading/offloading....years. - Manufacturing....years. - Guiding....years. - Grazing....years. - Cleaning....years. - Milkingyears. Do you work as a paid worker after the crisis? If yes, how much (USD) is your daily wage? - No - Yes,USD/day. How many hours do you work in one day? How many days per month? Which months in the year? - Hours/day - Days/month

	Which months in the year? - Jan - Feb - Mar - April - May - June - July - Aug - Sep - Oct - Nov - Dec Are the daily wages enough to meet your daily basic need? If no, what is the percentage of the meeting of your daily need? And what is the other source of income? - Yes - No, only% of my needs And what is the other source of income? - Saving - Second job - Borrowing - Humanitarian assistance - Hawala from relatives - Family assistance What are the positive advantages of working in agricultural and livestock labor activities after the crisis? - No need for education - No need for occupation - No need for capital - Women can work - Secure daily income - High demand during the season - More than one family member can work What are the current challenges and disadvantages you are facing as an agricultural and livestock worker after the crisis? - Lack of job opportunity - Seasonality of the work - Hard jobs - Low wages - Lack of sustainability - Need for travel out of the area - Risk for women - Child labor - Not suitable for disabled people - Lack of application of labor law What is the support provided by the local authority and the community after the crisis? - Job opportunities
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	- Support through the Labor law - Training and capacity building - Occupational health, safety, and environment - Gathering into cooperatives - Good wages and incentives - Transportation
Objective#3	To identify the direct and indirect causes of agricultural labor migration from Syria to Türkiye after the crisis. Syrian agricultural and livestock workers (refugees) in Türkiye
	1. When (year) did you migrate to Türkiye? - 2011 - 2012 - 2013 - 2014 - 2015 - 2016 - 2017 - 2018 - 2019 - 2020 - 2021 - 2022 2. What were the main reasons to migrate from Syria after the crisis? (What is the push and pull factors to come to Türkiye)? <u>Push Factors in NW Syria:</u> - Conflict and war - İsecurity situation - Losing the houses - Displacement - Insecured environment for women workers. - Deterioration of agriculture and livestock sectors - Losing the main job - Lack of job opportunities - Low wages - Fluctuation and devaluation of the local currency - Tension between IDPs and HCs <u>Pull Factors in Türkiye:</u> - Good security situation and safety - Develped agriculture sector - Agriculture and livestock Job opportunities - Sustainability and diversity - Good wages and incentive - Availability of labor law - No need for a work permit in the agriculture sector - Agricultural Similarity between Syria and Türkiye.

	- Culture Similarity between Syria and Türkiye.
Objective#4	To identify the negative and positive effects of the crisis on the agricultural and livestock labor sector in Türkiye. Syrian agricultural and livestock workers (refugees) in Türkiye
	1. What are the positive effects of the Syrian crisis (2011) on the agricultural and livestock labor sector in Türkiye? - Increase Agriculture production in Türkiye - Increase Exportation - Enforce the agricultural labor force sector - Enrolement of more agricultural refugee workers - Attracting new Syrian experience - Enrolment of women workers - Lower wages and incentive - No need for a work permit - Support for the agriculture and livestock sector by the organizations - Developing and revisiting the labor law policies - Less pressure on cities - İnhançe the social cohesion between Syrians and Turk. 2. What are the negative effects of the Syrian crisis (2011) on the agricultural labor sector in Türkiye? - Increase unemployment. - Competition between Syrian and Turkish workers - Tension between refugees and host community in Türkiye - İncrease the number of refugees in the agricultural provinces
Objective#5	To determine the potential agricultural job opportunities and challenges for Syrian migrants in Türkiye Syrian agricultural and livestock workers (refugees) in Türkiye
	Do you work as an agricultural worker in Türkiye? - No (Not continue) - Yes (Continue) In which type of agriculture (Crops/trees) do you work in Türkiye: - Winter crops - Winter vegetable - Summer vegetable - Forage crops - Cotton - Sugarbeets - Trees - Sheep/goats

