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Building Local Resilience in Syria (BLRS) - Short-term Impacts of FAO's Agricultural Support under BLRS Phase 1

FINAL ENDLINE REPORT
FOR PHASE 1

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Scope:

This Endline Impact Report uses panel household survey data to estimate the impact of agricultural interventions implemented by Food and Agriculture Organisation (FAO) in Phase 1 of the BLRS. Specifically, the report provides insights and lessons based on the short-term impacts of Farmer Field Schools delivered alongside complementary livestock support across five governorates in Syria. The target audience of this report is programme implementers, researchers, policy-makers, and other key stakeholders working on livelihoods and resilience-building programming in the agricultural sector in Syria. While the sections on the design, data analysis, and impact findings are technical in nature, the discussion, conclusions, recommendations, and lessons are written for a broader audience.

Disclaimer:

The authors declare no conflict of interest. The evaluation team conducted their work independently and without interference. The findings in this report are independent of any parties with an interest in the evaluation and were discussed with the FAO BLRS team solely for contextual purposes. Artificial Intelligence (AI) tools were used exclusively at the final stage of the report to support language editing and rephrasing to improve clarity, readability, and structure of the text. AI was not used for data collection, analysis of the data, interpretation of results, or the development of substantive content in this evaluation, which were developed solely by the evaluation team. The use of AI complied with the principles outlined in the UK Government AI playbook: no confidential or sensitive data were shared with AI tools, data protection regulations were fully respected, and AI was not used in any way that could introduce bias into the data or the analysis.

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Executive Summary

Background: Syrian farmers continue to face pressures from conflict legacies, economic instability, climate shocks, and the resultant food insecurity. Disrupted markets, damaged infrastructure and shifts in governance and policies, including the suspension of wheat subsidies over the past years, have constrained agricultural production and reduced farm profits. Prolonged hyperinflation and the overall weak Syrian Pound have severely reduced the purchasing power of households and farmers to buy food and agriculture inputs. The improvements in the exchange rate of the Syrian Pound against the US dollar after the governance transition at the end of 2024, decreased prices, but also led to a margin squeeze (high input costs and low output prices). At the same time, recurrent drought episodes, where in 2025 Syria witnessed one of the most severe droughts in decades, have reduced agricultural capacity and productivity. All these factors led to increased poverty rates in Syria, limit farmers' ability to invest, weaken productivity and livelihoods, strain food security, and increase reliance on harmful livelihood coping strategies.

The Building Local Resilience in Syria (BLRS) programme, funded by the UK Foreign, Commonwealth, and Development Office (FCDO) and implemented by the Food and Agriculture Organization (FAO) and the Syria Resilience Initiative (SRI), provides comprehensive livelihood and agricultural support to address the above challenges. The objective of BLRS is to improve food security, enhance resilience to shocks, and promote inclusive, dignified, and meaningful economic participation, particularly for women, thereby reducing reliance on external aid and harmful coping mechanisms. In the Phase 1 of the BLRS (April 2022 - March 2025), the partners provided training and agricultural inputs and services for crop and livestock production, rehabilitated irrigation and other critical agricultural infrastructure, supported small agricultural enterprises and value chains, and provided programming to address gender-based violence and gender inequality, benefitting approximately 115,000 Syrians annually.

ISDC conducted a portfolio of impact evaluations of the BLRS Phase 1 in coordination with FAO and SRI. This report presents the short-term findings of the impact evaluation of FAO's agricultural activities that were implemented in Aleppo, Deir-Ez-Zor, Hama, Homs, and Rural Damascus, approximately 1.5 years after implementation began. More specifically, this impact evaluation assesses the average effects of participation in livestock and crop production Farmer Field Schools (hereafter denoted as Livestock FFS and Crops FFS, respectively, or FFS in general). FFS are participatory and field-based learning groups in which farmers meet regularly to develop their skills through hands-on experimentation and observation. FFS were provided in the same communities alongside other types of FAO support, most commonly livestock services in the form of artificial insemination and veterinary care. Beneficiaries in some of these communities also received agro-processing vouchers and training, and participated in couples' sessions on the prevention of economic violence against women and girls.

Theory of change: FFS support is expected to improve farmers' knowledge and skills in livestock, crop and soil management and encourage more climate-adaptive decision-making to better cope with drought episodes in Syria. Particularly when combined with complementary

inputs and services, such as veterinary care, the adoption of good agricultural practices can improve crop and livestock production and productivity, increasing the households' access to own-produced food, thereby improving food security in the short term. Under economic and political uncertainty, greater reliance on own-produced food and agricultural inputs (such as fodder, seeds or vegetable seedlings) can reduce exposure to volatile markets and price spikes. In the longer term, increased production and productivity can also support higher farm revenues and household income. Additional participation in couples' sessions in some parts of the study area is expected to strengthen women's economic roles and challenge harmful gender attitudes.

Learning questions: The impact evaluation addresses the following two learning questions:

LQ1. What are the short-term impacts of the programme on beneficiary farming households' food security, resilience, agricultural production and productivity, income, and attitudes related to gender-equity compared to non-beneficiary farming households?

