



Post-Russian Invasion Survey of Smallholder Farmers in Ukraine

Follow-up Data Collection (December 2023 – January 2024)

Study Documentation

June 2025

List of Acronyms

MAPF – Ministry of Agricultural Policy and Food

SSSU – State Statistics Service of Ukraine

SAR – State Agrarian Registry

PSG – Producer Support Grant

EU – European Union

Table of Contents

| | |
|--|---|
| <i>List of Acronyms</i> | 2 |
| <i>1.0 Background</i> | 4 |
| 1.1 Survey Design..... | 4 |
| <i>2.0 Survey Questionnaire – Review of Sections</i> | 5 |
| 2.1 Screener & Background | 5 |
| 2.2 Household Roster | 5 |
| 2.3 Agricultural Production | 5 |
| 2.4 Property and Finance..... | 6 |
| 2.5 Agricultural production support | 6 |
| 2.6 Assets | 6 |
| 2.7 Plans for the 2024 agricultural season | 6 |
| <i>3.0 Sample and Field Work Organization</i> | 7 |
| 3.1 Sample | 7 |
| 3.2 Field Stage Implementation..... | 7 |
| 3.3 Response Rate | 8 |
| 3.4 Data Control | 8 |
| 3.5 Data Coding and Processing..... | 8 |
| <i>4.0 Producers</i> | 8 |
| <i>5.0 Accessibility</i> | 8 |

1.0 Background

With a total agricultural area of close to 45 million ha of very fertile land,¹ Ukraine has long been a major breadbasket and exporter of agricultural commodities. Beyond causing immediate hardship and triggering a large exodus of displaced people, Russia's military invasion of Ukraine and the economic blockade of its Black Sea export routes have also led to sharp increases in grain prices (von Cramon-Taubadel 2022) and raised concern about global food security. To provide information to the government for developing policies and programs to support the agricultural sector in Ukraine after the war, the World Bank carried out baseline and follow-up nationwide surveys of post-war farmers in cooperation with the Ministry of Agricultural Policy and Food (MAPF), with financial support from the EU, in areas controlled by Ukraine from October to December of 2022 (baseline survey) and from December 2023 to January 2024 (follow-up survey).

The survey objective is to obtain information on changes in welfare, production, and productivity in the small and medium farm sector between 2021 and 2023 and to identify ways in which the farmers could be most effectively supported. The survey data is collected via phone by researchers at the Kyiv International Institute of Sociology (KIIS) under the monitoring of the research team at the World Bank.

1.1 Survey Design

To cover family farms that often remained informal, the State Agrarian Registry (SAR) was used as a sample frame. The SAR is an electronic registry, established in August 2022, with the objective of transferring support to small and medium farmers in a transparent yet expeditious way. Farmers can sign up at the SAR website (<https://www.dar.gov.ua/>) using their electronic signature and provide a minimum of personal information, including a bank account to which any resource transfers can be made, irrespective of their legal status, i.e., registered legal entity, family-owned business (FOP), or individual. The system gathers information for all land parcels to which the farmer has registered rights from the registry of rights and the cadaster and adds information on the farm from several other official registries.² Information in SAR can be used by MAPF or any authorized entity to advertise or implement programs in support of the agricultural sector and to interact electronically with potential participants. Farmers can take any actions required digitally rather than by filling paper forms, including uploading scanned documents, photos, or providing authorization for providers of certain services to access specific types of personal information stored on the system.

The raw data was cleaned by dropping: (i) farms located in amalgamated communities with active conflicts; (ii) without any registered land; and (iii) with missing phone numbers. The final frame consisted of 63,374 registered farms. The distribution of farms by size and program participation shows that most of the farms are small (85%) with farm size less than 50 ha (35,264 PSG non-applicants vs. 18,605 PSG applicants) followed by farms with 50-120 ha (7.5% with 1,634 PSG non-applicants and

¹ Ukraine's agricultural land endowment is larger than the agricultural area of France (18 million ha), Germany (12 million ha) and Poland (11 million ha) combined.

