The Informal Agricultural Labor Market and the Obstacles to Formalization in Turkey's Bursa Province

Authors: *Laurent Bossavie, Merve Demirel, Siddharth Hari, Efsan Nas Ozen, Anja Sautmann and Mauro Testaverde. The authors thank the Agricultural Credit Cooperatives of Turkey for their support in implementing the survey.*

Informal employment is pervasive in labor markets where transient or highly seasonal occupations with low productivity dominate, such as the agricultural labor market. Informal work is a summary term for work conducted without paying taxes or social security dues, and sometimes involving conditions that are illegal under local labor laws. Even in high-income countries, agriculture is particularly prone to informal work arrangements. Informal agricultural laborers are vulnerable to exploitation, are often migrants or undocumented workers, and they neither have access to social security benefits nor contribute to the tax base.

In this context, increasing the rate of formal employment is a priority for policy. Formal employment provides worker protections, a minimum salary, access to basic social security benefits, and a path to greater integration into the economy. Policy tools for formalization include subsidies to cover social security premiums and taxes and a share of the wage; addressing information and bureaucratic barriers to registration; and stronger enforcement through audits and fines.

Turkey's agricultural sector is at the cusp of transformation. Small, family-owned farms that largely employ informal workers operate alongside larger agricultural businesses. Even though the share of agriculture in overall GDP (Gross Domestic Product) has been declining and is now at just 5 percent, agriculture still represents about 20 percent of employment,[1] all while native Turkish workers increasingly leave the sector in favor of service sector jobs in larger cities.

Estimates suggest that about 85 percent of employment in Turkish agriculture is informal.

Despite the continued high demand for low-skill workers in agriculture, low labor productivity prevents wage adjustments that could make the sector more attractive. Estimates suggest that about 85 percent of employment in agriculture is informal, compared to 30 percent in Turkey as a whole. At the same time, over the last seven years, conflicts in nearby Syria as well as Iraq, Iran and Afghanistan have led to the influx of an estimated four million refugees into Turkey. Many of these refugees end up living in rural areas and have few employment options. The agricultural labor market has the potential to absorb some of these workers and provide them a point of entry into the Turkish economy.

[1] Source: TurkStat.

To shed light on what types of policies might support this integration and foster the transition to greater rates of formal employment, the World Bank conducted a survey of 1048 farmers in the region of Bursa, Turkey, during January-February 2022. There is currently little systematic knowledge of workforce composition, hiring practices, wage determination, and attitudes towards formalization among employers in the agricultural sector in Turkey. This survey is intended to close this gap. It was conducted in Bursa, an economically developed province with a relatively well-established agricultural production market. About 11 percent of total employment is in agriculture, with about 70 percent of the labor force working informally.[2]

Formal Employment in Turkey

Important parts of the survey cover farmer's knowledge about the cost of registering a formal worker, their attitudes towards registration, and their willingness to formalize in exchange for receiving a subsidy payment that covers some of the significant cost of formalization (compared with an informal worker who only receives their daily wage).

From the farmers' perspective, formalization is pricey: social security premiums constitute 37.5% of the total gross wage.

Registering wage labor in Turkey requires paying at least the minimum wage, which is 5004 TL (Turkish Lira) in gross (about US$370) or 4253.40 TL in net (about US$315) as of 2022. Registration includes benefits such as paid vacation days, statutory leave (e.g., maternity leave), severance pay, health insurance, insurance against occupational accidents and illnesses (which also covers the farmer), as well as unemployment insurance benefits and contributions to pensions for the employee. The employer submits the registration to the Social Security Institution (SGK) on behalf of the employee and makes all relevant payments including the employer's and employee's shares of premiums and taxes.

Employee's contribution and relevant taxes are collected from the gross wage. These include the employee's share of the social security premium contributions (14 percent of gross wage), unemployment insurance contributions (1 percent of gross wage), and finally, income and stamp taxes. Taxes are levied only on the share of the gross wage that exceeds the minimum wage. The total cost of employment for the employer also includes the employer's share of social security contributions. These are 20.5 percent of the gross wage for social security premiums, and an additional 2 percent for the employer's share of the unemployment insurance premiums.

Aside from the costs, formal hiring comes with some restrictions: workers must be 18 or older, refugees must be registered in employer's province and obtain a work permit. Workers who are

---

[2] Source: TurkStat.

registered with SGK cannot work on national holidays or more than 45 hours per week. For each 6 consecutive days of work, workers earn the right for one paid vacation day.

A Survey of Farmers in Bursa

The data collection was carried out early in 2022, before the start of the growing and hiring season, in all 17 districts of Bursa. Surveyors visited or called farmers who were employing agricultural workers for at least 3 months at a time – longer than many short-term engagements in this sector – and who were therefore potentially candidates for converting informal to formal jobs (excluding farmers who only produce livestock products). Despite visiting 251 villages in total, the surveyors found it difficult to even find such formalization candidates: in 3 districts, no farmers were recruited, and the final sample consisted of only 1048 farmers. Of these, 647 were currently employing a long-term worker, while the remainder planned on rehiring workers later in the season.

Most farms in our study (1039 out of 1048) are family farms: a majority are managed by a single owner (923), and a small share of them are managed by multiple owners (58) and by sharecroppers or tenants (58). Only 9 farms in our sample have an employed farm manager. The respondent's mean age was 50, all farmers are Turkish, and all but two are male. They are also mainly from a lower educational background: 74% (780 out of 1048) did not complete high school, and 56% (587 out of 1048) did not even complete lower secondary education.

Olive and tomato were the most common crops, grown by 37% and 29% of farms in our sample, respectively. Only 3% of farms have green houses. Around 27% of farmers sell their crops via contract farming. 26% of farms produce at least one livestock product (such as meat, egg, milk, honey, etc.).

Farm Hiring Practices

Formal employment is extremely rare in our sample: only 10 farmers who currently employed someone (1.5 percent) reported formal workers on their farm, and only 11.3 percent of farmers who report having hired workers in the past season are registered with SGK themselves. 62 percent of farmers were "not at all aware" of the procedures to register a Turkish worker, and 92 percent did not know how to register a refugee worker. Nearly two thirds of farmers could not provide even an estimate of the cost of a formal contract as a share of the net wage, and those who did provide a number significantly underestimated this cost.

Figure 1 shows reasons cited for not registering workers. They ranged from the workers refusing (35%) to the restriction on working conditions that come with formal employment (29%). Unsurprisingly, the costs of higher wages (24%) and social security payments (29%) were mentioned frequently. Farmers also generally do not have support for business transactions or administrative duties such as registering a worker: 92 percent reported carrying out official transactions alone, and only 8 percent have an accountant.

The labor market is transient, and workers often only work for a few days or weeks on the same farm. On average, farmers reported having 35 short-term workers over the year, with some large farms employing more than a thousand people at peak times, but farmers have on average only 4.9 long-term workers (workers employed for 3 months or more in total).

Two-thirds of farmers report hiring their short-term workers through labor market intermediaries (brokers). Most brokers either take a commission from the workers' wages or receive a fixed amount per day or per season. But even in the case of long-term workers, 40 percent of farmers hired them through a broker. When no broker is used, hiring often relies on personal connections: 29 percent reported workers contacting them; 13 percent of farmers hired workers based on recommendations from other farmers.

Employment relations in agriculture are often short but can be intense. Even those declared "long-term workers" are reported to work only about 93 days on average during a given year, and many of them worked less than 3 months in the season prior. However, all workers – even those who were employed for more than 60 or more than 90 days – work on average longer than 8 hours per day for 6.4 days per week. This amounts to at least 51 hours per week on average, exceeding legal work hours allowed by formal employment contracts.
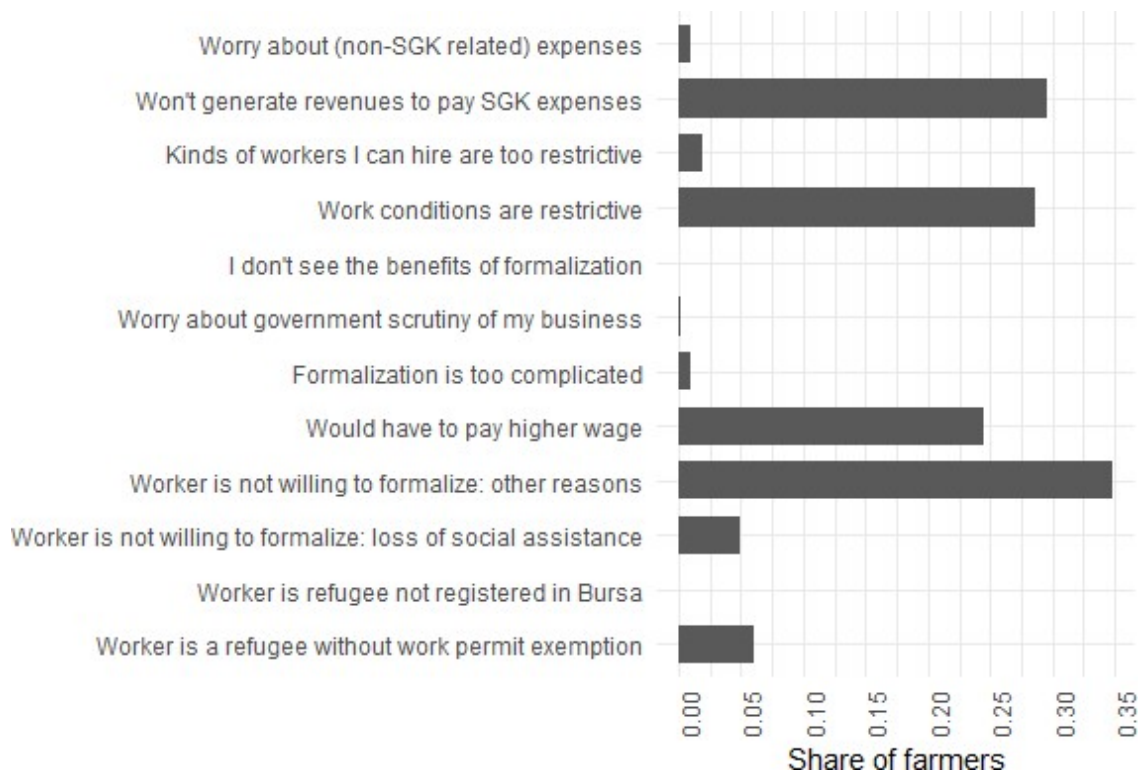
Figure 1: Stated reasons why farmers are not interested in formalization.

Farm Workers

If the farmer had one or more current long-term workers, a set of more detailed questions was asked about one randomly selected employee. Out of these 647 long-term workers, 8.4 percent and 5.7 percent, respectively, were refugees from Syria and Afghanistan. The majority of long-term workers were engaged in harvesting and picking (94%), followed by hoeing (45%), sowing and planting (43%) and pruning (20%), all seasonal tasks. The average daily wage is only 130 TL, well below the official minimum wage of 142TL, despite the average worker having more than 6 seasons of experience.

Some tasks, such as pruning and irrigation, earn a significant wage premium of 10-15TL, but the average daily salary is still barely above the minimum wage. Women earn 9.1TL less than men per day on average. Although the differences are not significant due to the small number of non-citizens in the sample, refugees also appear to earn less than Turkish workers.

The Value of a Formal Job: What Can Convince Farmers to Formalize?

To understand what could convince farmers to hire in the formal labor market, they were asked whether they would accept a subsidy covering both the social security and tax premiums and up to 80% of the worker's salary. Specifically, they were asked whether they could ever be convinced to formalize, and if the answer was yes, they were asked if they would accept formalization with a 20%, 40%, 50%, 60% or 80% subsidy of the net daily wage. The answers to these questions permit estimating the average subsidy payment the farmer requires.

More than 50% of farmers who do not currently have a long-term worker are in principle willing to formalize some of the jobs on their farm. This share jumps to over 80% among farmers who already have at least one long-term worker. Figure 2 shows the share of all farmers who agree to formalization at different subsidy levels. This graph shows that at a 50% subsidy, nearly half of the sample would consider creating a formal job. Further analysis shows that those who already have long-term workers again have higher acceptance rates. Moreover, when farmers who do not have long-term workers yet learn about the benefits to workers, their willingness to formalize increases. Nonetheless, on average even farmers interested in formalization would like to pay 37-47 percent below the worker's (formal) salary, not to mention the additional social security and tax payments. Of course, this partly reflects the fact that informal wages in this market lie significantly below the minimum wage. This implies that the average farmer attaches a negative value of nearly 40TL per day to turning an informal job into a formal job.
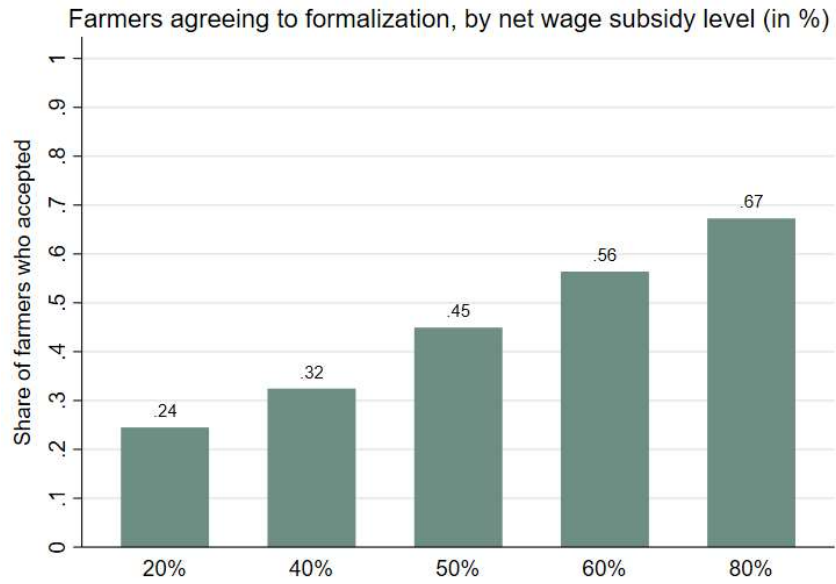
Figure 2: Share of farmers willing to formalize a worker, by subsidy offered.

Policy Lessons

Promoting formal employment is an important step to shift from a humanitarian to a development approach to refugees' integration in Turkey. Given the high number of refugees working informally in agriculture, improving working conditions in the sector through formalization is closely aligned with the Government of Turkey's agenda of graduating refugees out of social assistance and integrating them into the formal labor market. To achieve these goals, it is critical to identify the key constraints to formalization and develop policy tools to address them.

As this note highlights, most workers hired in the sector work for short periods of time in any given job. The short-term, highly seasonal, and low-productivity nature of work makes many jobs less suitable to formalization. However, the analysis presented in this note reveals that some farmers are willing to formalize their longer-term workers but would require financial support to do so.

In such a context, wage subsidies can potentially bridge the productivity gap and overcome initial barriers to formalization in the sector in the short term, while skill building interventions can increase productivity in the longer run. The level of the subsidy should be chosen to balance two competing effects: at very low levels they will not provide the necessary support to incentivize formalization, whereas levels that are too high would be an inefficient use of budgetary resources. In addition, as input costs can be quite volatile across years depending on several factors, subsidy rates can be revised regularly based on the share of labor costs in total input costs, in order to maintain this balance over time.

Identifying the true subsidy level at which farmers are willing to formalize would provide important insights for policy interventions. Additionally, while wage subsidies can help increase formalization in the short-run, their long-run sustainability depends crucially on what happens once they are withdrawn. At present there is limited evidence on this question in the agricultural sector, and further research is needed. The implementation of a wage subsidy combined with training courses building specialized agricultural skills to promote formalization of workers in agriculture is being tested by the Agricultural Credit Cooperatives of Turkey through a grant funded by the European Union and supervised by the World Bank. Lessons learned from this intervention are likely to provide important insights on the development of such a program to promote formalization of agricultural labor.

Another key finding from the present analysis was the central role played by labor brokers in bringing workers to farmers. Developing intermediation services which make systematic use of the preferences of workers and the needs of farmers may result in higher quality matches, higher net wages for workers in the absence of intermediary fees, improved worker productivity, and increased satisfaction among both workers and farmers, thereby increasing job tenures. This, in turn, may make farmers more willing to invest in their workers and could result in improved work conditions as well as increased formalization.

Given the low levels of formalization, it is not surprising that farmers have limited awareness of the procedures to be followed for formal hiring and the costs involved. Awareness-raising campaigns can help address this lack of information. In addition to providing information about the procedures to be followed for registering host and refugee workers with the SGK and providing cost estimates, these sessions should also emphasize the benefits of formalization for farmers such as insurance coverage for workplace accidents, which otherwise they would be liable for.