LQ2. Do the impacts differ between beneficiaries enrolled in Livestock FFS and Crops FFS?

Outcomes: Food security is proxied through three indicators. First, the Household Dietary Diversity Score (HDDS) captures the consumption of fourteen food groups over a 24-hour period. Second, the Food Consumption Score (FCS), which additionally weighs the food groups by nutritional importance, captures the frequency of food consumption over a 7-day period. Third, the Food Insecurity Experience Scale (FIES), which captures the severity of food access constraints based on households' reported experiences. Resilience is measured using the Resilience Capacity Index (RCI), a composite measure, which defines resilience as the ability of households to prevent, adapt to, and recover from shocks and stresses in ways that reduce chronic vulnerability across four dimensions: access to basic services, asset ownership, social safety nets, and adaptive capacity. Crop and livestock production and productivity are measured through crop yields, herd sizes, and milk production per animal per day. Annual household income is measured in real USD and disaggregated by source (e.g., livestock and crop farming income). Engagement in value chain activities indicates if households generate any income in the past 12 months from activities such as selling livestock, crop produce, inputs or processed products. Attitudes towards gender equity are assessed through agreement with statements on women's roles in society and early marriage.

Impact evaluation design and data: We develop a quasi-experimental design that compares changes in these outcomes between beneficiary and non-beneficiary households before and after FAO's support. Including a non-beneficiary group from non-targeted villages isolates programme effects from broader changes over time. Baseline data were collected in January-March 2023 and endline data in February 2025, tracking 443 non-beneficiary and 758 beneficiary households over this two-year period. We assess the average impacts using difference-in-differences estimations on the balanced panel dataset. We also assess the impacts by FFS type, and conduct heterogeneity analysis by household-head gender and location. To test the robustness of the results, we re-estimate the models using difference-in-differences with control variables and entropy balancing weights to improve comparability between beneficiary and non-beneficiary households, and a mixed-effects specification that accounts for village-level effects.

Impact findings:

Food security: The programme's contribution in terms of food security lies in improved food consumption and dietary diversity. From an average baseline FCS level of 57, already 15 points above the acceptable food security threshold, the programme raised FCS by 6.5% for beneficiary households compared to non-beneficiary households. These impacts were even stronger for Livestock FFS beneficiaries, whose FCS significantly improved by around 9%. Similarly, the HDDS increased for beneficiary households by 5% from an average baseline level of 6.6 different food groups per day. This implies that roughly one in three beneficiary households consumed one additional food group per day due to the programme, mainly driven by higher consumption of pulses, nuts, fruits, meat, poultry, or eggs. The share of all households (both beneficiaries and non-beneficiaries alike) experiencing severe food insecurity, such as not eating the whole day, has fallen from 11% at baseline to near zero at endline leaving little room for detecting additional programme effects on the FIES. At the same time, milder forms of food insecurity persist, for example, 62% of the beneficiary farmers still worry about food after the intervention. Similar to comparable agricultural interventions in Syria, the programme significantly improved short-term food consumption and dietary diversity even in periods when purchasing power temporarily improved in Syria.

Crop production: The main crops cultivated are maize and irrigated wheat, cultivated by 19% and 42% of the farmers, respectively. The cultivation of barley and rainfed wheat is less prevalent, each grown by 10% of the farmers or less in the sample. Over the study period, which was characterised by severe drought episodes in Syria, crop yields have fallen. Non-beneficiary farmers saw yield drops by 50% on average for barley, the most affected crop. In contrast, yields remain largely stable among BLRS beneficiary farmers during the same period. This implies that the BLRS activities have contributed to safeguarding the crop production and, hence, improved yield gains relative to non-beneficiaries. More specifically, yields of maize which is primarily a fodder crop improved by 17% to 6.2 t/ha among Livestock FFS participants. Barley, the other main fodder crop, improved as well, though less statistically consistent. Wheat was not specifically part of the FFS programme, and hence, we do not find direct significant impacts on irrigated wheat yields. However, and despite a severe drought season, yields of rainfed wheat significantly improved by 39% to 1.3 t/ha among Crops FFS participants, pointing to potential knowledge and practice spillovers of the programme.

Livestock production: Livestock keeping is common among surveyed households: at baseline 55% of households owned cattle, 36% owned sheep and 8% owned goats. Over the study period, the number of livestock heads has decreased for non-beneficiary farmers by 18% for cattle, 37% for sheep, and 53% for goats, pointing to clear destocking trends. However, cattle and sheep holdings of FAO beneficiary households only decreased by 8% and 14%, respectively, and herd size of goats increased by 35%. Despite these relative improvements among beneficiary households, the average effects were not statistically significant for cattle and sheep, but significant for goats. Amid broader national vaccination campaigns implemented during the same period benefitting all cattle keepers alike, the impacts of veterinary support could have been muted in the short-term. In terms of milk productivity, the results show significant regional improvements of sheep milk yields in Aleppo, Rural Damascus, and Deir-Ez-Zor (+0.5-1 litres of milk per sheep per day). However, this effect is not significant

for the overall sample of beneficiaries. No consistent effects were detected for cow milk yields. Moreover, and despite a low share of goat holders, we observe a significant improvement in milk productivity (+0.6 litres of milk per goat per day).