	- Cows - Poultry For how long (years) have you been working in each of the following agricultural activities in Türkiye? - Cultivationyears. - Sowing....years. - Weedingyears. - Irrigation....years. - Sprayingyears. - Fertilization....years. - Harvesting....years. - Processing....years. - Storing....years. - Marketing....years. - Loading/offloading....years. - Manufacturing....years. - Guiding....years. - Grazing....years. - Cleaning....years. - Milkingyears. Do you work as a paid worker in Türkiye? If yes, how much (USD) was your daily wage? - No - Yes,USD/day. How many hours do you work in one day? How many days per month? Which months in the year? - Hours/day - Days/month - Which months in the year? - Jan - Feb - Mar - April - May - June - July - Aug - Sep - Oct - Nov - Dec Do the daily wages (in Türkiye) meet your daily basic need? If no, what is the percentage of the meeting of your daily need? And what is the other source of income? - Yes - No, only% of my needs And what is the other source of income? - Saving - Second job - Borrowing
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	- Humanitarian assistance - Hawala from relatives - Family assistance What are the advantages of working in agricultural and livestock labor sector in Türkiye? - No need for education - No need for occupation - No need for capital - Women can work - Secure daily income - High demand during the season - More than one family member can work What are the challenges and disadvantages you are facing in Türkiye? - Lack of job opportunity - Seasonality of the work - Hard jobs - Low wages - Lack of sustainability - Need for travel out of the area - Risk for women - Child labor - Not suitable for disabled people - Lack of application of labor law What is the support provided by the local authority in Türkiye? - Job opportunities - Support through the Labor law - Training and capacity building - Occupational health, safety, and environment - Gathering into cooperatives - Good wages and incentives - Transportation Is this work legal? Or no? Do you need a work permit? - Legal - Illegal - Need a work permit - No need for a work permit How often you be informed about this work opportunity? - Relatives - Neighbours - Friends - Announcement in social media - Government - Self-search Do you feel that you are preferred as a Syrian worker in Türkiye? If yes? Why?- If No, why? - Yes, due to: - Available in all months - Availability of women workers
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	- Experience - Hard working - New initiatives - Unavailability of Turk workers - Low wages - No need for a work permit - No, due to: - Lack of Turkish language - Competition by Syrian workers - Refugees are not welcome - Unemployment among Turk workers - Agricultural activities are not suitable for Syrian workers - Lack of experience - High wages - Lack of Productivities
Objective#6	To identify the new Turkish policies regulating the agricultural labor and employment sector in Türkiye after receiving Syrian refugees. Turkish Agriculture ministry representatives
	1. Was the Turkish agricultural policy changed toward the agricultural labor sector after receiving the Syrian migrants? 2. What were the reasons for this change? 3. What were the main changes in the Turkish agricultural policy toward the agricultural labor sector after receiving the Syrian migrants? 4. What were the positive outcomes of these changes for the Syrian laborers? 5. What were the positive outcomes of these changes for the Turkish laborers? 6. What were the positive outcomes of these changes for Türkiye country?
Objective#7	To determine the impact of agricultural projects implemented by humanitarian organizations after the crisis on the agricultural labor market in Syria and Türkiye. Agricultural and Livestock workers in Syria
	Are there any agricultural projects implemented in your district after the crisis in NW Syria? - Yes - No What are the main activities/ projects implemented? - Winter crops - Winter vegetable - Summer vegetable - Forage crops - Cotton - Sugarbeets

	- Trees - Sheep/goats - Cows - Poultry In which activities the employments are the highest? - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting. - Processing - Storing - Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking How many hours do you work in one day? How many days per month? Which months in the year? Hours/day Days/month Which months in the year? - Jan - Feb - Mar - April - May - June - July - Aug - Sep - Oct - Nov - Dec How much (USD) is the daily wage? USD/Day Are the work opportunities offered by the NGOs enough to meet your daily needs? What is the percentage of its contribution? - Yes - No -% - What is the positive impact of the NGO's projects on Syrian laborers? - Availability of job opportunity - Sustainability of Job opportunity
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	- Good daily wages - Respective treatment - Safety and security regulation and procedures - Good opportunity for women - Good opportunity for Internal Displaced persons (IDPs) - Logical working hours What is the negative impact of the NGO's projects on Syrian laborers? - Lack of sustainability - Hard selection criteria - Seasonality of the agricultural and livestock activities - Work not suitable for women - Work not suitable for IDPs - Lack of safety - Lack of transportation Are women and girls have this work opportunity? If yes, in which agricultural activities? - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting. - Processing - Storing - Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking Do IDPs have this work opportunity? If yes, in which agricultural activities? - Yes - No Activities: - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting. - Processing - Storing
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	- Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking
Objective#7	To determine the impact of agricultural projects implemented by humanitarian organizations on the agricultural labor market in Türkiye. Agricultural and Livestock workers in Türkiye
	Are there any agricultural projects implemented in your district after the crisis in NW Syria? - Yes - No What are the main activities/ projects implemented? - Winter crops - Winter vegetable - Summer vegetable - Forage crops - Cotton - Sugarbeets - Trees - Sheep/goats - Cows - Poultry In which activities the employments are the highest? - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting. - Processing - Storing - Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking How many hours do you work in one day? How many days per month? Which months in the year? Hours/day Days/month Which months in the year?

	- Jan - Feb - Mar - April - May - June - July - Aug - Sep - Oct - Nov - Dec How much (USD) is the daily wage? USD/Day Are the work opportunities offered by the NGOs enough to meet your daily needs? What is the percentage of its contribution? - Yes - No -% What is the positive impact of the NGO's projects on Syrian laborers? - Availability of job opportunities - Sustainability of Job opportunities - Good daily wages - Respective treatment - Safety and security regulation and procedures - Good opportunity for women - Good opportunity for refugees - Logical working hours What is the negative impact of the NGO's projects on Syrian laborers? - Lack of sustainability - Hard selection criteria - Seasonality of the agricultural and livestock activities - Work not suitable for women - Work not suitable for refugees - Lack of safety - Lack of transportation Do women and girls have this work opportunity? If yes, in which agricultural activities? - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting.
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	- Processing - Storing - Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking Do IDPs have this work opportunity? If yes, in which agricultural activities? - Yes - No Activities: - Cultivation - Sowing - Weeding - Irrigation - Spraying - Fertilization - Harvesting. - Processing - Storing - Marketing. - Loading/offloading - Manufacturing - Guiding - Grazing - Cleaning - Milking
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Curriculum vitae (CV)

OMAR ATIK

Ph-D in plant protection, Faculty of Agriculture, Aleppo University, Aleppo, Syria, 2011.

Researcher in plant pathology (Pathologist): Plant Protection Department, Aleppo Center, General Commission for Agricultural Scientific Research (GCSAR), Aleppo Syria.

ICARDA-Contractor (Ph-D student) in Plant pathology and biotechnology. Biodiversity and Integrated Gene management Program (ICARDA), Faculty of Agriculture, Aleppo University (AU) and Aleppo scientific research center (GCSAR), Syria. 2008-2012.

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Bitki koruma alanında doktora derecesine sahiptir; Halep Üniversitesi Ziraat Fakültesi, Halep, Suriye, 2011.

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Farklı uluslararası dergilerde 15'ten fazla makale ve kitap bölümü yayınladım.

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