Finally, the analysis also highlights the need for a deeper understanding of hiring practices, wage determination and constraints to formalization in the agricultural labor market through more regular, systematic data collection. Accurate collection of such data can be quite challenging because it requires reaching out to employers likely to be hiring workers in the informal labor market. The nature of these work arrangements means that no sampling frame from administrative data or official records is available. For the survey in this brief, the survey team employed interviews with village headmen to gain an understanding of the profile of farmers in the village and use that information to implement the survey. The village headmen were not always able or prepared to share information on the workers farmers hired, and as a result the survey team had to visit many more villages than originally planned. Despite these challenges, building an evidence base through systematic data collection will provide valuable inputs to the policy making process.

Technical Appendix 1:

Details on the Data Collection and Survey Results

1 Background and Context

Policy priorities in the formalization of the agricultural labor market. Informal employment remains common in the context of developing economies. Informality is especially widespread in low-productivity sectors, such as agriculture, where labor costs associated with formal employment typically exceed labor productivity. As a result, informal employment in the agricultural sector of developing economies is pervasive, and is also common in higher-income country contexts. In those settings, informality reduction is often a priority among policy makers as informal employment comes with large fiscal losses but also with often poor working conditions for workers.

In countries that host a sizeable refugee population, such as Turkey, formal employment can also be a tool towards labor market integration of refugees in host communities, as host countries progressively graduate from short-term assistance to long-term economic integration of refugees in their labor market. Refugee workers in host countries like Turkey, however, are largely low-skilled. As a result, they tend to concentrate in low-productivity sectors and activities such as agriculture, adding to the challenge of employment formalization among that specific population.

Several policy tools have been implemented by policy makers globally as an attempt to reduce informality, including in the Turkish context [1] Those include reducing the relative cost of formal employment for employers through wage or social security contribution subsidies, decreasing the non-monetary costs associated with formalization by simplifying registration procedure of providing information, or increasing the costs of non-compliance through frequent audits and associated fines. These policies, however, have been mostly implemented in urban settings and it is unclear whether similar tools would produce comparable effects in the agricultural sector of rural labor markets.

Identifying relevant policy tools and their specific parameters to increase formal employ-

---

[1]See for example, A¸sık et al. [2022] on the effectiveness of social security contribution subsidies in reducing informal employment.

ment starts with identifying current constraints and bottlenecks to formalization in the agricultural sector. Those are currently not very well known, although low labor productivity combined by high labor costs associated with formalization are hypothesized to be a key factor. More broadly, there is currently little systematic knowledge of workforce composition, hiring practices, wage determination, and attitudes towards formalization among employers in the agriculture sector, which is an important pre-requisite to understand constraints to formalization.

To shed light on these knowledge gaps, this note reports on newly collected data from a sample of about 1,000 employers in the agricultural sector of Turkey. The survey collected detailed information on the current workforce composition, hiring practices and preferences, and wage determination of employers in the agricultural sector. This allows to shed light on the factors relevant to understand current constraints to formalization. The survey also collects detailed information about current knowledge of employers about formalization procedures. A hypothetical Multiple Price List (MPL) experiment included as part of the survey is used to assess the willingness of farmers to hire workers formally under alternative wage subsidy levels. The MPL also includes the randomized provision of information to farmers on the benefits and costs of formalization, to examine the potential role played by information gaps on informality in the sector.

The agricultural labor market in Turkey. While the share of agriculture in gross domestic product (GDP) in Turkey has been declining, falling from 12 percent in 1998 to 5 percent in 2021, agriculture still represents about 20 percent of employment.[2] Structural, institutional, and policy constraints such as low productivity, limited domestic market integration, and distinct dualistic patterns in farm structures – where small-scale family farms with unpaid labor and relatively large farms operate in parallel – act as a binding constraint on growth and employment generation. These factors result in unfavorable working conditions, including high rates of informality in the sector, with wages often below the national

---

[2]Source: Turkstat

3

minimum and inadequate worker protections: estimates suggest that about 85 percent of employment in agriculture is informal, whereas it is about 30 percent in Turkey overall.[3]

The seasonal nature of work in the sector and the pre-dominance of low-skill occupations means that farmers often use labor brokers to hire workers on a day-to-day basis. This ad-hoc nature of employment, combined with the costs of registration and formal contracting, provide little incentive for employers to become formal employers. These conditions also mean that the native Turkish population is increasingly leaving the sector to work in the service sector in urban areas: A recent survey of agricultural workers and farmers found that Turkish workers find it difficult to work in agriculture due to heavy work conditions and reliance on physical strength [ACC, 2022]. Combined with low wages, workers in agriculture guide their children to work in non-agricultural sectors, while farmers also confirmed the difficulty of finding Turkish agricultural workers. Given the relatively low education levels among refugee workers and the low supply of native workers in agriculture, the sector has the potential to absorb a significant share of the refugee population. Providing opportunities for formal employment in agriculture therefore indirectly contributes to improving the economic integration of refugees in Turkey.

The survey took place in Bursa, a relatively developed province with a well-established agricultural production market. About 11 percent of total employment is in agriculture, with about 70 percent of the labor force working informally.[4]

Employment and minimum wage regulations. Registering wage labor requires paying at least the minimum wage, which is 5004 TL in gross (about $370) or 4253.40 TL in net (about $315) in 2022. Registration includes benefits such as paid vacation days, statutory leave (e.g., maternity leave), severance pay, health insurance, insurance against occupational accidents and illnesses, as well as unemployment insurance benefits and contributions to pensions for the employee. The employer submits the registration to the Social Security Institution on behalf of the employee and makes all relevant payments including employer's

---

[3]Source: Turkstat
[4]Source: Turkstat

	Employee	Employer
Social security premium contributions	14%	20.5%
Unemployment insurance contributions	1%	2%
Total contributions	15%	22.50%
Income tax	Calculated based on 0.85·gross wage (after employee's share of contributions is deducted from gross wage)	
Stamp tax	0.759% on gross wage	

Note: Income tax rate starts from 15% and increases with the cumulative tax base for each calendar year. Please note that as of 2022, gross minimum wage is not subject to income or stamp taxes, and the amounts corresponding to these taxes are deducted from gross wages above minimum wage.

Table 1: Deductions from gross wages and employers' contributions.

and employee's share of premiums and taxes.

The employer states the number of days worked and the total wage paid each month, and premiums are calculated according to the deductions provided in Table 1. Employee's contribution and relevant taxes are collected from the gross wage. These include the employee's share of the social security premium contributions (14 percent of gross wage), unemployment insurance contributions (1 percent of gross wage), and finally, income and stamp taxes. Taxes are levied only on the share of the gross wage that exceeds the minimum wage.

The total cost of employment for the employer also includes the employer's share of social security contributions. These are 20.5 percent of the gross wage for social security premiums, and an additional 2 percent for the employer's share of the unemployment insurance premiums.

2   Survey Data Collection

The data collection was carried out early in 2022, before the start of the growing and hiring season, in 17 districts across Bursa. Survey participants were recruited by first contacting the headman in a village to obtain the contact information of eligible farmers. Where this was not successful, central gathering places such as coffee houses were visited to gather information on farmers in the village.

When eligible farmers were identified, they were visited on their farms for the interview. Farmers provided informed consent and received a small gift (a torch) to thank them for

their participation.

2.1 Sample Restrictions

Farm occupants eligible for interview were any co-owners, tenants, sharecroppers, or managers of the farm. At the beginning of the survey, we verified that the survey participant is responsible for hiring decisions on the farm. The survey was restricted to farmers who

- produce agricultural products other than meat or animal products (i.e. crops, such as fruit or vegetable),
- employed one or more farm workers for a salary for three full months or more in total over the last three years, and
- will be employing at least one farm worker for a salary for three months or more in total in the coming year (2022).

These restrictions aimed to rule out farmers who only employ very short-term labor. We call workers who work for the farmer three months or more in a given year "longterm workers" even though of course these are by conventional standards not longterm employment situations. This is motivated by the highly seasonal nature of farm work, with some months of the year essentially without significant work on farms that produce only crops. In addition, a farmer was excluded from the survey if all salaried employees on the farm were immediate family members (siblings, children or parents and in-law relations).

2.2 Survey Modules

The survey consisted of three modules that are briefly described here. The full set of questions is listed in appendix 2.

Eligibility, demographics of the respondent, and farm characteristics. The first set of questions collected basic information on the farm and its managers, as well as the land and crops grown. Eligibility was verified at the start of the survey.

Workers and hiring. Next, detailed information on the number of different types of workers (family labor, shortterm workers, and longterm workers) was collected, along with

salary bounds and basic demographic information on up to 10 longterm workers. Lastly, one of these workers was randomly selected for collecting additional detail, which included the worker's qualifications, tasks, salary, work experience, etc.

Knowledge and Preferences Regarding Formalization. A core interest of the survey was to understand whether farmers would be willing to register one or several of their longterm workers with the SGK. This implies that the worker is entitled to labor protections and that the farmer must register as an employer and pay tax and social security contributions. The questions related to these topics consisted of a few general questions about the farmer's familiarity with the process of formalization, and then a set of so-called multiple price list (MPL) questions.

An MPL is a tool to elicit preferences expressed in monetary value. Here, we use the MPL to ask farmers what level of subsidization of the worker's salary (on top of full coverage for the employer portion of the social security and tax payments) they would require to agree to convert this worker's position into a formal, registered job. Due to operational constraints, the questions asked were hypothetical, that is, the expressed preferences were not realized. However, farmers were instructed to treat them as seriously as they would an actual subsidy offer.

The questions proceeded by first asking whether the farmer was willing to formalize any of their informal longterm workers, or whether they would be interested in creating a new formal job, if they received a subsidy payment. Farmers who were willing to formalize either an existing or a new position at any level of subsidy were asked to report the worker's current (informal) salary. At this stage, for workers with an informal salary below the minimum wage, the farmer was informed that in a formal job they would have to be paid at least 142TL per day to meet minimum wage requirements. Using either the minimum wage or the reported informal wage above minimum wage as a basis, the farmer was then asked to answer yes or no to questions about whether they would formalize at a subsidy of 20%, 40%, 50%, 60% or 80% of the total salary. For each subsidy level, the subsidy amount paid and the daily

salary the farmer themselves had to cover were provided (in Turkish Lira). Answers to these questions provide a bracket for the farmer's "willingness to accept" (WTA) formalization at a given level of subsidization. We will use them to provide answers (a) which workers are willing to formalize at all, (b) what subjective value they assign to formalization (relative to an informal worker or no worker at all), and (c) what amount they would need to be paid, either in absolute terms, or in terms of the subsidization percentage.

Randomized Information. As part of the survey, farmers were randomly provided with information about different aspects of formalization, to test whether there is an effect on the subsidy payment they require. The first two statements were randomly added as part of the explanation of the MPL before the farmer had to decide whether they wanted to formalize any worker. The last statement was only provided randomly if they had already said they would be willing to formalize some worker at least at 100% subsidy, but before they answered questions about the level of subsidy they would be willing to accept.

   The randomized statements were:

1. Information on restrictions: "Employers can only register a worker with SGK if he/she is <u>18 or older</u>. Refugees must be registered in employer's province and the employer has to apply for a work permit. Workers who are registered with SGK cannot work on national holidays or more than 45 hours per week. For each 6 consecutive days of work, workers earn the right for one paid vacation day."

2. Information on benefits: "Registration provides insurance for farmers against occupational illnesses and accidents. For example, in case of a severe accident on the farm, if the worker is registered with the SGK, the SGK will cover any damages caused by the worker's negligence in the accident. This damage has to be covered by the farmer if the worker is not registered with the SGK. Registered workers also have access to health insurance, unemployment insurance, and pension rights."

3. Information on reimbursement modalities: "Please keep in mind that you first have to pay the worker and make payroll payments to the government, and then later you get

reimbursed from the program." (provided just before the MPL)

Due to the independent randomization procedure, a farmer might learn none, one, or several of these facts about formalization before answering the MPL questions. We also randomized the order of MPL questions to start either with a 20% or an 80% subsidy payment. We use this to estimate the effect of these factors on the farmer's willingness to accept and to control for any order biases in subject responses.

2.3 Survey Implementation and Final Sample

All survey visits were conducted from January 13 to February 11, 2022. In total, 251 villages were visited. The restrictions on the sample proved highly selective. While the overall number of households per village is approximately 120, only about 4 farmers per village on average were eligible for interview. Approximately 100 villages had no eligible farmers at all, and in three districts, no eligible farmers were identified. In the remaining 14 districts, a total of 1054 farmers were interviewed. In 157 cases, the interview was conducted or continued by phone. In some cases, data were missing or corrupted, for a final sample of 1048 farmers.

3 The Market for "Longterm" Agricultural Labor in Bursa

3.1 The Farms in the Sample

The survey aims to collect detailed information on both the current workers and the preferences of the current and future workers under different conditions. Hence, the survey is to be conducted with a farm manager responsible for hiring and firing decisions. Most farms in our study (1039 out of 1048) are family farms: most are managed by a single owner (923), and a small share of them are managed by the multiple owners (58) and by sharecroppers or tenants (58). An employee manages only 9 farms in our sample.

In our sample of farmers, the mean age is 50. All farmers are Turkish, and all but two are male. They are also mainly from a lower educational background: 74% (780 out of 1048) did not complete high school, and 56% (587 out of 1048) did not even complete lower secondary

District	Total Farmers	Sample share	Agreed to formalize with hypothetical 60% subsidy		Agreed to formalize with hypothetical 40% subsidy	
			Farmers	Workers	Farmers	Workers
Büyükorhan	58	0.055	49	358	26	169
Gemlik	126	0.120	66	200	38	104
Gürsu	65	0.062	48	237	28	163
Inegöl	183	0.175	105	862	49	401
Iznik	51	0.049	25	168	18	103
Karacabey	118	0.113	65	288	40	148
Keles	80	0.076	49	122	29	108
Kestel	18	0.017	11	18	7	10
Mudanya	76	0.073	47	212	30	153
Mustafakemalpasa	89	0.085	47	197	31	142
Nilüfer	144	0.137	77	511	40	307
Orhangazi	17	0.016	3	18	1	15
Osmangazi	17	0.016	4	0	3	0
Yenisehir	6	0.006	1	0	1	0
Total	1048	1.000	597	3191	341	1823

Table 2: The number of farmers interviewed in each district, in total and as share of the sample. Columns (3)-(6) provide the average number of farmers and the total number of longterm workers reported who agreed to formalize with a (hypothetical) 40% and 60% subsidy, respectively (see section 5).

education.

Small farms under 100 decares constitute most of our sample. Table 3 summarizes farm characteristics for all farms and by farm size, showing the most commonly produced crops, the share of farmers producing in a greenhouse, most used sales channels, and the share of farmers who produce livestock.

The most produced fruits and vegetables in Bursa are olive and tomato, grown by 37% and 29% of all farms in our sample, respectively. Olive is the most common product among small farms, and tomato is the most common product among larger farms. Greenhouse cultivation is not very common in Bursa, only 3% of farms produce at least some of their crops in greenhouses. Independent of the farm size, the most common way to sell their fruits and vegetables is selling directly to traders (69%), followed by selling via contract farming (27%). Furthermore, 26% of farms produce at least one livestock product (such as meat, egg, milk, honey, etc.) for higher revenues, and the presence of livestock products on the farm increases with farm size, as shown in Table 3.

Farm size (in decars)	Number of farms	The most common crops	Greenhouse cultivation	How to sell the crops	Livestock production
All	1048 (100%)	Olive (37%), Tomato (29%), Pea (25%), Pepper (22%), Peach (14%), Pear (13%), Fig (13%)	3%	To trader (69%), Contract farming (27%), To exporter (17%), End of harvest contract (16%), To commissioner (8%)	26%
[0-49)	483 (46%)	Olive (47%), Pea (20%), Tomato (19%), Pepper (17%)	4%	To trader (66%), Contract farming (24%)	19%
[50-99)	281 (27%)	Olive (39%), Pea (31%), Tomato (23%)	2%	To trader (71%), Contract farming (22%)	26%
[100-199)	177 (17%)	Tomato (44%), Pepper (35%), Pea (24%)	2%	To trader (71%), Contract farming (29%)	34%
[200-299)	61 (6%)	Tomato (62%), Pepper (34%), Pea (30%)	0%	To trader (72%), Contract farming (46%)	41%
[300-1400]	46 (4%)	Tomato (59%), Pepper (37%)	2%	To trader (63%), Contract farming (39%)	50%

Table 3: Farm characteristics by farm size. The second column shows the number of farmers in the given category by farm size. The most common products and the share of farmers producing those are given in column (3). Column (4) shows the share of farmers producing at least some of their products in a greenhouse. Column (5) gives the most common ways of selling the farm's crops. Finally, column (6) shows the share of farmers earning revenue from livestock products.