Engagement in agricultural value chain activities and income-generation: At baseline, 59% of the households generated income from sales of unprocessed crops while 69% generated income from livestock sales. 3% or less engaged in each of the other value chain activities. The results show strong improvements, where beneficiary households are twice as likely to engage in processing and storage as well as crop sales after processing. On the other hand, we do not detect strong evidence of short-term programme effects on annual household income. US-Dollar-equivalent incomes have increased during the study period for both beneficiary and non-beneficiary households alike, from 2625 USD to 3800 USD per annum, on average. Given this upward shift, income benefits from agricultural gains might require more time to materialise. The value of the Syrian Pound against the US Dollar has improved after the fall of the regime in December 2024 which implies that farmers could have faced a profit margin squeeze from high input costs and falling output prices.

Resilience: BLRS beneficiary households show clear improvement in their resilience, with the RCI increasing by 8% on average, and by 12% among Livestock FFS participants. These gains point to a stronger ability of households to absorb, adapt to, and recover from shocks, and are most plausibly explained by the programme's positive effects on crop and livestock production. The programme proved protective amid the ongoing drought, holding crop and livestock production broadly stable while it deteriorated elsewhere. At the same time, higher fodder-crop yields improved on-farm fodder access, reducing households' reliance on volatile markets.

Gender-related outcomes: One third of the sample is female-headed households, who at baseline have systematically lower food security and resilience levels, smaller holdings of land and livestock, and limited access to productive agricultural assets compared to male-headed households. The gains in food security, resilience and productivity are driven mainly by male-headed beneficiary households, while the impacts of the programme on these outcomes for female-headed households were not significant. This suggests that female-headed households still face persistent structural constraints, which limits their ability to fully benefit from the same support. More positively, the programme contributed to shifting attitudes toward women's role in social and economic life: one in four beneficiaries were more likely to support women speaking out without fear of harm, and one in eight were more likely to support women in holding leadership positions in the community.

Lessons learnt and recommendations: Based on these short-term impact findings of the FAO activities in Phase 1 of the BLRS, we draw six lessons and recommendations to further strengthen Phase 2 of the BLRS and related future programmes in the agricultural sector in Syria:

1. Resilience against market volatility: Volatile markets can squeeze margins. On-farm input production can reduce dependence on such volatile markets. The programme should continue promoting on-farm input production through FFS. Moreover, guided by market monitoring, future programmes should pilot adaptive measures to buffer

market shocks, such as providing input subsidies during price spikes and storage or sales support when output prices fall. Evidence from these pilots should inform the policy dialogue and advice to the government on agricultural support mechanisms.

2. Commercialisation and market linkages: Macroeconomic factors can overshadow programme effects on income. Future interventions should place greater emphasis on commercialisation to improve value retention and secure predictable income streams. This could be achieved, for example, through investing in post-harvest processing and promoting small-scale commercialisation of inputs such as fodder and seeds. Market linkages should be reinforced through aggregation mechanisms and farmer cooperatives, to improve access to reliable buyers and enhance bargaining power. Further evidence is needed on the effectiveness of cooperative-based approaches in strengthening market resilience.

3. Livestock resilience and asset recovery: Stabilised herd sizes and livestock productivity during drought conditions highlight the importance of continuing to promote drought-adaptive livestock practices in FFS and provide health services. Future programming should place greater emphasis on rebuilding productive assets, particularly cattle herds, including incentives to preserve improved livestock to allow stronger impact of artificial insemination and veterinary services to materialise. Complementary financial protection mechanisms, such as livestock insurance, savings schemes, or access to credit, should also be explored to reduce distress sales and support recovery, ensuring accessibility for more vulnerable households. Further research is needed to assess the longer-term impacts of livestock support, including on livestock retention and productivity returns.

4. Climate resilient crop cultivation: The ability of beneficiary households to maintain crop production under severe drought conditions highlights the importance of systematically integrating climate adaptation into FFS and related services, including introducing more drought-tolerant seed varieties and integrating water-efficient practices. Additional activities, such as developing early warning systems that can be delivered through accessible channels such as mobile messaging, can bring additional value to existing support as it allows timely and risk-informed decision-making. Piloting anticipatory action approaches that provide time-bound support ahead of climatic shocks using forecast-based triggers in future programming can help households protect assets and sustain production more cost-effectively.