² For example, the SAR automatically gathers information on any outstanding debts to the state (which would legally disqualify them from receiving state support) and on farmers' registered livestock from the animal registry and Government plans to add information from other registries, including the mortgage registry and the registry of court cases, in the near future.

3,107 PSG applicants) and farms that are not eligible for PSG participation with size greater than 120 ha (7.5% with 2,743 less than 500 ha and 2,021 greater than 500 ha).

The expected sample size for the phone survey was 2,500 farms with 10% each in the small size category from PSG applicants and non-applicants, 20% each in the farm category of 50-120 ha from PSG applicants and non-applicants, 20% from the farm size category of 120-500 ha and 20% from the farm size category of greater than 500 ha. Given the expected high non-response rate of phone interviews, all the farms with a size greater than 50 ha were included in the sample, and then 1,125 and 1,126 farms were randomly selected from PSG non-participants and participants in the less than 50 ha category. The final response rate was about 20% with the lowest in the greater than 500 ha category (15%) and the highest in the 50-120 ha PSG non-applicant category (28%). The survey initially targets 2,500 farms, and eventually collected data for 2,251 farms. Within the follow-up survey, which was conducted one year after the baseline survey, 2,252 farms were contacted, with a final response rate of 54%. Thus, data for 1,206 farms were collected in the second round of the survey.

2.0 Survey Questionnaire – Review of Sections

The survey questionnaire comprised seven sections, namely:

- Screener & Background;
- Household Roster;
- Agricultural Production;
- Property and Finance;
- Agricultural production support;
- Assets and
- Plan for the 2024 agricultural season.

Each of the sections had varying sub-sections and questions, and the following is a review of these sections.

2.1 Screener & Background

The aim of this section was to determine whether the farm was operational during the 2023 agricultural season and identify the most knowledgeable person about the farm's agricultural production to ensure the collection of accurate and reliable information.

2.2 Household Roster

Given that detailed household roster data was collected at baseline, this section aimed to gather information on the potential sources of household agricultural labor, i.e., household members aged 16 years and older who were living in the household at the time of the survey.

2.3 Agricultural Production

This section aimed to provide comprehensive information on agricultural production and the effects of the war on farmland or structure. It covers the total cultivated area and details on agricultural input use and crop production for the 2023 agricultural season. Information on each crop includes the cultivated area, total (expected) output, sold volume, price received, costs for purchased inputs (fertilizer,

herbicide, pesticides, and seeds), machinery services (for soil preparation, sowing, fertilizer/herbicide application, and harvesting), and hired labor.

2.4 Property and Finance

The aim of this section was to provide information regarding additional income sources and participation in land and credit markets. It includes details on the number of full-time household members and hired employees working on the farm, the number of part-time household members involved, the current land leasing price, willingness to lease additional land, demand for and the amount willing to pay for buying land, demand for credits and interest rates, and whether public social support payments had been received.

2.5 Agricultural production support

The goal of this section was to gather information on the farm's participation in agricultural support programs, specifically aimed at mitigating the impact of the war on agricultural production. It also collected data on the demand for credit and matching grants for agricultural investment or working capital needs. Additionally, it sought details on whether the farm had utilized the state agrarian registry in 2023 and for what purposes.

2.6 Assets

This section collected information on the ownership of tractors and combine harvesters during the 2021-2023 agricultural seasons.

2.7 Plans for the 2024 agricultural season

This section collected information on the crops that the farm planned to grow and the total area of farmland intended for each crop during the 2024 agricultural season.

Table 1 Organization of Survey Questionnaire

| Name | Section Name | Level of Analysis | Identification Variable |
|------|---------------------------------------|----------------------|----------------------------|
| S0 | Screening & Background | Household/farm | CASE_ID_W2, FARM_ID |
| S1 | Household Roster | Household/farm | CASE_ID_W2, FARM_ID |
| S2 | Agricultural Production | Household/farm, Crop | CASE_ID_W2, FARM_ID, crop |
| S3 | Property and Finance | Household/farm | CASE_ID_W2, FARM_ID |
| S4 | Agricultural Production and Support | Household/farm | CASE_ID_W2, FARM_ID |
| S5 | Assets | Household/farm | CASE_ID_W2, FARM_ID, asset |
| S6 | Plan for the 2024 Agricultural Season | Household/farm, crop | CASE_ID_W2, FARM_ID, crop |

Note that “FARM_ID” can be used as a unique identifier to establish the panel with the baseline survey.