4   Hiring Practices and Formalization

The survey included questions to understand hiring patterns and practices in the sector. As expected given the nature of agricultural activities, the vast majority of workers currently employed by farmers are short-term workers, with farmers on average hiring 35.0 short-term workers compared to 4.9 long-term workers. Use of labor brokers is very common, with nearly two-thirds of farmers reporting using brokers to hire short-term workers, and 40 percent for long-term workers. Other hiring channels for long-term workers include workers contacting farmers directly (29 percent) and recommendations from other farmers (13 percent). Brokers typically receive a commission taken from the workers' wages or receive a fixed amount per day of work.

As described above, informal hiring is predominant in the agricultural sector of Turkey. Given the focus of this study, the sample was restricted to farmers who either currently hire or plan to hire workers on a longer-term basis. These jobs are potentially more suited to formalization. However, even here, however, formal hiring is extremely rare - out of 647
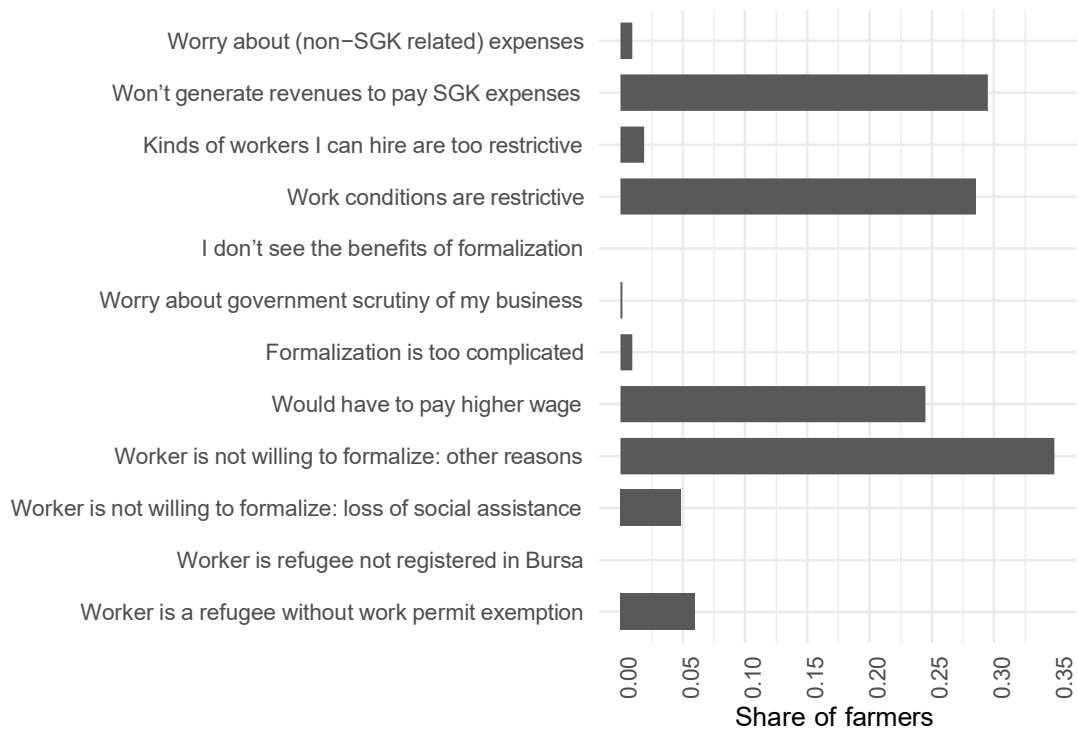
Figure 1: This figure shows the proportion of farmers who list each factor as a reason for not registering their current long term worker with the SGK. Sample restricted to farmers who currently hire long-term workers.

farmers who currently employed long-term workers, only 10 (1.5%) hired them formally. Among all 1048 farmers in the data, only 119 (11.4%) are registered with SGK as employers. The survey included questions to understand the reasons behind such low levels of formalization. As can be seen in figure 1, 35 percent of the farmers surveyed state that their workers would be unwilling to formalize. Formal hiring includes certain restrictions on working hours - for example workers cannot work for more than 45 hours a week or on national holidays. 29 percent of the farmers surveyed cite these restrictions on working conditions as a reason for not formalizing their workers. A third set of reasons are related to the costs associated with formalization. Formal hiring requires that workers be paid at least the minimum wage and 24 percent of farmers surveyed do not want to pay a higher wage, while 29 percent do not believe their business will generate sufficient revenues to pay out the SGK expenses (taxes and contributions).
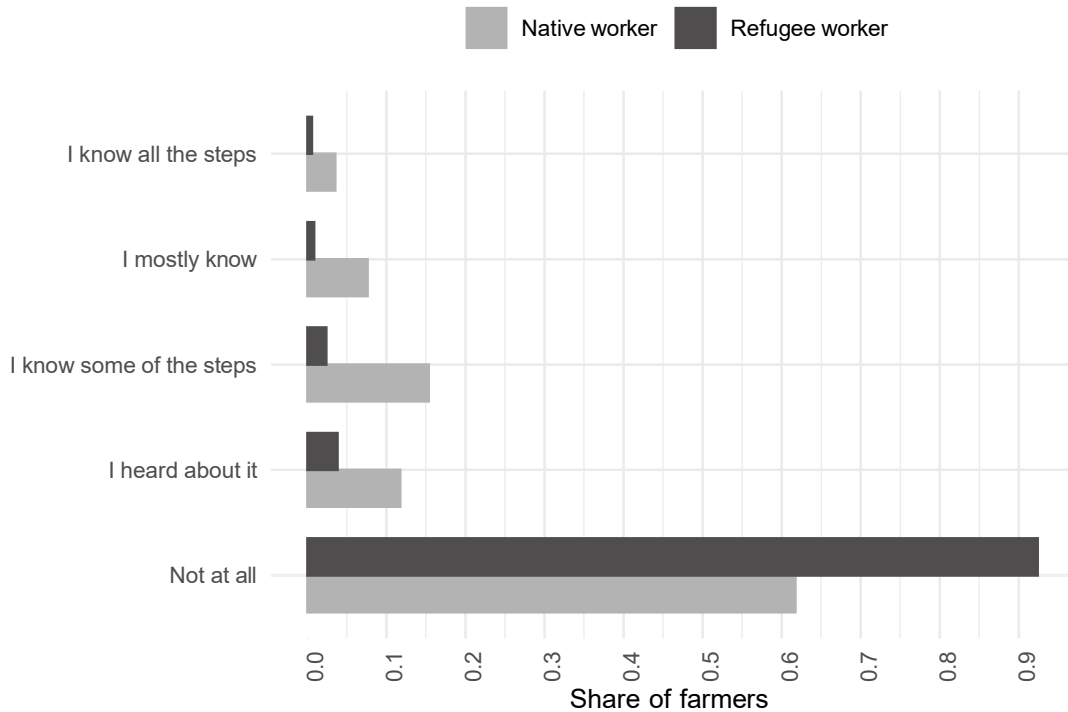
Figure 2: Farmers' knowledge of the procedures to formalize workers by worker type.

Given such low levels of formalization, it is not surprising that farmers have limited information regarding the steps they need to take to formally hire workers, or the associated costs. The survey included questions aimed at understanding farmers' knowledge of the procedures related to hiring a worker formally, including registration with the SGK. As can be seen in figure 2, 62 percent of farmers surveyed stated that they are *"not at all aware"* of the procedures to register a native worker with the SGK, a number which rises to 92 percent in the case of refugee workers.

Similarly, farmers don't seem to have a good estimate of the costs they would have to incur to formally hire workers. During the survey, farmers were asked to estimate the total cost associated with formally hiring a worker who was paid a (hypothetical) net wage of 200 TL per day.[5] Nearly two-thirds of farmers stated that they did not know the costs involved. Amongst farmers who did provide an estimate, a large majority significantly underestimated

---

[5]The true costs are approximately 60 percent of the net wage and therefore the total cost of hiring a worker formally at 200 TL per day is approximate 320 TL.

the costs associated with registration. Interestingly, however, farmers seem reasonably well informed about the benefits for workers upon formalization. For example, 85 percent of farmers are aware that formal employment would provide workers with health insurance and 35 percent know that workers will be covered under accident insurance.

The survey also included some questions aimed at understanding the support farmers receive in conducting official transactions. An overwhelming majority (92 percent) of farmers surveyed carry out official transactions including interacting with authorities by themselves, without any support. Further, only 8 percent of farmers report hiring an accountant to manage their business accounts.

4.1 Workers

Compared to other surveys on employers in the agricultural sector, the survey asked detailed questions on the workers currently employed by farmers in the sample. It includes questions on overall workforce composition, but also more detailed questions on one of the long-term workers employed by the farmer. This allows to gain insights on farmers' workforce composition and workers' characteristics, hiring practices, demand and preferences for workers' attributes, and wage determination.

Table 4 shows summary statistcs of the workers the farmers reported as currently employed with them. The composition of long-term workers in the sample is gender balanced: 50 percent of males and 50 percent of females. The vast majority of long-term workers are Turkish, while 8 and 6 percent are refugees from Syria and Afghanistan, respectively. Long-term workers have on average been working in the specific agricultural activity they are employed in for over 6 seasons, and for the specific farmer they are currently employed for 2.7 seasons. The agricultural season is short but intense, as indicated by the working times. Even those reported to be "long-term workers" work a fairly low number of total days per year: 93 days on average. Many workers were reported to work less than 3 months in the past season. However, they work on average more than 8 hours per day and 6.4 days per week, and these numbers do not change much when restricting the sample to workers who

14

Variable	Mean	Standard deviation	Min	Max
Daily wage	130.147	30.473	51.400	375
Days worked last year	93.037	58.795	5	365
Days worked in a week	6.427	1.049	2	7
Hours worked in a day	8.164	0.921	4	12
Experience (in seasons)	6.426	6.824	1	35
Experience in the farm (in seasons)	2.752	3.678	1	30
Female	0.497	0.500	0	1
Syrian	0.084	0.277	0	1
Afghan	0.057	0.233	0	1
Observations	646			
Workers who worked 60 or more days last year:				
Days worked last year	102.165	58.837	60	365
Days worked in a week	6.405	1.055	2	7
Hours worked in a day	8.209	0.951	4	12
Observations	551			
Workers who worked 90 or more days last year:				
Days worked last year	142.599	65.001	90	365
Days worked in a week	6.425	1.029	2	7
Hours worked in a day	8.313	1.022	5	12
Observations	259			

Table 4: Summary statistics on long-term workers.

worked 60 days or more or 90 days or more in the last year. The numbers amount to at least 51 hours of work per week on average, which exceeds legal work hours allowed by formal employment contracts.

The vast majority of long-term workers are engaged in harvesting and picking activities (94%) followed by hoeing (45%), sowing and planting (43%) and pruning (20%). For each worker, the employer was asked to consider the specific job they carried out and to rate the importance of different worker attributes for doing this job well on a scale from 1 to 5. The
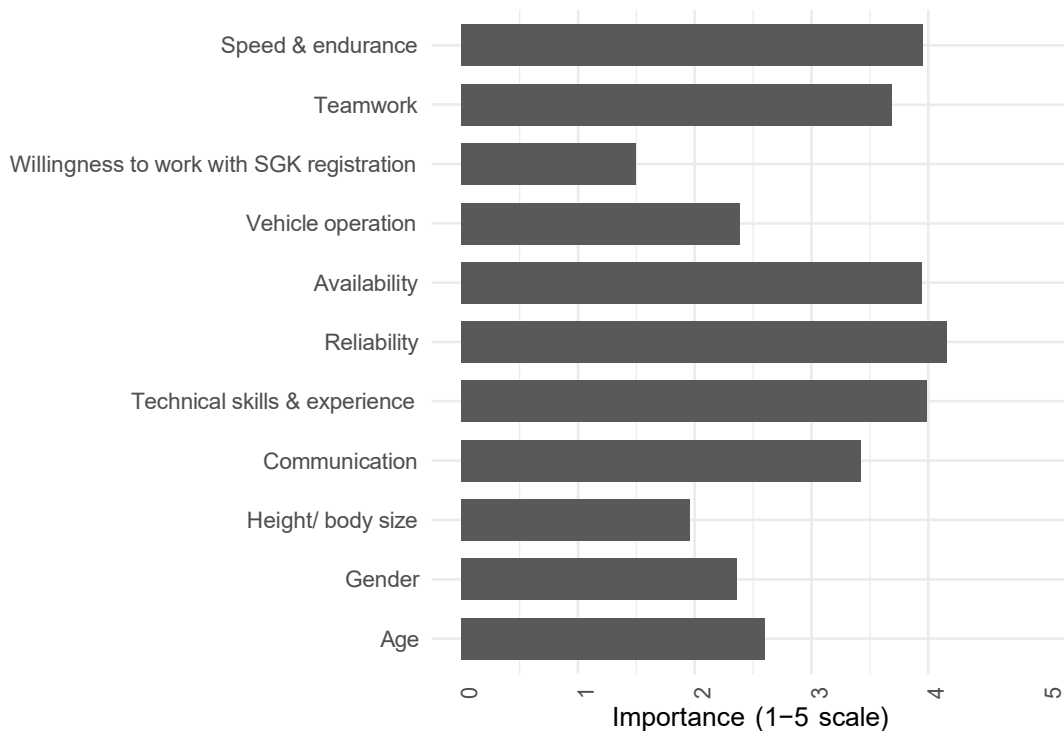
Figure 3: Importance of different qualities for the tasks carried out by current long-term workers, as rated by farmers on a scale from 1 to 5.

results are summarized in figure 3. Among those, reliability (average score of 4.2), technical skills and experience (4.0) together with speed and endurance (4.0) and availability (3.9) were rated the most important. By contrast, the willingness to work with social security registration (1.5), height and body size (2.0), and gender (2.4) were characterized as not very important. The low importance of physical attributes may be surprising given the nature of agricultural activities. However, the equal rating of technical skills with endurance, reliability, and availability also reflects that these tasks do not primarily require scarce technical knowledge.

Table 5 shows a regression of the worker's wage on worker tasks and characteristics. The average wage earned by long-term agricultural workers in the sample is TKL 130 per day, below the current national minimum wage of TKL 142 per day (see Table 4). Despite the overall low skill levels required for agricultural activities, the table shows significant variation in the wages earned by the type of task performed: higher-skilled tasks such as pruning and

irrigation are significantly associated with higher wages. In contrast, workers engaged in tasks such as sifting, packaging, sowing and planting, blending or seeding receive a lower pay. Somewhat surprisingly, experience does not has a statistically significant impact on wages, although the effect is of the expected sign. Even after accounting for the task performed, workers' characteristics such as gender and nationality seem to matter in determining the wage: female workers receive on average 9 TL less per day compared to male workers with similar observable characteristics and carrying out similar tasks, while refugee workers earn on average 3 to 7 TL less per day than comparable Turkish workers, even though this difference is not significant due to the small number of refugee workers in the sample.

Dependent variable:	Daily wage (TL)	
	Coefficient	Standard error
Female	**-9.098*****	**(2.376)** -
Syrian	-3.754	(4.310)
Afghan	-7.819	(5.049)
Experience (in # seasons)	0.283	(0.173)
Packaging	-44.07	(28.78)
Operating vehicle	-0.117	(10.52)
Pruning	**9.874*****	**(2.935)**
Hoeing	-4.472	(2.774)
Management	-29.95	(21.42)
Sowing and planting	**-9.063*****	**(2.855)**
Sifting	**-18.65****	**(7.677)**
Fertilizing	-2.193	(6.027)
Harvesting	-7.342	(6.251)
Blending	-17.23	(17.77)
Machinery/vehicle repair	26.55	(41.80)
Pesticide application	-2.080	(9.208)
Irrigation	**15.95****	**(7.156)**
Loading for transport	-3.172	(10.53)
Seeding	-19.61	(31.32)
Constant	**144.7*****	**(6.768)**
Observations	646	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Regressions of the reported net salary on worker characteristics and nature of the worker's main tasks.

5 Do Farmers Value Formality?

In this section, we use the answers from the module on formalization and the hypothetical multiple price list to estimate the subsidy required to make a farmer willing to register a worker and write a formal contract with SGK, and how the subsidy varies in response to different information about formalization or for different types of farmers.

Recall that the survey was carried out in two steps; first, we asked whether farmers were willing to formalize under *any* subsidy level, up to a 100% subsidy. If the farmer agreed to formalize in principle, we conducted a multiple price list procedure to elicit the farmer's "willingness to accept" formalization at a given subsidy level.