5. Gender-sensitive programming: Female-headed households did not experience clear gains in food security and resilience compared to male-headed households, reflecting persistent structural constraints facing rural women in Syria related to assets, labour, mobility, time use, service access, and decision-making power. Given the observed positive shift in attitudes on the economic role of women in the beneficiary communities, future cycles of the programme should build on this momentum to strengthen women's participation in FFS and value chain activities. This can be achieved, for example, by tailoring content, delivery modalities, supplementary support, and market linkage strategies to the specific needs of women and

female-headed households. Baseline data should be used more systematically to identify barriers early, and adapt support accordingly to improve effectiveness and equity.

6. Mitigating all levels of food insecurity: While severe food insecurity has declined, milder food access constraints persist, with a risk that seasonal shocks could push households into more severe food insecurity. Future programming should test timely, market-informed response mechanisms that provide temporary support during acute price spikes or lean periods, helping households smooth consumption and avoid reliance on negative coping strategies. Cash-based assistance should be considered when affordability is the main constraint, while in-kind agricultural input support could be more effective when supply constraints dominate. In addition, broader measures to ease household food budget pressures, including home or community gardens, in areas with high prevalence of mild food insecurity, should be considered, as previous evidence showed that they have considerable benefits for female-headed households.

Conclusion: The BLRS programme delivers comprehensive, multi-year support to strengthen household resilience against shocks. The impact evaluation of FAO's activities in Phase 1 confirms that integrated interventions, specifically FFS and livestock services, have significantly improved food consumption, safeguarded crop and livestock production, and bolstered short-term resilience of farmers. While the BLRS establishes a clear pathway toward sectoral resilience, strategic and programmatic refinements can ensure long-term sustainability, profitability and equitable outcomes for female-headed smallholder farmers. This is critical as Syria continues to face compounding pressures of prolonged drought, macroeconomic volatility and political instability.

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List of Abbreviations

ASI	Agricultural Stress Index
BLRS	Building Local Resilience in Syria
DiD	Difference-in-Differences
FAO	Food and Agriculture Organization of the United Nations
FCDO	UK Foreign, Commonwealth, and Development Office
FCS	Food Consumption Score
FFS	Farmer Field School
FIES	Food Insecurity Experience Scale
ha	Hectare
HDDS	Household Dietary Diversity Score
HH	Household
HHH	Household Head
ISDC	International Security and Development Center
MCU	Milk Collecting Units
M&E	Monitoring and Evaluation Unit
PII	Personally Identifiable Information
RCI	Resilience Capacity Index
rCSI	reduced Coping Strategy Index
RIMA II	Resilience Index Measurement and Analysis
SPEI	Standardised Precipitation-Evapotranspiration Index
SRI	Syria Resilience Initiative
SYP	Syrian Pounds
t	Tonnes
UNDP	United Nations Development Programme
USD	United States Dollar
VHI	Vegetation Health Index
VAWG	Violence against Women and Girls
WFP	World Food Programme

1. Introduction

Syrian farmers continue to face compounding pressures. The legacy of conflict has disrupted markets, services, and infrastructure, while recent governance changes have altered the conditions for producers, for example, through the suspension of wheat subsidies. A deep economic crisis has driven high inflation and currency volatility. In early 2025, the Syrian Pound appreciated against the US Dollar, lowering prices of food but also of farm outputs. The rapid swings also contributed to new uncertainty for farmers' planning and investment. At the same time, severe drought episodes have reduced agricultural capacity. Together, these pressures constrain the ability of farmers to invest in seasonal production, threaten agricultural productivity and livelihoods, and strain food security for millions of Syrians.

Against this backdrop, the "Building Local Resilience in Syria" (BLRS) programme, which is funded by the UK Foreign, Commonwealth, and Development Office (FCDO) and implemented by the Food and Agriculture Organization of the United Nations (FAO) and the Syria Resilience Initiative (SRI), is supporting households across Syria over a six-year period, with a particular focus on the agriculture sector. The overall objective of BLRS is to strengthen the self-reliance of vulnerable Syrians, reduce dependence on emergency aid, and mitigate the use of harmful coping strategies. More specifically, the project aims to improve longer-term food security for targeted communities, strengthen resilience to shocks at individual and community levels, and ensure a dignified and safe social and economic participation of vulnerable groups, especially women.

BLRS is implemented in two phases. Phase 1, which ran from April 2022 until March 2025 across nine governorates, included a wide range of interventions. These include: capacity-building of farmers on topics such as irrigation management, climate-smart agriculture, and good agriculture practices; providing direct inputs and services to improve crop farming and livestock keeping, along with the necessary equipment and training; rehabilitating irrigation, water, and energy infrastructure; establishing small-and medium-enterprise and value chain support in the agriculture sector with a particular focus on women; and delivering a couple-based programming to prevent violence against women and girls. Through these interventions, approximately 115,000 Syrians benefited annually during Phase 1, including women, youth, and persons with disabilities.

ISDC - International Security and Development Center, is conducting a portfolio of impact evaluations of the BLRS activities, covering both Food Security and Livelihoods (FSL)

interventions and pilot programmes aimed at preventing Violence against Women and Girls (VAWG). These impact evaluations build on experimental and quasi-experimental designs, aiming to generate evidence-based learning on what works, identify areas for improvement for programming, and provide actionable recommendations for both programming and policy while considering the broader challenging context.