3.0 Sample and Field Work Organization

3.1 Sample

The follow-up survey utilized the same survey firm and farm phone numbers as in the baseline study. For the baseline survey, the World Bank team has provided the list of contacts for the survey. A total of 11,064 farms/enterprises were on the list, sorted by priority. All the farms have been divided into 6 sampling categories with a target task set for each category:

Table 2 Samle frame and target sample at baseline

| Sampling category | Phone numbers provided | Target sample size |
|-------------------|------------------------|--------------------|
| 1 | 1,444 | 250 |
| 2 | 1,065 | 250 |
| 3 | 1,498 | 500 |
| 4 | 2,669 | 500 |
| 5 | 2,564 | 500 |
| 6 | 1,824 | 500 |
| TOTAL | 11,064 | 2,500 |

A total of 2,251 farms participated in the baseline interviews and were contacted again within one year for the follow-up survey.

3.2 Field Stage Implementation

Data have been collected through phone interviews. Interviewers from KIIS' central and regional teams have been involved in data collection. Three supervisors, led by the fieldwork director, controlled interviewers' work.

All interviewers who conduct quantitative interviews in the KIIS surveys have passed general training and acquired knowledge and skills in conducting interviews and converting refusals. In this study, the fieldwork director conducted additional distant online training for interviewers. Taking into account the length of the fieldwork, video-recorded training was posted on the internet for interviewers to refresh their knowledge. Also, online chat has been established where interviewers could ask questions or share challenging situations, and project or fieldwork managers consulted them.

An official letter has been prepared from KIIS' management and was emailed to the potential respondents who had questions or doubts about the survey.

At least three call-backs have been made to the respondents who could not be reached. Each interview was conducted by a trained interviewer in one of two languages – Russian or Ukrainian, up to the respondent's choice.

The fieldwork stage of the follow-up survey began on December 1, 2023, and was finished on January 30, 2024.

3.3 Response Rate

Reasons for non-participation were as follows:

| | | |
|---------------------|---|-------|
| ELIGIBLE | Interviewed | 1206 |
| | Incorrect farm identification number | 3 |
| | Refusal | 390 |
| | Not relevant contact: refused to redirect to a knowledgeable person | 41 |
| | Could not respond due to security reasons | 7 |
| UNKNOWN ELIGIBILITY | No response (Nobody answers; Out of reach; Auto answering machine; Busy line; Appointed time for another call; Not relevant contact: redirected to knowledgeable person; Poor quality connection) | 565 |
| NON-ELIGIBLE | The farm did not operate in 2022 | 11 |
| | Enterprise is closed/destroyed/bankrupt | 21 |
| | Non-existent number | 5 |
| | Respondent moved abroad | 3 |
| TOTAL | | 2,252 |

Overall response rate = 53.7%. The average interview length is 35 minutes.

3.4 Data Control

Internal data quality control focused primarily on monitoring the interviewers' work. The goal was to review 10% of interviews, either by listening to them or by re-contacting the respondents. In doing so, supervisors ensured that all questions were fully asked and verified responses to key questions.

This internal control was conducted by specially trained interviewers/controllers throughout the data collection period. No significant violations were observed.

3.5 Data Coding and Processing

Data have been collected electronically. Survey logic has been incorporated into the instrument. After data collection, mainly general data completeness and outliers have been checked. Also, all text responses to open-ended questions have been analyzed and coded if necessary.

The final data file of the follow-up survey contains data from 1,206 interviews. It was provided to the World Bank team in SPSS formats.

4.0 Producers

The PIs for this study are Daniel Ali Ayalew, Klaus Deininger, and Thea Hilhorst from the World Bank.

This work was supported by the EU and the World Bank.

Data collection was done by research teams at the Kyiv International Institute of Sociology (KIIS).

5.0 Accessibility

Access Authority is the World Bank

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