Some farmers declined hiring a worker with a formal contract even if the cost was fully covered. Table 6 shows a linear regression of an indicator for whether the farmer was interested in formalizing onto whether the farmer already had a longterm worker, and whether they were given the randomized information on the benefits on formalization (such as insurance) as well as regulations for formal labor contracts (such as on paid leave and maximum work hours per week).

The table shows that more than 60% of farmers are in principle willing to either formalize an existing worker or to create a formal job on their farm. This share jumps to over 80% for farmers who already have at least one longterm worker. By contrast, the randomized information provided on costs and benefits of formalization does not have a significant impact. This is unaffected by interacting the dummy for the farmer receiving the randomized information with a dummy for whether the farmer is currently employing longterm workers. Farmers either already have this information, or it is not marginal for their decision to formalize – the results below suggest the latter.

When the farmer indicated interest in formalizing, we used the actual (informal) salary as reported by the farmer to determine the formal salary. For existing workers, we used the higher of the minimum wage w^M or the worker's current informal wage w_i^I. For farmers who do not want to formalize one of their existing workers, we asked to report the informal wage

| | Interest in formalization | |
	(1)	(2)
Constant	0.602***	0.616***
	(0.026)	(0.034)
Has longterm worker	0.260***	0.238***
	(0.025)	(0.042)
Info: benefit	0.020	0.019
	(0.024)	(0.039)
LT worker X info: reg		0.000
		(0.050)
Info: regulations	0.038	0.011
	(0.024)	(0.039)
LT worker X info: benefits		0.043
		(0.049)
N	1047	1047

Table 6: Farmer expression of interest in formalization.

they would pay in the job they would create. Due to an error, unfortunately, this question was not asked to workers who wanted to create a new formal job but did not currently have any workers. For those farmers, the wage used was simply the minimum wage w^M.

Table 7 shows the proportion of cited wages above minimum wage, along with the average informal salary reported, and the formal salary that would be necessary to hire this worker. For existing workers, 67% of informal wages are below the Turkish minimum wage, with an average of only 128TL. It is notable that the salaries cited for newly created formal jobs are quite a bit higher and more often above minimum wage than the salaries for existing workers. This could indicate that farmers intend to use formality and the subsidy to attract workers they would otherwise be unable to hire. It should be noted that all but six farmers in this group only said they would consider hiring a new worker with a formal contract after they were asked whether they would say no even with a 100% subsidy, which would make this

	Existing Worker		New Worker (Has Workers)		New Worker (No Workers)	
	mean	*sd*	*mean*	*sd*	*mean*	*sd*
Above min. wage	0.33	0.47	0.67	0.47		
Informal salary	128.18	30.62	150.79	31.61		
Formal salary	147.72	18.41	158.97	22.78	142.00	0.00
Observations	531		95		197	

Table 7: Average informal salary cited and corresponding formal salaries (respecting minimum wage of 142TL per day).

highly-paid worker free to them. Moreover, note that for farmers without long-term workers (last two columns) no informal salary for new hires was elicited, and they were defaulted to the minimum wage.

5.1 Estimation approach

Before showing the MPL results, we introduce how we estimate the farmer's valuation of a formal contract and the subsidy payment required. Essentially, the yes/no answer to a given question of the MPL tells us whether the farmer is willing to subsidize at this specific subsidy level. For example, when a farmer says yes to all subsidy levels 40% or higher, but no to a 20% subsidy, the point of indifference between accepting or rejecting the subsidy offer is likely somewhere between 20% and 40%. In practice, MPL measures are known to have some error; for example, the subject may switch from yes to no "too early" or "too late" in the list. We also know that there are order biases: when the questions start with a low payment and go higher, subjects tend to say yes to fewer subsidy offers than when the questions start with a high payment and go lower. Our estimation method for the average willingness to pay, based on Jack et al. [2022], allows us to account for individual variation, error, and order biases.

Formally, consider farmer i faced with the binary choice to either formalize a worker at subsidy rate s_t or not. A farmer who is considering formalizing an informal worker paid w_i^I, upon formalizing, must pay formal wage $w_i^F = \max\{w^M, w_i^I\}$ as well as any taxes t_i^F. The taxes are covered by the subsidy program, as is a portion of the formal salary. A

farmer who is creating a new job gains a formal worker, but must again pay the formal wage and tax. In both cases, the farmer is reimbursed t_i^F and receives the subsidy payment $s_t w_i^F$, where s_t denotes the percentage of the formal wage covered by the program subsidy, $s_t \in \{20\%, 40\%, 50\%, 60\%, 80\%\}$. Thus, subject i will agree to formalization with the subsidy if

$$V_i^F - (w_i^F + t_i^F) + (s_t w_i^F + t_i^F) + \epsilon_i^F > \max\{0, V_i^I - w_i^I\} + \epsilon_i^I \tag{5.1}$$

$$V_i^F - (1 - s_t)w_i^F > \epsilon_i \text{ for new hires, and}$$
$$V_i^F - V_i^I - [(1 - s_t)w_i^F - w_i^I] > \epsilon_i \text{ for formalizing a current worker.} \tag{5.2}$$

Note that between the five questions in the same MPL given to the farmer, only the subsidy level varies. V_i^F and V_i^I summarize the non-monetary value of a formal vs. informal worker to farmer i. In the first line, t_i^F is included, but since it is reimbursed it cancels out in the second and third lines.

The values V_i^F and V_i^I include the expected productivity of the worker, along with any other non-salary costs or benefits. In particular, if the farmer anticipates hassle costs or follow-on costs when the subsidy expires, this will enter V_i^F, so that $V_i^F < V_i^I$. Formalization may also carry a fixed cost, such as transaction costs. On the other hand, a formally employed worker may be more productive either due to reciprocity or selection effects, so that $V_i^F > V_i^I$, especially if a new worker can be recruited. Even though most employers do not offer formal jobs, it is possible that $V_i^F > V_i^I$, because of the uncompensated tax payment t_i^F when formalization is not subsidized. This tax makes up around 60% of the worker's salary and increases the cost of unsubsidized formalization considerably.

In what follows, we will be interested in two quantities: first, the average net value (NV) that farmers ascribe to formalization, and second the farmer's average willingness to accept

(WTA), that is, the total transfer they must minimally receive to agree to formalization. The net value of formalization to a farmer who is formalizing a current worker is the difference

in non-monetary value, $NV_i = V_i^F - V_i^I$. For a farmer hiring a new worker it is simply V_i^F. Following Jack et al. [2022], we assume that the error term is normally distributed and estimate the terms in the equation above using a random effects probit. To identify the average net value of formalization $\overline{N\,V} = (\overline{V}^F - \overline{V}^I)$, we assume

$$\epsilon_i \sim N(0, \sigma) \tag{5.3}$$

$$\Pr(\text{accept}) = \Pr\left(\epsilon_i < \overline{N\,V} + (NV_i - \overline{N\,V}) + [w_i^I - (1 - s_t)w_i^F]\right] \tag{5.4}$$

$$= F(\overline{N\,V} + \rho_i + X_i), \tag{5.5}$$

where F is the CDF of the normal distribution with standard deviation σ, ρ_i is an individual-specific effect with mean zero (assumed to be a random effect), and $X_{it} = w_i^I - (1 - s_t)w_i^F$ is the net salary change formalization would incur. Note that there is no coefficient on X_{it} and the terms we estimate are σ and $\overline{N\,V}$.

In order to account for the change to average net value due to the randomized treatments, we add dummies for each to the probit equation. In addition, we include terms that account for order bias b_i. This term estimates the "boost" to the farmer's perceived net value that comes from randomly starting the MPL at a subsidy level where the farmer is more likely to accept, here the high subsidy (see Jack et al. [2022]), and conversely the "ding" from starting at a level where the farmer is less likely to accept. Assuming that order bias symmetrically favors the option preferred in the first choice, this variable is 1 when the order of the MPL is descending and -1 when it is ascending. We can also estimate a vector of terms, one for each subsidy level (see below). Thus, the full model we estimate is

$$\epsilon_i \sim N(0, \sigma) \tag{5.6}$$

$$\Pr(\text{accept}) = F(\overline{N\,V} + \rho_i + X_i + \beta D_i + \gamma B_i), \tag{5.7}$$

where D_i is a vector of dummies indicating which random information treatments the

farmer received, and B_i is a single term or vector indicating order biases.

We estimate the farmer's willingness to accept (WTA) in the same way. The WTA is the total "price" the farmer is willing to pay to formalize a worker. This price is negative if informality is preferred and it equals the total cost the farmer incurs when formalizing. The cost of formalization consists in the wage difference between the formal and informal salary (if the farmer is paying informal wages below the minimum wage), as well as the tax t_i^F. These terms are added to the net value NV_i. For example, for a farmer formalizing a current worker, we have

$$V_i^F - (w_i^F + t_i^F) + (s_t w_i^F + t_i^F) + \epsilon_i^F > V_i^I - w_i^I + \epsilon_i^I$$

$$[V_i^F - V_i^I - (w_i^F + t_i^F - w_i^I)] + (s_t w_i^F + t_i^F) > \epsilon_i$$

$$WTA_i + [s_t w_i^F + t_i^F] > \epsilon_i \tag{5.8}$$

$$\tag{5.9}$$

and we estimate

$$\Pr(\text{accept}) = F(\overline{WTA}_i + \rho' + X_{it}' + \beta' D_i + \gamma' B_i), \tag{5.10}$$

where the variable term is the total transfer to the farmer $X_i' = s_t w_i^F + t_i^F$.

Lastly, we can also directly estimate the subsidy percentage that farmers on average require to formalize. Instead of using the full MPL structure, we estimate this with interval regression (see Jack et al. [2022]).[6]

6   Results

Net Value of Formalization $\overline{NV}$**.**   Our first set of estimates in Table 8 reports the estimated average value of formalization, split out into the three different groups of farmers.

---

[6]Due to the fact that no farmers exhibit multiple switching in this data and all responded to the same five subsidy levels, the random effects model is not identified.

The first group are farmers who are interested in formalizing one of their existing workers. The second group are farmers who are not interested in formalizing one of their workers, but express interest in creating a new position. The last group are farmers who do not currently have a longterm worker, but expressed interest in creating a new longterm position as well. This last group of farmers did not provide an informal salary and were assumed to hire at minimum wage.

The estimates show that the average net value of formalizing a current worker is negative. A farmer anticipates costs of about 33TL per day just to employ a worker with a formal contract instead of informally. This could reflect costs such as greater barriers to terminating a formal contract than ending an informal relationship. Farmers with a current worker also exhibit significant order bias, meaning their choices vary a lot depending on the way the MPL is presented. This could indicate uncertainty. Providing information on the benefits of formalization is estimated to have a negative effect on the value of formalization, on the order of a daily cost of 8TL, but this estimate is only significant at the 10% level.

By contrast, for farmers who do not currently have a worker, the value of a formal worker is positive, at around 74TL, or about 52% of the daily minimum wage. This value is similar for farmers with existing workers and farmers without any longterm workers. Here, we also see a strong *positive* effect when farmers learn about the benefits of the formal contract. This could reflect that farmers factor in that the formal job is more attractive to workers, meaning that they will be able to recruit higher-quality employees.

Willingness to accept. When estimating the willingness to accept, we see that farmers on average require between 98TL and 144TL daily payments in order to be willing to hire a formal worker. The WTA is higher in column (2), and this reflects partly the higher wages that farmers cited for their hypothetical formal worker. By contrast, the WTA for a current worker or a new formal worker at minimum wage (columns (1) and (3)) is about the same at 111 and 98 TL respectively. Again, the information treatment about the benefits to the worker increases the willingness to accept for new workers. The term is not significant in (2)

	Current Worker (1)	New Worker (has workers) (2)	New Worker (has no workers) (3)
Avg. net benefit	-33.73^{***}	74.01^{***}	96.17^{***}
	(4.56)	(9.12)	(5.31)
Info: Regulations	-1.76	5.38	3.76
	(4.61)	(7.83)	(5.40)
Info: Benefits	-7.85^{*}	38.25^{***}	15.31^{***}
	(4.66)	(8.28)	(5.47)
Info: Delay	-3.50	-5.61	-6.30
	(4.63)	(7.94)	(5.46)
Order Bias	18.15^{***}	5.28	3.60
	(2.37)	(3.82)	(2.73)
N	2655	475	985

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 8: MPL estimates: average net value associated with formalizing a current worker employed informally (farmers with a current worker) and average net value associated with obtaining a subsidized formal worker (farmers who want to formalize a new worker).

but highly significant in column (3) and at around 15TL. Again, this suggests that farmers value these benefits when trying to attract new workers.

Subsidy level required. An alternative way to look at this data is not to interpret it as a measure of willingness to pay, but to simply ask at what subsidy level farmers said "yes" to formalization. We already saw the number of farmers by district in Table 2 who would accept formalization at a 40% and a 60% subsidy. Figure 4 shows different aspects of the same data. The left panel includes all farmers in the survey, and asks what share agreed to formalize a worker at each subsidy level. For example, at a 50% subsidy, 45% of farmers agreed to formalize, or a total of 472 farmers. The right side shows total acceptance rates at subsidy levels of 40%, 50% and 60%. For example, among farmers with no current longterm workers, 39% would agree to formalize at a 50% subsidy. Among those who have longterm

	Current Worker (1)	New Worker (has workers) (2)	New Worker (has no workers) (3)
Avg. total transfer	−110.81***	−143.69***	−97.58***
	(6.16)	(9.25)	(5.93)
Info: Regulations	0.77	1.57	2.97
	(6.04)	(7.99)	(5.86)
Info: Benefits	−8.73	26.54***	13.30**
	(6.40)	(8.33)	(6.13)
Info: Delay	−5.38	−6.35	−6.60
	(6.10)	(7.97)	(6.07)
Order Bias	20.11***	9.37**	3.16
	(3.62)	(4.13)	(3.00)
N	2655	475	985

Standard errors in parentheses

$^*\ p < .1,\ ^{**}\ p < .05,\ ^{***}\ p < .01$

Table 9: MPL estimates: average willingness to accept associated with creating a formal position. Equals the negative of the total subsidy payment received.

workers, this proportion is 49% of farmers.

In addition, Table 10 shows the estimated average subsidy at which farmers agree to formalize. We estimate the average subsidy level at which farmers switch to accepting using interval regression which accounts for the censoring of the data.[7] Here, we again only include farmers who expressed any interest in formalizing. Both the acceptance rates at different subsidy levels and the average minimum subsidy do not have a "willingness to pay" interpretation, but they are of course instructive from a policy perspective. The average farmer who would ever formalize is willing to do so at a 37%-49% wage subsidy. The higher-end estimate comes from farmers who did not want to formalize an existing worker, but agreed to consider a new worker provided they got a 100% subsidy. Not surprisingly,

---

[7]The above approach does not apply with the same fixed subsidy cutoffs for each farmer and no multiple switching which allows estimating error.
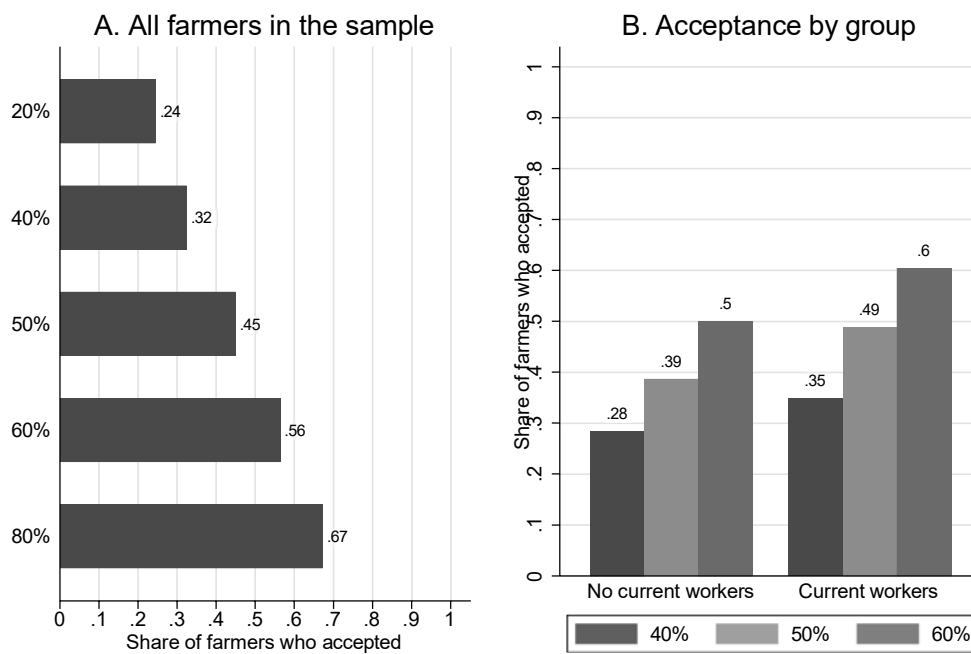
Figure 4: Left panel: total share of farmers who agreed to formalize at different subsidy levels. Right panel: acceptance rates by group at 40%, 50%, and 60% subsidy level.