This impact report focuses specifically on FSL activities implemented by FAO under Phase 1 of the BLRS project. During this phase, FAO provided a range of agricultural support packages, including, most prominently, the provision of livestock services in the form of artificial insemination and veterinary services. A core element of FAO's BLRS support in Syria is Farmer Field Schools (FFS). Through hands-on practical training, FFS is intended to strengthen farmers' knowledge and skills, improving their agricultural production and overall farm resilience towards shocks. In total, FAO reached approximately 9,500 farming households in Syria through the FFS (FAO, 2026c).

Using a quasi-experimental design, we estimate the impacts of the FFS, when provided with other support, on agricultural production and productivity, food security, income generation, household resilience, and attitudes towards gender equity 1.5 years after the start of the support (short-term impact). More specifically, we estimate changes in these outcomes for farmers who were enrolled in the FFS and reside in targeted communities that have received other interventions from FAO under BLRS relative to a non-beneficiary group. Moreover, we examine how the impacts differ across households depending on the type of FFS received.

The rest of the report is structured as follows: In Section 2, we start by explaining the context and reviewing current evidence on comparable agricultural programming in crisis settings. We then describe the intervention implemented under BLRS and present the theory of change. Next, we outline the impact evaluation objectives and design in Section 3, followed by a description of how data were collected, including the ethical considerations in Section 4. We then explain the empirical strategy and the methods used for the analysis in Section 5, and provide an overview of the dataset, including sample attrition and the baseline balance, in Section 6. The report then presents descriptive statistics in Section 7, describing the context and its evolution over time. The main results of the impact analysis are presented in Section 8, and the results from the robustness checks, as well as the limitations of the evaluation in Section 9. Finally, we discuss in Section 10 the findings in relation to the context of Syria and the broader evidence on agricultural programming in crisis-affected settings. We conclude in

Section 11, and we present lessons learned and provide actionable recommendations to guide future programming and evidence generation in Section 12.

This report is intended for programme implementers, researchers, policy-makers, donors and other key stakeholders working on food security, livelihoods and resilience programming in Syria and similar contexts. While the sections on impact evaluation design, data analysis and impact findings are written for a technical audience, the discussion, conclusions, recommendations and lessons have been drafted for a broader audience. This approach ensures that the findings can effectively contribute to programme strengthening and inform policy development to rehabilitate the resilience of agri-food systems, both within and beyond Syria, in line with ISDC's commitment to encourage the use of the findings. Further details on the use of evidence and the communication plan are available in Appendix A.

2. Context, Interventions, and Theory of Change

2.1 Context

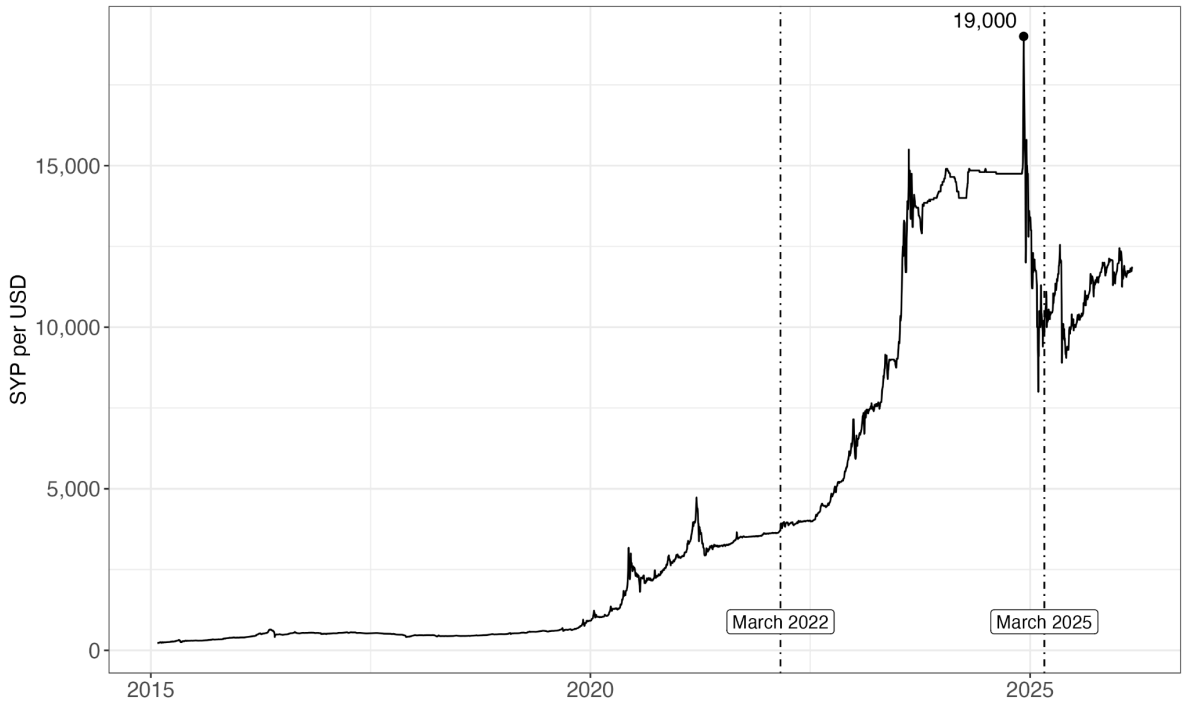
After 15 years of armed conflict, Syria and Syrian farmers continue to face political, economic, and climatic challenges:

First, politically and institutionally, Syria remains a highly fragmented and transitional environment. Since the start of the conflict, state capacity has severely declined over time, and governance has shifted in many parts between different actors, changing administrative rules and services across areas of control (UNDP, 2025). For farmers, this fragmentation shapes the conditions under which they operate, including access to public services and goods, pricing conditions, and the predictability of regulations. These challenges are compounded by the war-related destruction of agricultural infrastructure, the collapse of local markets, and the severe restrictions on international trade (Baliki et al., 2023). In December 2024, the country experienced an important government transition, with the fall of the regime. However, governance remains fragile, including challenges around restructuring institutions, integrating armed actors, and aligning territorial administrations (EUAA, 2025).

Second, after years of hyperinflation and weak local currency, price instability persists coupled with acute liquidity constraints which continue to pose challenges and severe economic hardships. As Figure 1a shows, the value of the Syrian pound (SYP) to the US Dollar (USD) has depreciated sharply over the past decade, reaching its peak by December 2024, which contributed to high inflation and weakened purchasing power (World Bank, 2025). Following

the political transition, the value of the SYP improved by roughly 30%, which is attributed to shortages of local-currency liquidity, increased demand for the local currency, and an easing of sanctions (ibid; FAO, 2025b). This led to a substantial decline in nominal SYP commodity prices (FAO, 2025b). Still, the currency's value remains far below pre-crisis levels (World Bank, 2025). The political transition has also been felt economically in the agricultural sector, which took place during the sowing season, when farming input costs were at their highest. The suspension of the government's subsidised wheat-production support in February 2025, including for fuel and fertilisers, marked a significant departure from the prevailing farming conditions in 2024 (FEWS NET, 2025). At the same time, nominal output prices of many agricultural products fell markedly (FAO, 2025b), reducing profits and reinforcing uncertainty for farmers' production and investment decisions.

Figure 1a. Fluctuations in the currency exchange rate between SYP and USD in Syria (2015 - 2026)

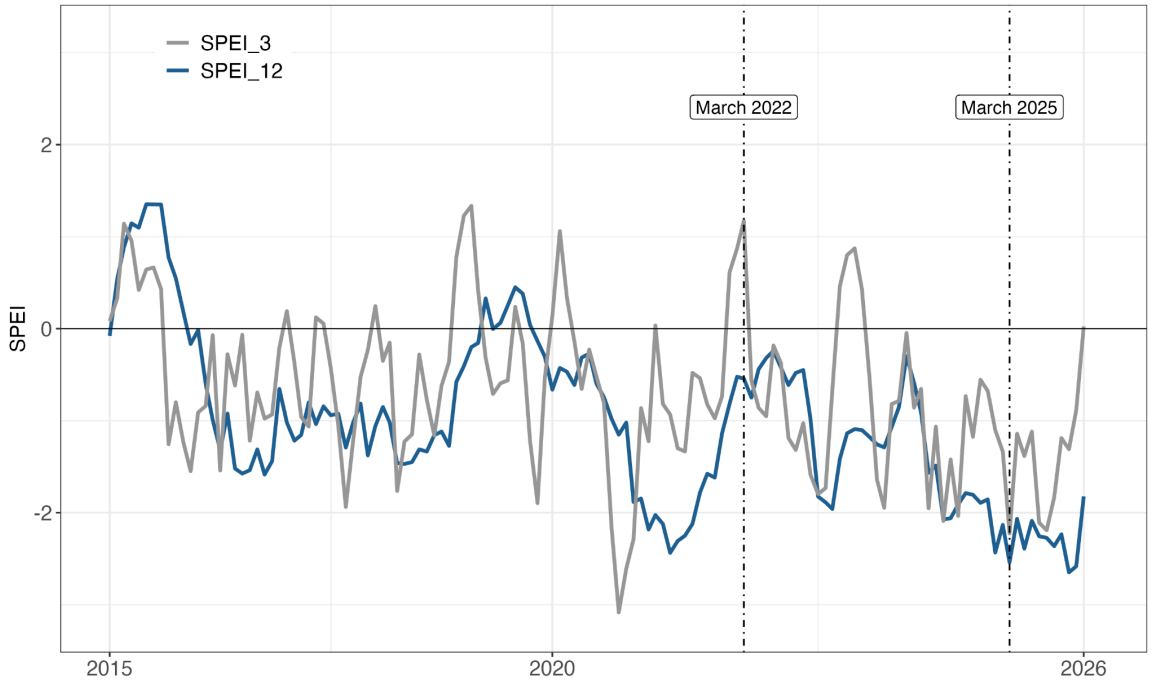


Note: *Own visualisation of the exchange rate between the SYP and USD from 2015 to 2026. Data source: SPToday (2026). The vertical lines indicate the start and the end of the BLRS Phase 1.*

Third, Syria experienced historic drought episodes in 2024/2025 (FEWS NET, 2025). Figure 1b presents the Standardised Precipitation-Evapotranspiration Index (SPEI) for 2015-2026, where values below zero indicate drier-than-normal conditions, while values above zero indicate wetter-than-normal conditions. The short-term indicator (SPEI-3) captures seasonal variability, while the longer-term indicator (SPEI-12) reflects accumulated hydrological stress. The figure shows substantial volatility in short-term climatic conditions (SPEI-3), with pronounced negative spikes, particularly in 2020, 2024, and 2025. More importantly, the

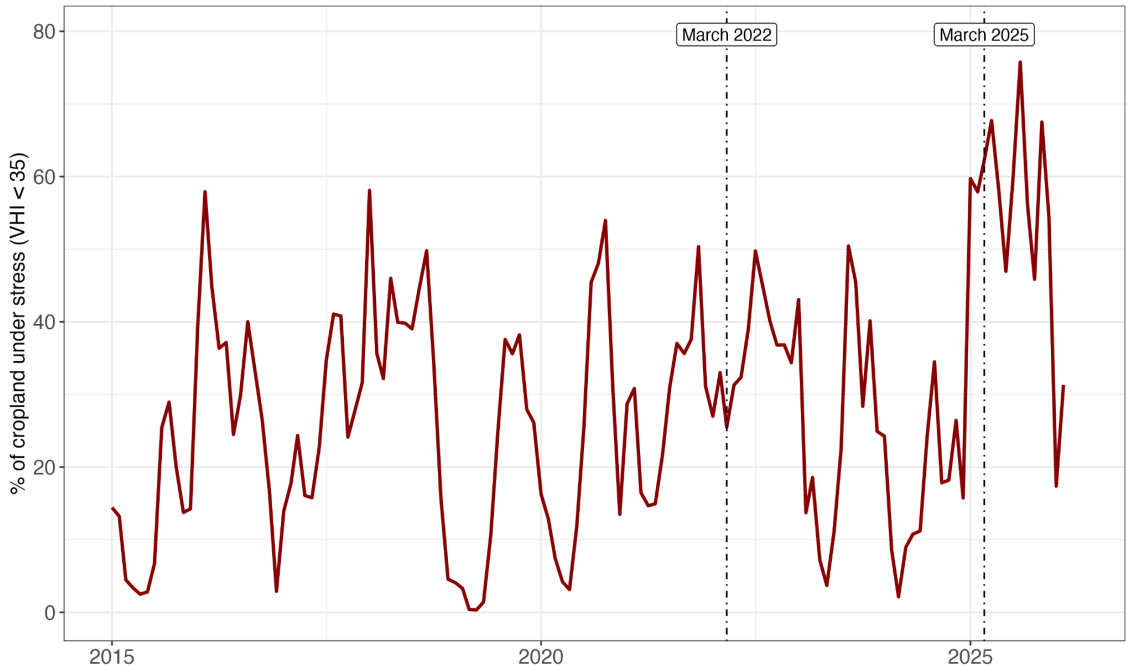
longer-term indicator (SPEI-12) remains predominantly below zero since 2021, indicating prolonged drought conditions. Coupled with limited irrigation capabilities, these drought conditions translate into severe vegetation stress. Figure 1c presents the Agricultural Stress Index (ASI) for 2015-2026, which measures the percentage of cropland affected by drought-induced vegetation stress (VHI < 35). Higher values indicate that a larger share of cultivated land is experiencing stress during the crop cycle. The series exhibits pronounced seasonal volatility, with recurring spikes, where up to 60% of cropland is affected. In 2025, the values repeatedly exceeded 60%, indicating that up to three-quarters of cultivated land experienced vegetation stress during the most acute phase of the recent drought.

Figure 1b. Standardised Precipitation-Evapotranspiration Index (SPEI) trends in Syria (2015 - 2026)



Note: *Own visualization of the SPEI between 2015 and 2026. Data sources: Land and Climate Service (n.d.). SPEI-3 represents short-term climatic conditions, typically reflecting seasonal rainfall variability. SPEI-12 captures longer-term hydrological conditions by integrating precipitation and evapotranspiration over a full year, making it more indicative of prolonged droughts or wetter periods. Vertical lines indicate the beginning and end of the BLRS Phase 1.*

Figure 1c. Agricultural Stress Index (ASI) trends in Syria (2015 - 2026)



Note: *Own visualisation of the Agricultural Stress Index between 2015 and 2026. Data source: FAO (2026a). The ASI is an early-warning indicator that captures the share of cropland that is affected by drought through combining time-averaged Vegetation Health Index (VHI) conditions during the crop cycle with the share of arable pixels falling below a critical VHI threshold. Vertical lines indicate the beginning and end of the BLRS Phase 1.*