	Current Worker (1)	New Worker (has workers) (2)	New Worker (has no workers) (3)
model			
Average Subsidy in Percent	37.37***	53.00***	36.74***
	(3.00)	(6.83)	(5.14)
Info: Regulations	1.37	−3.72	−1.58
	(3.00)	(6.01)	(5.09)
Info: Benefits	5.80*	−17.88***	−9.53*
	(3.01)	(6.30)	(5.09)
Info: Delay	2.03	3.51	5.42
	(3.00)	(5.99)	(5.10)
Order Bias	−8.59***	−4.13	−2.27
	(1.51)	(2.86)	(2.54)
lnsigma			
Average Subsidy in Percent	3.49***	3.28***	3.50***
	(0.04)	(0.09)	(0.07)
N	531	95	197

Standard errors in parentheses
$^{*} p < .1, ^{**} p < .05, ^{***} p < .01$

Table 10: Average lowest subsidy level accepted by group.

their acceptance threshold is on average higher than the rest of the sample. Again, we see that information on the benefits from formalization additionally reduces the subsidy that is required for farmers who currently do not have longterm workers, to 25% on average.

References

ACC. Agricultural employment support for refugees and Turkish citizens through enhanced market linkages: Training needs assessment summary report. Technical report, 2022.

Güneş Aşık, Laurent Loic Yves Bossavie, Jochen Kluve, Selin Efsan Nas Ozen, Metin Nebiler, Ana Maria Oviedo Silva, et al. The effects of subsidizing social security contributions: Job

creation or informality reduction? Technical report, The World Bank, 2022.

Kelsey Jack, Kathryn McDermott, and Anja Sautmann. Multiple price lists for willingness to pay elicitation. *Working paper*, 2022.

Technical Appendix 2:
Survey Questionnaire

Agricultural Labor Survey Bursa - Questionnaire

Enumerator	○ (list of enumerators)
District	○ Büyükorhan ○ Gemlik ○ Gürsu ○ Harmancık ○ İnegöl ○ İznik ○ Karacabey ○ Keles ○ Kestel ○ Mudanya ○ Mustafakemalpaşa ○ Nilüfer ○ Orhaneli ○ Orhangazi ○ Osmangazi ○ Yenişehir ○ Yıldırım
Village	○ Akçasaz ○ Aktaş ○ Bademlik ○ Balaban ○ Bayındır ○ Burunca ○ Çakıryenice ○ Çeribaşı ○ Danacılar ○ Danaçalı ○ Demirler ○ Derecik ○ Durhasan ○ Düğüncüler ○ Elekçalı ○ Ericek ○ Gedikler ○ Geynik ○ Hacıahmetler ○ Hacılar ○ Hemşeriler ○ Karaağız ○ Karaçukur ○ Karalar ○ Kayapa ○ Kınık ○ Kuşlar ○ Mazlumlar ○ Osmanlar ○ Örencik ○ Özlüce ○ Perçin ○ Pınarköy ○ Pirebeyler ○ Sarnıç ○ Tekerler ○ Yenice ○ Zaferiye ○ Adliye ○ Ata ○ Balıkpazarı ○ Büyükkumla ○ Cihatlı ○ Cumhuriyet ○ Demirsubaşı ○ Dr.Ziya Kaya

○ Engürücük
○ Eşref Dinçer
○ Fevziye
○ Fındıcak
○ Gençali
○ Güvenli
○ Halitpaşa
○ Hamidiye
○ Hamidiyeköy
○ Haydariye
○ Hisar
○ Karacaali
○ Katırlı
○ Kayhan
○ Kumla
○ Kurşunlu
○ Kurtul
○ Küçükkumla
○ Muratoba
○ Narlı
○ Orhaniye
○ Osmaniye
○ Şahinyurdu
○ Şükriye
○ Umurbey
○ Yeni
○ Yeniköy
○ Adaköy
○ Ağaköy
○ Canbazlarköyü
○ Dışkayaköyü
○ Ericekköyü
○ Hasanköy
○ İğdirköyü
○ İpekyolu
○ İstiklal
○ Karahıdırköyü
○ Kazıklıköyü
○ Kumlukalan
○ Kurtuluş
○ Yenidoğan
○ Zafer
○ Akpınar
○ Alutca
○ Balatdanişment
○ Ballisaray
○ Bekdemirler
○ Çakmak
○ Çamoğlu
○ Çatalsöğüt
○ Dedebali
○ Delicegüney
○ Dutluca
○ Ece
○ Gedikören
○ Gökçeler
○ Gülözü
○ Harmancik Akalan
○ Hopandanişment
○ Ilıcaksu
○ İshaklar
○ Karaca
○ Kepekdere
○ Kilavuzlar
○ Kişmanlar
○ Kocapınar
○ Kozluca
○ Nalbant

- ◯ Okçular
- ◯ Saçaklı
- ◯ Yayabaşi
- ◯ Yeşilyurt
- ◯ Akbaşlar
- ◯ Akhisar
- ◯ Akincilar
- ◯ Alibey
- ◯ Aşağiballik
- ◯ Babaoğlu
- ◯ Bahariye
- ◯ Bahçekaya
- ◯ Baykoca
- ◯ Bayramşah
- ◯ Bilalköy
- ◯ Boğazköy
- ◯ Burhaniye
- ◯ Cemiyet
- ◯ Cerrah
- ◯ Cuma
- ◯ Cumhuriyet
- ◯ Çavuşköy
- ◯ Çaylica
- ◯ Çayyaka
- ◯ Çeltikçi
- ◯ Çiftlikköy
- ◯ Çitli
- ◯ Deydinler
- ◯ Dipsizgöl
- ◯ Doğanyurdu
- ◯ Dömez
- ◯ Edebey
- ◯ Elmaçayir
- ◯ Ertuğrulgazi
- ◯ Esenköy
- ◯ Esentepe
- ◯ Eski Bahçekaya
- ◯ Eskikaracakaya
- ◯ Eskiköy
- ◯ Eymir
- ◯ Fatih
- ◯ Fevziye
- ◯ Findikli
- ◯ Gazelli
- ◯ Gedikpinar
- ◯ Gülbahçe
- ◯ Gündüzlü
- ◯ Güneykestane
- ◯ Güzelyurt
- ◯ Hacikara
- ◯ Halhalca
- ◯ Hamamli
- ◯ Hamidiye
- ◯ Hamitabat
- ◯ Hamzabey
- ◯ Hasanpaşa
- ◯ Hayriye
- ◯ Hilmiye
- ◯ Hocaköy
- ◯ Huzur
- ◯ İclaliye
- ◯ İhsaniye
- ◯ İsaören
- ◯ Karagölet
- ◯ Karahasanlar
- ◯ Karakadi
- ◯ Karalar
- ◯ Kayapinar

- ◯ Kemalpaşa
- ◯ Kestanealani
- ◯ Kinik
- ◯ Kiran
- ◯ Kocakonak
- ◯ Konurlar
- ◯ Kozluca
- ◯ Kulaca
- ◯ Kurşunlu
- ◯ Küçükyenice
- ◯ Lütfiye
- ◯ Madenköy
- ◯ Mahmudiye
- ◯ Mesudiye
- ◯ Mezit
- ◯ Muratbey
- ◯ Olukman
- ◯ Orhaniye
- ◯ Ortaköy
- ◯ Osmaniye
- ◯ Osmaniyeköy
- ◯ Özlüce
- ◯ Paşaören
- ◯ Rüştiye
- ◯ Saadet
- ◯ Saripinar
- ◯ Sinanbey
- ◯ Soğukdere
- ◯ Sulhiye
- ◯ Sultaniye
- ◯ Sungurpaşa
- ◯ Süle
- ◯ Süleymaniye
- ◯ Sülüklügöl
- ◯ Süpürtü
- ◯ Şehitler
- ◯ Şipali
- ◯ Tahtaköprü
- ◯ Tekkeköy
- ◯ Tokuş
- ◯ Turgutalp
- ◯ Turgutalpköy
- ◯ Tuzla
- ◯ Tüfekçikonak
- ◯ Yeni
- ◯ Yenice
- ◯ Yeniceköy
- ◯ Yeniköy
- ◯ Yeniyörük
- ◯ Yiğit
- ◯ Yukariballik
- ◯ Yunusemre
- ◯ Aydinlar
- ◯ Bayindir
- ◯ Beyler
- ◯ Boyalıca
- ◯ Candarli
- ◯ Çakirca
- ◯ Çamdibi
- ◯ Çamoluk
- ◯ Çampınar
- ◯ Çiçekli
- ◯ Derbent
- ◯ Dereköy
- ◯ Dirazali
- ◯ Elbeyli
- ◯ Elmalı
- ◯ Eşrefzade

- ◯ Göllüce
- ◯ Gürmüzlü
- ◯ Hacıosman
- ◯ Hisardere
- ◯ Hocaköy
- ◯ İhsaniye
- ◯ İnikli
- ◯ Karatekin
- ◯ Kaynarca
- ◯ Kirinti
- ◯ Kutluca
- ◯ Mahmudiye
- ◯ Mahmut Çelebi
- ◯ Mecidiye
- ◯ Mustafa Kemal Paşa
- ◯ Mustafali
- ◯ Müşküle
- ◯ Orhaniye
- ◯ Osmaniye
- ◯ Ömerli
- ◯ Sansarak
- ◯ Sariağil
- ◯ Selçuk
- ◯ Süleymaniye
- ◯ Şerefiye
- ◯ Tacir
- ◯ Yeni
- ◯ Yenişerefiye
- ◯ Yeşil Camii
- ◯ Yürükler
- ◯ Abdullahpaşa
- ◯ Akçakoyun
- ◯ Akçasusurluk
- ◯ Akhisar
- ◯ Arız
- ◯ Bakirköy
- ◯ Ballıkaya
- ◯ Bayramdere
- ◯ Beylik
- ◯ Boğazköy
- ◯ Canbalı
- ◯ Canbaz
- ◯ Çamlıca
- ◯ Çarıkköy
- ◯ Çavuşköy
- ◯ Çeşnigir
- ◯ Dağesemen
- ◯ Dağkadı
- ◯ Danişment
- ◯ Doğla
- ◯ Drama
- ◯ Ekinli
- ◯ Ekmekçi
- ◯ Emirsultan
- ◯ Esentepe
- ◯ Eskikaraağaç
- ◯ Eskisarıbey
- ◯ Fevzipaşa
- ◯ Garipçe
- ◯ Gazi
- ◯ Gölecik
- ◯ Gölkıyı
- ◯ Gönü
- ◯ Güngörmez
- ◯ Hamidiye
- ◯ Harmanlı
- ◯ Hayırlar
- ◯ Hotanlı

- ◯ Hüdavendigar
- ◯ Hürriyet
- ◯ İkizce
- ◯ İnkaya
- ◯ İsmetpaşa
- ◯ Karacaahmet
- ◯ Karakoca
- ◯ Karasu
- ◯ Kedikaya
- ◯ Keşlik
- ◯ Kıranlar
- ◯ Kulakpınar
- ◯ Kurşunlu
- ◯ Küçükkaraağaç
- ◯ Mamuriyet
- ◯ Mecidiye
- ◯ Muratlı
- ◯ Nasrettin
- ◯ Okçular
- ◯ Orhaniye
- ◯ Ortasarıbey
- ◯ Ova Hamidiye
- ◯ Ovaesemen
- ◯ Örencik
- ◯ Runguşpaşa
- ◯ Saadet
- ◯ Sazlıca
- ◯ Selimiye
- ◯ Seyran
- ◯ Sırabademler
- ◯ Subaşı
- ◯ Sultaniye
- ◯ Şahinköy
- ◯ Şahmelek
- ◯ Tabaklar
- ◯ Taşlık
- ◯ Taşpınar
- ◯ Tavşanlı
- ◯ Tophisar
- ◯ Uluabat
- ◯ Yarış
- ◯ Yeni
- ◯ Yenice
- ◯ Yenikaraağaç
- ◯ Yenisarıbey
- ◯ Yeşildere
- ◯ Yolağzı
- ◯ Akçapınar
- ◯ Alpağut
- ◯ Avdan
- ◯ Baraklı
- ◯ Basak
- ◯ Belenören
- ◯ Bıyıklıalanı
- ◯ Cuma
- ◯ Çukur
- ◯ Dağ Demirciler
- ◯ Dağdibi
- ◯ Davutlar
- ◯ Dedeler
- ◯ Delice
- ◯ Denizler
- ◯ Durak
- ◯ Düvenli
- ◯ Epçeler
- ◯ Ertuğrulgazi
- ◯ Gelemiç
- ◯ Gököz

- ◯ Harmanalanı
- ◯ Harmancik Demirci
- ◯ Haydar
- ◯ Hereke
- ◯ Issızören
- ◯ Karaardıç
- ◯ Kemaliye
- ◯ Kiran Işiklar
- ◯ Kirazlı
- ◯ Koca Kovacik
- ◯ Kozbudaklar
- ◯ Küçük Kovacik
- ◯ Menteşe
- ◯ Pınarcık
- ◯ Sofular
- ◯ Sorgun
- ◯ Uzunöz
- ◯ Yağcılar
- ◯ Yazıbaşı
- ◯ Yenice
- ◯ Yunuslar
- ◯ Ağlaşan
- ◯ Ahmet Vefik Paşa
- ◯ Aksu
- ◯ Alaçam
- ◯ Babasultan
- ◯ Barakfakih
- ◯ Burhaniye
- ◯ Çataltepe
- ◯ Derekızık
- ◯ Dudaklı
- ◯ Erdoğan
- ◯ Esentepe
- ◯ Gölbaşı
- ◯ Gölcük
- ◯ Gözede
- ◯ Kale
- ◯ Kayacık
- ◯ Kazancı
- ◯ Kozluören
- ◯ Lütfiye
- ◯ Narlıdere
- ◯ Nüzhetiye
- ◯ Orhaniye
- ◯ Osmaniye
- ◯ Saitabat
- ◯ Sayfiye
- ◯ Serme
- ◯ Seymen
- ◯ Soğuksu
- ◯ Şevketiye
- ◯ Turanköy
- ◯ Ümitalan
- ◯ Vanimehmet
- ◯ Yağmurlu
- ◯ Yeni
- ◯ Akköy
- ◯ Altıntaş
- ◯ Aydınpınar
- ◯ Bademli
- ◯ Balabancık
- ◯ Çağrışan
- ◯ Çamlık
- ◯ Çayönü
- ◯ Çekrice
- ◯ Çepni
- ◯ Çınarlı
- ◯ Dedeköy

- ◯ Dereköy
- ◯ Eğerce
- ◯ Emirleryenicesi
- ◯ Esence
- ◯ Evciler
- ◯ Göynüklü
- ◯ Güzelyalı Burgaz
- ◯ Güzelyalı Eğitim
- ◯ Güzelyalı Siteler
- ◯ Güzelyalı Yalı
- ◯ Halitpaşa
- ◯ Hançerli
- ◯ Hasanbey
- ◯ Hasköy
- ◯ Işıklı
- ◯ İpekyayla
- ◯ Kaymakoba
- ◯ Kumyaka
- ◯ Küçükyenice
- ◯ Mesudiye
- ◯ Mirzaoba
- ◯ Mürsel
- ◯ Mütareke
- ◯ Orhaniye
- ◯ Ömerbey
- ◯ Söğütpınar
- ◯ Şükrüçavuş
- ◯ Tirilye
- ◯ Ülkü
- ◯ Yalıçiftlik
- ◯ Yaman
- ◯ Yaylacık
- ◯ Yeni
- ◯ Yörükali
- ◯ Yörükyenicesi
- ◯ Adaköy
- ◯ Adalet
- ◯ Ağaçlı
- ◯ Akarca
- ◯ Akçapınar
- ◯ Alacaat
- ◯ Aliseydi
- ◯ Alpağut
- ◯ Aralık
- ◯ Aşağıbalı
- ◯ Atariye
- ◯ Atatürk
- ◯ Ayaz
- ◯ Bahariye
- ◯ Barış
- ◯ Behram
- ◯ Boğaz
- ◯ Bostandere
- ◯ Bük
- ◯ Camandar
- ◯ Cumhuriyet
- ◯ Çakallar
- ◯ Çaltilibük
- ◯ Çamlıca
- ◯ Çardakbelen
- ◯ Çavuşköy
- ◯ Çeltikçi
- ◯ Çırpan
- ◯ Çiviliçam
- ◯ Çömlekçi
- ◯ Çördük
- ◯ Dallıca
- ◯ Demirdere

- ◯ Demireli
- ◯ Dere
- ◯ Derecik
- ◯ Derekadı
- ◯ Devecikonaği
- ◯ Doğanalan
- ◯ Doğancı
- ◯ Dorak
- ◯ Döllük
- ◯ Durumtay
- ◯ Eskibalçık
- ◯ Eskikızılelma
- ◯ Fevzidede
- ◯ Fındıcak
- ◯ Garipçetekke
- ◯ Güller
- ◯ Güllüce
- ◯ Gündoğdu
- ◯ Güveçdere
- ◯ Güvem
- ◯ Hacıahmet
- ◯ Hacıali
- ◯ Hamidiye
- ◯ Hamidiyeköyü
- ◯ Hamzabey
- ◯ Hisaraltı
- ◯ Işıklar
- ◯ İlyasçılar
- ◯ İncealipınar
- ◯ Kabulbaba
- ◯ Kadirçeşme
- ◯ Kapaklıoluk
- ◯ Karacalar
- ◯ Karaköy
- ◯ Karaoğlan
- ◯ Karaorman
- ◯ Karapınar
- ◯ Kayabaşı
- ◯ Kazanpınar
- ◯ Keltaş
- ◯ Kestelek
- ◯ Killik
- ◯ Kocakoru
- ◯ Kosova
- ◯ Koşuboğazı
- ◯ Kömürcükadı
- ◯ Körekem
- ◯ Kösehoroz
- ◯ Kumkadı
- ◯ Kurşunlu
- ◯ Lalaşahin
- ◯ Lütfiye
- ◯ Melik
- ◯ Muradiyesarnıç
- ◯ Ocaklı
- ◯ Onaç
- ◯ Orhaniye
- ◯ Ormankadı
- ◯ Orta
- ◯ Osmaniye
- ◯ Ovaazatli
- ◯ Ömeraltı
- ◯ Paşalar
- ◯ Sarımustafalar
- ◯ Selimiye
- ◯ Sincansarnıç
- ◯ Soğucak
- ◯ Soğukpınar

- ◯ Söğütalan
- ◯ Sünlük
- ◯ Şapçı
- ◯ Şehriman
- ◯ Şerefiye
- ◯ Şevketiye
- ◯ Şeyhmüftü
- ◯ Taşköprü
- ◯ Taşpınar
- ◯ Tatkavaklı
- ◯ Tepecik
- ◯ Tirnova
- ◯ Uğurlupınar
- ◯ Üçbeyli
- ◯ Vıraca
- ◯ Yalıntaş
- ◯ Yamanlı
- ◯ Yavelli
- ◯ Yaylaçayır
- ◯ Yenibalçık
- ◯ Yenice
- ◯ Yenidere
- ◯ Yenikızılelma
- ◯ Yeşilova
- ◯ Yoncaağaç
- ◯ Yukarıbalı
- ◯ Yumurcaklı
- ◯ Yunus Emre
- ◯ Yüzbaşı Sabribey
- ◯ Züferbey
- ◯ 19 Mayıs
- ◯ 23 Nisan
- ◯ 29 Ekim
- ◯ 30 Ağustos Zafer
- ◯ Ahmet Yesevi
- ◯ Akçalar
- ◯ Alaaddinbey
- ◯ Altınşehir
- ◯ Ataevler
- ◯ Atlas
- ◯ Ayvaköy
- ◯ Badırga
- ◯ Balat
- ◯ Balkan
- ◯ Barış
- ◯ Başköy
- ◯ Beşevler
- ◯ Büyükbalıklı
- ◯ Cumhuriyet
- ◯ Çali
- ◯ Çamlıca
- ◯ Çatalağıl
- ◯ Çaylı
- ◯ Dağyenice
- ◯ Demirci
- ◯ Doğanköy
- ◯ Dumlupınar
- ◯ Ertuğrul
- ◯ Esentepe
- ◯ Fadıllı
- ◯ Fethiye
- ◯ Gökçe
- ◯ Gölyazı
- ◯ Görükle
- ◯ Gümüştepe
- ◯ Güngören
- ◯ Hasanağa
- ◯ Işıktepe

- ◯ İhsaniye
- ◯ İnegazi
- ◯ İrfaniye
- ◯ Kadriye
- ◯ Karacaoba
- ◯ Karaman
- ◯ Kayapa
- ◯ Kızılcıklı
- ◯ Konak
- ◯ Konaklı
- ◯ Korubaşı
- ◯ Kurtuluş
- ◯ Kuruçeşme
- ◯ Kültür
- ◯ Makşempinari
- ◯ Minareliçavuş
- ◯ Odunluk
- ◯ Özlüce
- ◯ Tahtalı
- ◯ Unçukuru
- ◯ Üçevler
- ◯ Üçpınar
- ◯ Ürünlü
- ◯ Yaylacık
- ◯ Yolçatı
- ◯ Yüzüncüyıl
- ◯ 300 Evler
- ◯ Ağaçhisar
- ◯ Akalan
- ◯ Akçabük
- ◯ Altıntaş
- ◯ Argın
- ◯ Balıoğlu
- ◯ Başköy
- ◯ Belenoluk
- ◯ Celepler
- ◯ Çeki
- ◯ Çınarcık
- ◯ Çivili
- ◯ Çöreler
- ◯ Dağgüney
- ◯ Deliballılar
- ◯ Demirci
- ◯ Dere
- ◯ Dündar
- ◯ Emir
- ◯ Erenler
- ◯ Esentepe
- ◯ Eskidanişment
- ◯ Fadil
- ◯ Fevzipaşa
- ◯ Firoz
- ◯ Gazioluk
- ◯ Gazipaşa
- ◯ Girencik
- ◯ Göktepe
- ◯ Göynükbelen
- ◯ Gümüşpınar
- ◯ İkizoluk
- ◯ İsmetpaşa
- ◯ Kabaklar
- ◯ Kadi
- ◯ Karabekirpaşa
- ◯ Karaoğlanlar
- ◯ Karasi
- ◯ Karıncalı
- ◯ Koçu
- ◯ Kusumlar

- ◯ Küçükorhan
- ◯ Letafet
- ◯ Mahaller
- ◯ Nalınlar
- ◯ Orta
- ◯ Osmaniyeçatak
- ◯ Sadağı
- ◯ Semerci
- ◯ Serçeler
- ◯ Sırıl
- ◯ Söğüt
- ◯ Süleymanbey
- ◯ Şükriye
- ◯ Tepecik
- ◯ Topuk
- ◯ Yakuplar
- ◯ Yenidanişment
- ◯ Yeşiller
- ◯ Yörücekler
- ◯ Akharem
- ◯ Arapzade
- ◯ Bayırköy
- ◯ Camiikebir
- ◯ Cihanköy
- ◯ Çakırlı
- ◯ Çeltikçi
- ◯ Dutluca
- ◯ Fatih
- ◯ Fındıklı
- ◯ Gedelek
- ◯ Gemiç
- ◯ Gölyaka
- ◯ Gürle
- ◯ Hamzalı
- ◯ Heceler
- ◯ Hürriyet
- ◯ Karsak
- ◯ Keramet
- ◯ Mahmudiye
- ◯ Muradiye
- ◯ Narlıca
- ◯ Ortaköy
- ◯ Örnekköy
- ◯ Paşapınar
- ◯ Sölöz
- ◯ Tekke
- ◯ Üreğil
- ◯ Yenigürle
- ◯ Yeniköy
- ◯ Yenisölöz
- ◯ Adalet
- ◯ Ahmetbey
- ◯ Ahmetpaşa
- ◯ Akpınar
- ◯ Aksungur
- ◯ Aktarhüssam
- ◯ Alaaddin
- ◯ Alacahırka
- ◯ Alacamescit
- ◯ Alaşarköy
- ◯ Alemdar
- ◯ Alipaşa
- ◯ Altınova
- ◯ Altıparmak
- ◯ Armutköy
- ◯ Atıcılar
- ◯ Avdancık
- ◯ Bağlarbaşı

- ◯ Bağlı
- ◯ Bahar
- ◯ Başaran
- ◯ Büyükdeliller
- ◯ Çağlayan
- ◯ Çaybaşı
- ◯ Çekirge
- ◯ Çeltikköy
- ◯ Çırpan
- ◯ Çiftehavuzlar
- ◯ Çirişhane
- ◯ Çukurcaköy
- ◯ Dağakça
- ◯ Demirkapı
- ◯ Demirtaş Barbaros
- ◯ Demirtaş Cumhuriyet
- ◯ Demirtaş Sakarya
- ◯ Demirtaşpaşa
- ◯ Dereçavuşköy
- ◯ Dikkaldirim
- ◯ Doburca
- ◯ Doğanbey
- ◯ Doğancı
- ◯ Doğanevler
- ◯ Dumlupınar
- ◯ Dürdane
- ◯ Ebu İshak
- ◯ Elmasbahçeler
- ◯ Emek Adnan Menderes
- ◯ Emek Fatih Sultan Mehmet
- ◯ Emek Zekai Gümüşdiş
- ◯ Fatih
- ◯ Gaziakdemir
- ◯ Geçit
- ◯ Gökçeören
- ◯ Gülbahçe
- ◯ Gündoğdu
- ◯ Güneştepe
- ◯ Güneybayir
- ◯ Güneybudaklar
- ◯ Haci İlyas
- ◯ Hamitler
- ◯ Hamzabey
- ◯ Hocaalizade
- ◯ Hocahasan
- ◯ Hüdavendigar
- ◯ Hürriyet
- ◯ Hüseyinalan
- ◯ İbrahimpaşa
- ◯ İnkaya
- ◯ İntizam
- ◯ İsmetiye
- ◯ İstiklal
- ◯ İvazpaşa
- ◯ Karabalçık
- ◯ Karaislah
- ◯ Kavaklı
- ◯ Kayhan
- ◯ Kemerçeşme
- ◯ Kırcaali
- ◯ Kirazlı
- ◯ Kiremitçi
- ◯ Kocanaip
- ◯ Koğukçinar
- ◯ Kuruçeşme
- ◯ Küçükbalıklı
- ◯ Küçükdeliller
- ◯ Kükürtlü

- ◯ Küplüpınar
- ◯ Maksem
- ◯ Mehmet Akif
- ◯ Mollafenari
- ◯ Mollagürani
- ◯ Muradiye
- ◯ Mürseller
- ◯ Nalbantoğlu
- ◯ Namik Kemal
- ◯ Nilüferköy
- ◯ Orhanbey
- ◯ Osmangazi
- ◯ Ovaakça Çeşmebaşı
- ◯ Ovaakça Eğitim
- ◯ Ovaakça Merkez
- ◯ Ovaakça Santral
- ◯ Panayır
- ◯ Pınarbaşı
- ◯ Reyhan
- ◯ Sakarya
- ◯ Santral Garaj
- ◯ Seç
- ◯ Seferışıklar
- ◯ Selamet
- ◯ Selçukgazi
- ◯ Selimiye
- ◯ Sırameşeler
- ◯ Soğanlı
- ◯ Soğukkuyu
- ◯ Soğukpinar
- ◯ Süleymaniye
- ◯ Şehabettinpaşa
- ◯ Şehreküstü
- ◯ Tahtakale
- ◯ Tayakadın
- ◯ Tuna
- ◯ Tuzaklı
- ◯ Tuzpazarı
- ◯ Ulu
- ◯ Uluçam
- ◯ Veysel Karani
- ◯ Yahşibey
- ◯ Yenibağlar
- ◯ Yeniceabat
- ◯ Yenikaraman
- ◯ Yenikent
- ◯ Yeşilova
- ◯ Yiğitali
- ◯ Yunuseli
- ◯ Zafer
- ◯ Afşar
- ◯ Akbıyık
- ◯ Akçapınar
- ◯ Akdere
- ◯ Alaylı
- ◯ Ayaz
- ◯ Aydoğdu
- ◯ Barcın
- ◯ Beypinar
- ◯ Burcun
- ◯ Cihadiye
- ◯ Çamönü
- ◯ Çardak
- ◯ Çayır
- ◯ Çayırlı
- ◯ Çelebi
- ◯ Çeltikçi
- ◯ Çiçeközü

- ◯ Demirboğa
- ◯ Dereköy
- ◯ Ebeköy
- ◯ Eğerce
- ◯ Fethiye
- ◯ Gökçesu
- ◯ Gündoğan
- ◯ Günece
- ◯ Hayriye
- ◯ Hıdırbali
- ◯ İncirli
- ◯ Karaamca
- ◯ Karabahadır
- ◯ Karacaahmet
- ◯ Karacaali
- ◯ Karaköy
- ◯ Karasıl
- ◯ Kavaklı
- ◯ Kıblepınar
- ◯ Kızılhisar
- ◯ Kızılköy
- ◯ Kirazlıyayla
- ◯ Koyunhisar
- ◯ Kozdere
- ◯ Köprühisar
- ◯ Kurtuluş
- ◯ Mahmudiye
- ◯ Marmaracık
- ◯ Mecidiye
- ◯ Menteşe
- ◯ Orhaniye
- ◯ Osmaniye
- ◯ Papatya
- ◯ Paşayayla
- ◯ Reşadiye
- ◯ Selimiye
- ◯ Söylemiş
- ◯ Subaşı
- ◯ Süleymaniye
- ◯ Tabakhane
- ◯ Terziler
- ◯ Toprakdere
- ◯ Toprakocak
- ◯ Ulucami
- ◯ Yarhisar
- ◯ Yazılı
- ◯ Yeni
- ◯ Yenigün
- ◯ Yeniköy
- ◯ Yıldırım
- ◯ Yılmaz
- ◯ Yolören
- ◯ Yüzüncüyıl
- ◯ 52 Evler
- ◯ 75. Yil
- ◯ Akçağlayan
- ◯ Anadolu
- ◯ Arabayatağı
- ◯ Bağlaraltı
- ◯ Balaban
- ◯ Baruthane
- ◯ Beyazıt
- ◯ Cumalıkızık
- ◯ Çınarönü
- ◯ Davutdede
- ◯ Davutkadı
- ◯ Değirmenlikızık
- ◯ Değirmenönü

	○ Demetevler
	○ Duaçınarı
	○ Eğitim
	○ Emirsultan
	○ Erikli
	○ Ertuğrulgazi
	○ Esenevler
	○ Fidyekızık
	○ Güllük
	○ Hacıseyfettin
	○ Hacivat
	○ Hamamlıkızık
	○ Hocataşkın
	○ İsabey
	○ Kaplıkaya
	○ Karaağaç
	○ Karamazak
	○ Karapınar
	○ Kazim Karabekir
	○ Kurtoğlu
	○ Maltepe
	○ Mehmet Akif Ersoy
	○ Mevlana
	○ Meydancık
	○ Millet
	○ Mimarsinan
	○ Mollaarap
	○ Musababa
	○ Namazgah
	○ Ortabağlar
	○ Piremir
	○ Samanlı
	○ Selçukbey
	○ Selimzade
	○ Sıracevizler
	○ Sinandede
	○ Siteler
	○ Şirinevler
	○ Şükraniye
	○ Teferrüç
	○ Ulus
	○ Umurbey
	○ Vakıf
	○ Vatan
	○ Yavuz Selim
	○ Yediselviler
	○ Yenimahalle
	○ Yeşil
	○ Yeşilyayla
	○ Yıldırım
	○ Yiğitler
	○ Yunusemre
	○ Zeyniler
	○ Zümrütevler
	parent = ${district}
What is the source of the sample?	○ Muhtar ○ Through another farmer ○ Through Agricultural Cooperative ○ Other
Q1. Enter ID number of the farm you are visiting from the list of farms obtained from village head:	${sourcesample} = 1
Q1a. Enter the participant's name:	${sourcesample} > 1
Q2. Address/location	

Q4. This is your _____attempt to speak with this farmer.	○ First ○ Second ○ Third
Q5. Is an eligible respondent available for an interview now? *Eligible respondents are co-owners, tenants, or managers who are currently operating this farm; all individuals who can make final hiring decisions.*	○ Yes ○ No
Q6. What is the reason? *"Not Available" includes both no time and not home.*	${q5} = 2 ○ No eligible respondent available, revisit ○ No one at home, revisit ○ Any eligible respondents are on extended absence. ○ Other (Please Specify)
Q6: Please, specify	${q6} = 98
Q7. This was the third visit attempt and no one could be reached. Please inform your supervisor.	(${q6} = 1 or ${q6} = 2) and ${q4} = 3 ○ Yes ○ No
Q8. This farmer cannot be interviewed. Please politely end the interview and inform your supervisor.	name=1 ${q6} = 3 ○ Yes ○ No
Q9. Attempt to make an interview appointment or learn when an eligible respondent might be available. Record any notes on availability for interview here. Hello! My name is ${enum_name} . This survey is part of a research project of the International Bank of Reconstruction and Development, also known as the World Bank. I work for UDA Consulting. UDA Consulting is conducting this survey on behalf of the World Bank. We carry out ths survey to learn about farm operations and farm workers in Turkey. The findings may inform programs to support farmers and workers. This survey visit will take approximately 25-30 minute of your time. You can freely decide to participate. If you do decide to take part, we will compensate you for your time with a small gift at the end of this visit " Some of the data we are collecting refers to you as a person, such as the farm location or your name and phone number. Any such personal information will not be accessible to anyone outside of UDA Consulting and the World Bank. Your personal information will be separated from your survey responses and stored on protected World Bank computers. The World Bank would like to keep your contact information for 2 years or until the research is completed, and the need to hold your information will be regularly reviewed. Your personal information will be removed as soon as the research is finished. In all cases, no one outside of the research team will be able to link your survey responses to your person or this farm. For any future data collection, the World Bank will contact you first, and you are free to decline participation. If you would like the World Bank to remove your personal information at any point in the future, you can contact Laurent Bossavie at The World Bank. Participation in this survey is voluntary and you can choose not to answer any individual questions. However, we hope that you will participate in this survey since your experience is important. At this time, do you want to ask me anything about the survey? Please let me know if you consent to participating in this study.	name=1 (${q6} = 1 or ${q6} = 2) and (${q4} = 1 or ${q4} = 2)
Q5b. Did the farmer provide consent?	○ Yes ○ No
Q10. For this survey, we would like to speak with farmers who employ workers for a salary. Please tell me yes or no for each statement I'm going to read you. *Read answers aloud. Tick all that apply. Note: needs to be a salaried worker, i.e. the farmer paid them a daily or monthly wage. Parttime work that totals 3 months is sufficient. Select all that apply.*	☐ In one of the last three years, this farm employed one or more farm workers for a salary for 3 full months or more in total. ☐ This farm will be employing at least one farm worker for a salary for three months or more in total in the coming year.

| | ☐ This farm exclusively produces animal products. |
| | ☐ None of the above |

	(selected(${q10}, '1') or selected(${q10}, '2')) and not(selected(${q10}, '3'))
Q11. Are all salaried workers immediate family members of the farm owner? *Immediate family members are siblings, children, or parents, brother/sister in law,son/daughter in law and parents in law*	◯ Yes ◯ No

	${q11} = 1 or (selected(${q10}, '3') and ${calq10} = 1) or (selected(${q10}, '99') and ${calq10} = …
	name=1
Q12. This farmer is not eligible for interview. Please politely end the interview and inform your supervisor.	◯ Yes ◯ No

Q16. Who runs this farm? Please tell me the names of all co-owners, tenants, sharecroppers, or managers who are currently involved in managing this farm and can make final hiring decisions (including yourself) *Please include both spouses if they co-own the farm. Include the son/daughter and/or son/daughter in law or any (younger) relatives if they run the farm for or with the (older) owner. Confirm with the owner if there is any uncertainty who is responsible for operating the farm. In a managed farm, the respondent is the farm manager. If the owner is a company, please enter this information as well.*	

Q16a. What is the name and surname or company name of this farmer # ${pid} *Please enter the respondent's information first*	

Q17. What is ${own_name} exact role on the farm?	◯ (Co)Owner ◯ (Co)Tenant or (Co)Sharecropper ◯ Manager employed by the farmer for a salary ◯ Company owner ◯ Co-managing family member of the owner/tenant/sharecropper/manager ◯ Other (specify)

	${q17} = 98
Q17: Please, specify	

	${q17} = 5
Q18. Does ${own_name} have a family relationship with the owner?	◯ Spouse ◯ Son or daughter ◯ Son-in-law or daughter-in-Law ◯ Grandchild ◯ Parent ◯ Parent-in-Law ◯ Brother or sister ◯ Grandparent ◯ Other relative ◯ No family relationship

Q19. Are there any other partners/owners you want to add? *Please tell me the names of all co-owners, tenants, sharecroppers, or managers who are currently involved in managing this farm and can make final hiring decisions (including yourself).*	◯ Yes ◯ No

Q20. Surveyor: Please establish whether the farm is operated by a (family) owner or managed by a tenant or sharecropper who lives on or near the farm ("a family farm"), or a professional manager ("a managed farm", possibly owned by a company).	◯ Family farm: tenant ◯ Family farm: sharecropper ◯ Family farm: owner ◯ Managed farm: managed by employee for absent farmer ◯ Other (specify)

	${q20} = 98
Q20: Please, specify	

Please choose how you want to enter age: ${respondent_name}	◯ Date of birth ◯ Approximate age

Q21. What is your date of birth? *Date of birth*	${s_date} = 1 Day: Month: Year:
Q22. What is your approximate age?	${s_date} = 2
Q23. Gender ${respondent_name}	○ Male ○ Female
Q24. We would like to obtain your phone number for the sole purpose of following up *Please enter the 10-digit phone number without deleting the area code. If the interviewee does not want to provide a phone number, please enter "9999999999".*	
Q25. We would like to obtain your additional phone number for the sole purpose of following up *Please enter the 10-digit phone number without deleting the area code. If the interviewee does not want to provide a phone number, please enter "9999999999".*	${phone_main} != '9999999999'
Q26. What is your highest completed level of education? ${respondent_name}	○ Illiterate ○ Literate without diploma ○ Daycare/kindergarden ○ Primary school (5 years) ○ Middle school (8 years) ○ High school ○ Vocational or technical high school ○ Open Education 2 years ○ 2-3 years higher educational institution ○ Open Education 4 years ○ 4 years higher educational institution/faculty ○ Master ○ Doctorate
Q27. What is the ${respondent_name} main language? *Do not ask aloud if native Turkish speaker.*	○ Turkish ○ Arabic ○ Dari ○ Pashtu ○ Kurdish ○ Other (specify)
Q27: Please, specify	${q27} = 98
Q60. Is this farmer registered with the SGK as an employer? *You may have SGK registration for yourself for retirement and healthcare purposes, but not as an employer to hire a worker formally. In this case please choose "No".*	○ Yes ○ No
Q61. Besides the family members already mentioned, do any other immediate family members of the farmer work on this farm?	○ Yes ○ No
Q62. How many immediate family members work on this farm? *Note that this may be a duplicate question with the earlier list of respondents if all family members who work here are also considered co-owners - just enter total number here even if duplicate.*	${q61} = 1
Q63. Outside of the immediate family members we already covered,did any people work on this farm in 2021 who were not paid a salary for their work? *They may be paid in kind or allowed to live on the farm in exchange. These may be family members or friends. Family members or friends may also be paid a salary. In this case, please include them under the employed workers below.*	○ Yes ○ No
Q64. How many such workers work on the farm?	${q63} = 1

Q65. Other than the individuals we already covered, did any people work on this farm in 2021 who were paid a salary for their work and worked on the farm for a total of 3 months or more ? We will call these workers "longterm workers". *Include all who completed at least a full three months in 2021. Do not include workers who work regularly but only for short periods, e.g. a few days per month that do not add up to 3 months. If the respondent is a hired farm manager, make sure he or she is included here.*	○ Yes ○ No	
Q67. Of your longterm workers, how many do you hire through a broker? *If necessary, remind them that a "longterm worker" is a worker who worked at the farm 3 months or more.*		${q65} = 1
Q68. What was the lowest salary for these longterm workers hired through a broker? *Record daily wage.*		${q67} > 0
The daily wage paid is less than 50 TL. Please confirm!	○ Yes ○ No	${q68} < 50 name = 1
The daily wage paid is over than 200 TL. Please confirm!	○ Yes ○ No	${q68} > 200 name = 1
Q69. What was the highest salary for these workers hired through a broker? *Record daily wage*		${q67} > 0
The daily wage paid is less than 50 TL. Please confirm!	○ Yes ○ No	${q69} < 50 name = 1
The daily wage paid is over than 200 TL. Please confirm!	○ Yes ○ No	${q69} > 200 name = 1
Q70. Of your longterm workers, how many do you hire directly, that is, you do not use a broker and deal with them in person? *Again, ensure farm manager is included here. If necessary, remind them that a "long term worker" is a worker who worked at the farm 3 months or more.*		${q65} = 1
ERROR! Although it is said to employ long-term workers, the total number of long-term workers is 0. Go back and check!	○ Yes ○ No	${q65} = 1 and ${cal_long} = 0 False
Q71. Some farm workers work only for short periods of time in a given year, i.e. under 3 months. Did you hire any such workers in 2021, e.g. during harvest? *If necessary, remind them that a "longterm worker" is a worker who worked at the farm 3 months or more. Shortterm workers is anyone else.*	○ Yes ○ No	
Q72. How many short term workers did you hire in 2021?		${q71} = 1
Q72a. What was the average working number of days per short term worker in 2021?		${q71} = 1
Q72b. How much did you pay for all short term workers in 2021?		${q71} = 1
Q73. What was the lowest salary the farm paid for this type of short term or seasonal labor? *Record daily wage.*		${q71} = 1
The daily wage paid is less than 50 TL. Please confirm!	○ Yes ○ No	${q73} < 50 name = 1
The daily wage paid is over than 200 TL. Please confirm!		${q73} > 200

	○ Yes ○ No name = 1
Q74. What was the highest salary the farm paid for this type of short term or seasonal labor? *Record daily wage.*	${q71} = 1
The daily wage paid is less than 50 TL. Please confirm!	${q74} < 50 ○ Yes ○ No name = 1
The daily wage paid is over than 200 TL. Please confirm!	${q74} > 200 ○ Yes ○ No name = 1
Q75. Do you use a broker to hire any of your short term workers?	${q71} = 1 ○ Yes ○ No
Q77. How do you pay the broker? *Please find out what the agreement between the farmer and the broker is.*	${q75} = 1 or ${q67} > 0 ○ Broker takes commission from worker's wage ○ Fixed amount per team/worker ○ Fixed amount per day/week ○ Fixed amount per season/harvest/year ○ Other (specify)
Q77: Please, specify	${q77} = 98
Q65b. Are there specific tasks or jobs on the farm that last in total longer than 3 months and that the same worker could potentially do instead of several short-term workers?	${q71} = 1 ○ Yes ○ No ○ Unsure/Don't know
Q65c. How many longterm workers could work in these jobs?	${q65b} = 1
Q65d. How many workers are working on these jobs	${q65b} = 1
### ATTENTION TO THE INTERVIEWER: Total long-term workers: ${cal_long}	${cal_long} > 0
### Now i would like to learn more about the people who worked longterm on this farm in 2021 for a salary *read out loud.*	${cal_long} > 0
Q78. Do you provide any other benefits, services, gifts, or payments (and incur costs) for your workers besides the salaries they receive? *Please tick all that apply. Probe if the farmer cannot name any.*	${cal_long} > 0 ☐ Transportation ☐ Accommodation ☐ WC&Shower facilities ☐ Food ☐ Share from the products ☐ Clothing ☐ Gifts in weddings/childbirths ☐ Gifts in eids ☐ Health insurance ☐ Accident insurance ☐ Loans or advances ☐ Family assistance (more money every few months for "family") ☐ Other (Please Specify) ☐ None, not provide
Q78: Please, specify	selected(${q78}, '98')

Interviewers Note: Please make a list of their longterm, workers. If they have more than 10, ask them to report the 10 that have worked with them the longest. *not read out loud.*	${cal_long} > 0
Q79a. Did you hire this worker directly without any broker?	○ Yes ○ No
Q79. I would like to be able to refer to the worker but I do not need their full name. Could you tell me the worker's first name, or initials? # ${pid_worker} *Please do not record surnames. If the farmer wonders why you need to know, explain that it's just a short cut to be able to talk about this worker later*	
Q80. What is ${worker_name} gender?	○ Male ○ Female ○ Don't know
Q81. What is ${worker_name} age? *Please enter "999" if age not known.*	
Q82. Where is ${worker_name} from? *don't press them if they say "don't know", but ask if the worker is Syrian or Afghan if the farmer says "not from Turkey"*	○ Worker is Turkish ○ Worker is Syrian ○ Worker is Afghan ○ Worker is from another country (specify) ○ Worker is not from Turkey but country of origin unknown ○ I don't know ○ Refused
Q82: Please, specify another country	${q82} = 4
Q93. Have you registered ${worker_name} with the SGK?	○ Yes ○ No ○ Refused
I will now ask you more detailed questions about one of your workers. My tablet will choose one name from your list. I would like to learn more about the worker ${r_worker_name} For each of the following questions, please remember that your answers are confidential and will not be shared with anyone outside the research team. What you say will not be connected to your person or your worker. We ask these questions to many farmers all over Bursa to understand hiring on farms in general.	${q27} = 1
Q83. How well is ${r_worker_name} able to understand a conversation about farm work in Turkish? *please read options aloud*	○ Excellent, understands exactly ○ Fair, understands most ○ Basic, understands simple requests or gets by with other workers translating ○ None, requires translation
Q84. How well is ${r_worker_name} able to understand a conversation about farm work in your preferred language? *please read options aloud*	${q27} > 1 ○ Excellent, understands exactly ○ Fair, understands most ○ Basic, understands simple requests or gets by with other workers translating ○ None, requires translation
Q85. How many days has ${r_worker_name} worked at this farm in the last calendar year? *Please convert to days if they give you months or weeks.*	${q85} < 60
${r_worker_name} has worked less than 60 days. Please confirm! 2022?	○ Yes ○ No

Q86. How many days do you expect ${r_worker_name} to work at this farm in

```
name = 1
```

Enter 0 if worker is not working at this farm anymore.	
Q87. In a typical work month last year, how many days per week was ${r_worker_name} working on your farm? *This question is about how much time per week the worker spent at the farm when he or she was employed there; was it a part time or full time job?*	
Q88. In a typical month, how many hours per work day was ${r_worker_name} working?	
Q89. Which tasks does ${r_worker_name} primarily work on? *Check up to three most important tasks. These may not be the tasks that take up the most time; for example, the worker may be the only one who can complete repairs.*	☐ Packaging ☐ Operation of vehicles or operational equipment ☐ Pruning ☐ Hoeing ☐ Farm or worker management ☐ Non-farm tasks such as child care or building repairs ☐ Sowing and planting ☐ Sifting ☐ Fertilization ☐ Harvesting and picking ☐ Blending ☐ Record keeping (manual or computer) ☐ Brokerage ☐ Machinery or vehicle repair ☐ Marketing ☐ Pesticide application ☐ Operation of irrigation systems ☐ Loading for transport ☐ Seeding ☐ Processing of products ☐ Other (Please Specify)
Q89: Please, specify	`selected(${q89}, '98')`
Q90. How many seasons has ${r_worker_name} worked at this farm, including all of 2021?	
Q91. How did you find ${r_worker_name} when he/she was hired?	◯ Recommendation from a family member ◯ Recommendation from another farmer (not a family member) ◯ Recommendation from another worker (not a family member) ◯ Worker contacted me ◯ Farmer reached out to a worker known to him ◯ Through a broker ◯ Other (Please Specify)
Q91: Please, specify	`${q91} = 98`
Q92. What was/is ${r_worker_name} salary? *Amount*	important it is for the job this worker is doing. 1 is "irrelevant", 5 is "decisive". As
Q92a. Earned salary period?	
Q96. From your answers, the total salary paid to ${r_worker_name} in 2021 was approximately ${cal_salary} . Does this sound correct?	
Q97. How many seasons of experience does ${r_worker_name} have with the tasks he/she performs?	

For each criteria that I'm now reading to you, please rate from 1 to 5 how

○ Day
○ Week
○ Month
○ Year
○ End of harvest

○ Yes
○ No

an example, the first criteria is age. Suppose you really need a young worker in this job, then you might give a 4 or 5 for "age".	
Q98a. The age of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98b. The gender of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98c. The height and body size of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98d. The ability to communicate well of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98e. The technical skill and experience of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98f. The reliability: shows up at work and on time, follows instructions of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98g. The available times for to work (days or hours, overall length, etc.) of a worker in ${r_worker_name} role are.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98h. The ability to drive a car or operate farm equipment of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98i. The willingness to work with SGK registration of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important ◯ 4- Very important, but not decisive for hiring ◯ 5- Decisive for hiring the worker
Q98j. The ability to work well with others of a worker in ${r_worker_name} role is.... *Read options aloud:*	◯ 1- Irrelevant ◯ 2- Somewhat important, but other criteria matter more ◯ 3- Medium important

	○ 4- Very important, but not decisive for hiring ○ 5- Decisive for hiring the worker
Q98k. The ability to work fast without taking many breaks hard of a worker in ${r_worker_name} role is.... *Read options aloud:*	○ 1- Irrelevant ○ 2- Somewhat important, but other criteria matter more ○ 3- Medium important ○ 4- Very important, but not decisive for hiring ○ 5- Decisive for hiring the worker
Q100. Keeping all the criteria we just discussed in mind, on a scale from 1 to 5, please rate how good a fit ${r_worker_name} is for the job he or she is doing on your farm. 1 means a poor fit, while 5 is a perfect fit."	○ 1 (Poor fit) ○ 2. ○ 3. ○ 4. ○ 5 (Perfect fit)
Q95. What are the reasons you decided not to register ${r_worker_name} with SGK?	`${r_worker_sgk} = 2` ☐ Workers are refugees who have no exemption from the work permit ☐ Worker are refugees not registered in Bursa ☐ Workers will not want to because they may lose other social benefits ☐ Workers will not want to for other reasons ☐ Would have to pay a higher wage ☐ Formalization is too complicated ☐ Worry about government scrutiny of my business ☐ I don't see benefits to formal employment ☐ The hours or work conditions are too restrictive ☐ The kinds of workers I can hire are too restrictive ☐ I don't see the sustainability of sufficient revenue to cover SGK related expenses ☐ Worry about taxes, fees, or fines to pay (other than SGK) ☐ Other (Please Specify)
Q95: Please, specify	`selected(${q95}, '98')`
Q103. When you need to interact with authorities about your farm/business to perform an official transaction, do you do it yourself or get support from someone else?	○ I do it myself ○ I get support
Q104. From whom do you get support for official transactions? *Please tick all that apply. Probe if the farmer cannot name any.*	`${q103} = 2` ☐ ACC's staff ☐ Public institution employee ☐ A friend or another farmer ☐ A family member ☐ A farm worker who works for me ☐ An accountant or lawyer I hired ☐ Other (Please Specify)
Q104: Please, specify	`selected(${q104}, '98')`
Q105. Do you have an accountant you work with regularly?	○ I have a regular accountant ○ I have an accountant I use occasionally ○ I do not have an accountant ○ Other (Please Specify)
Q105: Please, specify	`${q105} = 98`
Q106. From 1 to 5, How familiar are you with the official procedures required to register a native worker with the SGK?	*read out loud.*

○ Not at all
○ I heard about it
○ I somewhat know
○ I mostly know
○ I know all the steps

Question	Response	Condition
Q107. From 1 to 5, How familiar are you with the official procedures required to register a refugee worker with the SGK? *read out loud.*	○ Not at all ○ I heard about it ○ I somewhat know ○ I mostly know ○ I know all the steps	
Q108. Have you ever gone through the process of registering a native worker with SGK?	○ Yes ○ No	`${r_worker_sgk} > 1 and ${r_worker_nation} = 1`
Q108a. Have you ever gone through the process of registering a refugee worker with SGK?	○ Yes ○ No	`${r_worker_sgk} > 1 and ${r_worker_nation} > 1`
Q109. In your opinion, what are some of the advantages or benefits of registering a worker with SGK? *Do not read the list out loud. Tick all the farmer mentions.*	☐ Health insurance ☐ Occupational accidents and illness insurance ☐ Complying with job safety protocols ☐ Contributing to worker's pension ☐ Unemployment insurance ☐ Other (Please Specify) ☐ No advantages/benefits	
Q109: Please, specify		`selected(${q109}, '98')`
Q110. Do you know how much your labor cost per worker will increase when you register a worker? Let us say you are paying 200 TL per day to a worker. By registering this worker with SGK, how much do you need to spend in total when you include all costs (wages, taxes and other expenses)?	○ 200-224 TL ○ 225-249 TL ○ 250-274 TL ○ 275-299 TL ○ 300-324 TL ○ 325-349 TL ○ 350-374 TL ○ 375-400 TL ○ More than 400 TL ○ I don't know	
Q120. As you may know, the World Bank is working on programs that are designed to help both farmers and workers, including refugees. Some of these programs might provide direct financial support to farmers who register workers with SGK.		
We are now going to provide you with some information that you may or may not be aware of about the registration of workers with SGK.		`${r_contenta} = 1 and ${r_contentb} = 1`
Q121a. Employers can only register a worker with SGK if he/she is 18 or older. Refugees must be registered in employer's province and the employer has to apply for a work permit. Workers who are registered with SGK cannot work on national holidays or more than 45 hours per week. For each 6 consecutive days of work, workers earn the right for one paid vacation day.		`${r_contenta} = 1`
Q121b. Registration provides insurance for farmers against occupational illnesses and accidents. For example, in case of a severe accident on the farm, if the worker is registered with the SGK, the SGK will cover any damages caused by the worker's negligence in the accident. This damage has to be covered by the farmer if the worker is not registered with the SGK." Registered workers also have access to health insurance, unemployment insurance, and pension rights.		`${r_contentb} = 1`
Q122. We are now doing an exercise to learn about your hiring preferences.. The exercise is hypothetical, but I would like you to treat it as if it were real. Please imagine what you would do if you were offered to participate in a World Bank farm employment program. Imagine a program where you, the farmer, receive support to hire a worker who is registered with SGK. You can receive support for 3-12 months of salary that you can use for one or more of your workers.		
Q123. First, please think about the longterm workers we talked about before. Would any one of them be interested in registering with SGK and you would be		`${cal_long} > 0`

in principle willing to do that for her/him? List of all workers not registered : ${all_withoutsgk} Name of worker who was selected for collecting detailed information: ${r_worker_name} *If they name several workers, pick one - if worker from before IS included, use that worker. If worker from before is NOT included, use worker they had the longest.*	○ Worker from detailed interview before ○ Another longterm worker from list above ○ None of these workers
Q123a. Please write selected worker's first name	${q123} = 2
Q124. What is the daily salary of ${other_name} ?	${q123} = 2
Q124a. Recall that the daily salary of ${r_worker_name} is ${per_day}	${q123} = 1
Q125. Could you think of any job on the farm for which you would be willing to hire a new worker with SGK registration?	${q123} = 3 or ${cal_long} = "" ○ Yes ○ No I can't think of any job on the farm.
Q126. Suppose the World Bank would cover the entire salary and all social security payments for any worker who works with you three months or more in total. Would you then be willing to hire with SGK registration?	${q125} = 2 ○ Yes, I would want to hire. ○ No, I don't want to hire.
Q127. What are the reasons you do not want to register any worker?	${q126} = 2 ☐ Workers are refugees who have no exemption from the work permit ☐ Worker are refugees not registered in Bursa ☐ Workers will not want to because they may lose other social benefits ☐ Workers will not want to for other reasons ☐ Would have to pay a higher wage ☐ Formalization is too complicated ☐ Worry about government scrutiny of my business ☐ I don't see benefits to formal employment ☐ The hours or work conditions are too restrictive ☐ The kinds of workers I can hire are too restrictive ☐ I don't see the sustainability of sufficient revenue to cover SGK related expenses ☐ Worry about taxes, fees, or fines to pay (other than SGK) ☐ Other (Please Specify)
Q127: Please, specify	selected(${q127}, '98')
Q128. What is the typical daily salary of the type of worker you are thinking of hiring?	about each offered subsidy level
Q129. If you hire this worker with SGK registration, you will receive a monthly payment reimbursing part of your cost. The reimbursement will cover all premium payments and taxes you will pay to the government, plus a portion of the salary you pay to the worker. The contract needs to be at least 3 months long and the payments last up to 12 months, after which you have to cover any costs from the contract yourself.	
Q130a. In 2022, please recall that for SGK registration, the worker's salary must be at least the minimum wage, or around 142 TL per day. In addition, there will be about 54 TL in social security payments and taxes per day. If you employ a worker full time in a month, the worker's monthly salary must be at least 4253 TL. In addition, there will be about 1626 TL in social security payments and taxes per month.	
Q130b. You reported that ${cal_name} will receive a net salary of ${worker_salary} TL per day. With this salary, there will be about ${cal_sgk} TL in social security payments and taxes per day. I will now ask you a series of questions in which I will offer you different payments from the World Bank program to write a formal contract for this worker. Please consider each question on its own merit and think carefully	

```
${q123} = 3
```

```
${q124} < 143 or ${q128} < 143 or
               ${per_day} < 143
```

```
${q128} > 142
```

Q131_1. Please keep in mind that you first have to pay the worker and make payroll payments to the government, and then later you get reimbursed from the program.	`${r_contentc} = 1`
Q131_2. Please answer with either "yes" or "no". Yes indicates that you would accept this payment and will write a formal work contract for ${cal_name} /[position from above]. "No" means that you would not accept this payment and do not want to write a formal contract.	
Q131a. Suppose the World Bank program covers all social security and tax contributions, and in addition, 20% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p20} of that amount.	○ Yes ○ No ○ Quit
Q131b. Suppose the World Bank program covers all social security and tax contributions, and in addition, 40% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p40} of that amount.	○ Yes ○ No ○ Quit
Q131c. Suppose the World Bank program covers all social security and tax contributions, and in addition, 50% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p50} of that amount.	○ Yes ○ No ○ Quit
Q131d. Suppose the World Bank program covers all social security and tax contributions, and in addition, 60% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p60} of that amount.	○ Yes ○ No ○ Quit
Q131e. Suppose the World Bank program covers all social security and tax contributions, and in addition, 80% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p80} of that amount.	○ Yes ○ No ○ Quit
Q131a. Suppose the World Bank program covers all social security and tax contributions, and in addition, 80% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p80} of that amount.	○ Yes ○ No ○ Quit
Q131c. Suppose the World Bank program covers all social security and tax contributions, and in addition, 60% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p60} of that amount.	○ Yes ○ No ○ Quit
Q131d. Suppose the World Bank program covers all social security and tax contributions, and in addition, 50% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p50} of that amount.	○ Yes ○ No ○ Quit
Q131e. Suppose the World Bank program covers all social security and tax contributions, and in addition, 40% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p40} of that amount.	○ Yes ○ No ○ Quit
Q131f. Suppose the World Bank program covers all social security and tax contributions, and in addition, 20% of the worker's salary. This means you pay a total of approximately ${total_cost} per day, but the program covers ${s_p20} of that amount.	○ Yes ○ No ○ Quit
This set of questions was hypothetical. However, a real program might be implemented with a fixed level of subsidies. I am now letting the tablet pick one of the levels we asked you about randomly. [coin.gif]	
Q131_2a. The level of subsidy picked is 20%. Your decision at this level was ${q131a_v1_name}. Could you confirm for me: if you were offered a subsidy of 20% for real, for how many months would you hire a worker at this subsidy level?" ATTENTION TO THE INTERVIEWER: "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	`${selectedat1} = 'q131a_v1'`
Q131_2b. The level of subsidy picked is 40%. Your decision at this level was ${q131d_v1_name}. Could you confirm for me: if you were offered a subsidy of 40% for real, for how many months would you hire a worker at this subsidy	`${selectedat1} = 'q131d_v1'`

level?" <u>ATTENTION TO THE INTERVIEWER</u> : "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	
Q131_2c. The level of subsidy picked is 50%. Your decision at this level was ${q131e_v1_name}. Could you confirm for me: if you were offered a subsidy of 50% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131b_v1'
Q131_2d. The level of subsidy picked is 60%. Your decision at this level was ${q131b_v1_name}. Could you confirm for me: if you were offered a subsidy of 60% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131e_v1'
Q131_2e. The level of subsidy picked is 80%. Your decision at this level was ${q131g_v1_name}. Could you confirm for me: if you were offered a subsidy of 80% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131g_v1'
Q131_2f. The level of subsidy picked is 80%. Your decision at this level was ${q131g_v2_name}. Could you confirm for me: if you were offered a subsidy of 80% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131g_v2'
Q131_2h. The level of subsidy picked is 60%. Your decision at this level was ${q131e_v2_name}. Could you confirm for me: if you were offered a subsidy of 60% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> `The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131e_v2'
Q131_2i. The level of subsidy picked is 50%. Your decision at this level was ${q131b_v2_name}. Could you confirm for me: if you were offered a subsidy of 50% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131b_v2'
Q131_2j. The level of subsidy picked is 40%. Your decision at this level was ${q131f_v2_name}. Could you confirm for me: if you were offered a subsidy of 40% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131d_v2'
Q131_2k. The level of subsidy picked is 20%. Your decision at this level was ${q131d_v2_name}. Could you confirm for me: if you were offered a subsidy of 20% for real, for how many months would you hire a worker at this subsidy level?" <u>ATTENTION TO THE INTERVIEWER:</u> "The farmer can choose a number between 3-12 (months). If the farmer does not want to hire a worker, please write 0."	${selectedat1} = 'q131f_v2'
Q40. What is the total area of this farm? *In decar*	
Q41. Are you a member of the ACC?	○ Yes ○ No
Q42. Which were your most important agricultural crops that you have grown in 2021? If this is more than 1 or two crops, please name the crops that make up 80% of your farm revenue. *Make sure to cover all seasons.*	☐ Almond ☐ Apple ☐ Apricot ☐ Blackberry ☐ Cherry

- ☐ Chestnut
- ☐ Cranberry
- ☐ Cucumber
- ☐ Fig
- ☐ Grape
- ☐ Hazelnut
- ☐ Kiwi
- ☐ Medlar
- ☐ Melon
- ☐ Nectarine
- ☐ Olive
- ☐ Peach
- ☐ Pear
- ☐ Persimmon
- ☐ Pine nuts
- ☐ Plum
- ☐ Pumpkin
- ☐ Quince
- ☐ Raspberry
- ☐ Strawberry
- ☐ Walnut
- ☐ Watermelon
- ☐ Jujube
- ☐ Orange
- ☐ Mulberry
- ☐ Artichoke
- ☐ Arugula
- ☐ Bean
- ☐ Beet
- ☐ Broad bean
- ☐ Broccoli
- ☐ Cabbage
- ☐ Cauliflower
- ☐ Chickpea
- ☐ Cress
- ☐ Dill
- ☐ Eggplant
- ☐ Leek
- ☐ Lettuce
- ☐ Okra
- ☐ Onion
- ☐ Parsley
- ☐ Pea
- ☐ Pepper
- ☐ Potato
- ☐ Purslane
- ☐ Radish
- ☐ Roman bean
- ☐ Spinach
- ☐ Sugar beet
- ☐ Tomato
- ☐ Carrot
- ☐ Celery
- ☐ Lolo rosso
- ☐ Mint
- ☐ Chard
- ☐ Basil
- ☐ Other (Please Specify)
- ☐ None

Q42: Please, specify	`selected(${q42}, '98')`

Q43. Do you cultivate ${c_name} in greenhouses?	`${c_code} = 8 or ${c_code} = 15 or ${c_code} = 22 or ${c_code} = 25 or ${c_code} = 33 or ${c_code} …` ○ Yes, all of it ○ Yes, some of it ○ No

Q44. How did you sell your harvest of ${c_name} last year (2021)?	☐ To the ACC through a Contract Farming Contract ☐ To the ACC through a Harvest-end contract ☐ To the retail market through a contract farming contract ☐ To the retail market through a harvest end contract ☐ To an exporter ☐ To Commissioners without any contract ☐ To Traders without any contract ☐ Other (Please Specify) ☐ Refuse/Don't know

Q44: Please, specify	`selected(${q44}, '98')`

Q45. Which livestock products have you produced commercially on this farm in 2021?	☐ Meat ☐ Eggs ☐ Milk ☐ Fur or leather ☐ Wool ☐ Honey ☐ animals for sale ☐ Other (Please Specify) ☐ None

Q45: Please, specify	`selected(${q45}, '98')`

Q46. Please list any other sources of revenue for you in 2021 besides your own agricultural production that we already covered, including land sales. What is the source of revenue?	☐ Renting out land ☐ Renting out equipment ☐ Working as a broker for other farmers ☐ Salary from another job ☐ Retirement salary ☐ Income from another business ☐ Working for another farmer ☐ Craft or art ☐ Breeding services ☐ Selling animals ☐ Animal training ☐ Renting out animals ☐ Renting out space, e.g. to tourists ☐ Land sales ☐ Government pension or other retirement payments ☐ Other (Please Specify) ☐ None

Q46: Please, specify	`selected(${q46}, '98')`

Q50. Do you know any eligible farmer in your village? If so, can you please	share his/her contact details with us

Q51. What is the name and surname of this farmer # ${otherpid}

○ Yes
○ No

Q52. Can you share the farmer's phone number with me? *Please enter the 10-digit phone number without deleting the area code. If the interviewee does not want to provide a phone number, please enter "9999999999".*	
Q53. Are there any other farmers you want to add?	○ Yes ○ No
The survey is finished. Please do not forget to give the participant's gift!	○ Yes ○ No name=1