These overlapping political, economic, and climatic challenges severely undermine Syria's agricultural sector. For instance, the output of wheat, one of the country's core staples, has declined by more than 50% compared to pre-war levels of roughly 4 million metric tonnes, with the 2025 output projected to be even lower due to the drought (FEWS NET, 2025). The food security situation remains strained. The declining domestic food availability continues to contribute to persistently high food insecurity, with around 35% of the Syrian population being food insecure in 2025 (WFP, 2026; FEWS NET, 2025). Additionally, households in Syria are dependent on the use of negative food-related coping strategies, such as cutting essential food expenditures, borrowing and purchasing food on credit, and consuming cheaper or less preferred foods. At the same time, asset-based coping strategies have become more limited after years of depletion, weakening the resilience of households and their ability to respond to future shocks (FEWS NET, 2025). Particularly concerning, early marriage remains a common coping strategy in Syria, as some households resort to marrying off young daughters to ease financial pressure (UNFPA, 2025). Against this backdrop, assistance plays a vital role in Syria. In 2025, 16.5 million Syrians require humanitarian assistance (OCHA, 2025).

2.2 Current evidence on the impacts of agricultural support in crisis-affected settings

In crisis-affected settings, like in Syria, farming households face simultaneous production shocks and market disruptions that reshape both their decision-making and well-being. For instance, armed conflicts undermine food systems through destruction, displacement, and resource allocation away from productive investment, weakening both on-farm capacity and value chains (Vesco et al., 2025). Similarly, climatic stress, particularly drought, deteriorates crop yields, reduces pasture and water availability, and triggers destocking and exit from livestock keeping, as livestock productivity declines (Tahir et al., 2018). Additionally, during droughts, livestock disease risks may rise as animals weaken and herd movements intensify (Catley et al., 2014).

At the same time, agriculture can be a key coping and recovery mechanism for households during crises (Arias et al., 2019; Bozzoli & Brück, 2009). For example, agriculture provides food for households' own consumption, reducing market dependence, and can be a reliable source of livelihood and income for rural communities. Additionally, agricultural assets such as land, livestock, or machinery can function as both productive and liquid assets, which can help farmers smooth their consumption during prolonged crisis periods (Acosta et al., 2021). Such asset ownership is particularly important for women, who often face greater constraints in accessing and controlling productive resources (Collishaw et al., 2023). Hence, agricultural assistance can be a critical strategy to restore agricultural productivity in the short-term and to rebuild livelihoods during and after crises, thereby improving food security and resilience (FAO, 2025a). Yet, rigorous causal evidence on the impacts of such programmes in complex crisis settings remains limited (Al Daccache et al., 2024).

Evidence on agricultural and livestock input provision

Existing evidence from crisis settings, although limited, shows that the provision of in-kind agricultural inputs, such as seeds or tools, is effective in increasing short-term agricultural productivity, strengthening household food security, and reducing reliance on harmful food-related coping strategies (Baliki et al., 2023; 2024; Brück et al., 2019; Valli et al., 2022). Particularly female-headed households often benefit from small-scale agricultural support (Weiffen et al., 2025a). Similarly, during droughts, the provision of direct veterinary services does not just prevent and treat animal diseases and reduce animal mortality (Catley et al., 2014; Kappes et al., 2023), but also reduces the dependence on harmful livelihood coping

strategies (Baliki et al., 2021). Emerging evidence further suggests that providing agricultural inputs ahead of drought shocks can be a promising way to reduce losses and protect livelihoods (De Brauw, 2025). Interventions addressing livestock input constraints can improve herd productivity in the short-term (Chen, 2024), while artificial insemination requires adequate time to lead to higher milk output, and its positive impact on animal productivity is usually only detected five years after treatment (Dizyee et al., 2019). However, the impact of such livestock services are less studied in crises-settings, and it is unclear if these impacts are evident when livestock keepers face compounding climatic, economic, and political challenges.

Evidence on farmer field schools and other capacity building activities

Farmer Field Schools are another promising approach to strengthening agricultural capacity, particularly for climate adaptation. FFS uses a people-centred, participatory learning model in which farmers meet regularly in the field to observe, experiment, and discuss production challenges in their local context. Through this hands-on process, they aim to build farmers' technical skills, critical thinking, and decision-making so they can improve production and livelihoods (FAO, 2026b). Empirically, FFS have been shown to improve farmers' knowledge and encourage the adoption of good agricultural practices, which often translates into higher agricultural production and productivity in low- and middle-income countries (Waddington et al., 2014).

Evidence from drought-affected settings suggests that improved practices promoted through FFS, such as better crop and soil management and more efficient use of water and inputs, strengthen climate adaptability and increase resilience against drought (Berhanu et al., 2024; Chandra et al., 2017; Pienaah et al., 2024). Moreover, they contribute to strengthening food security and household resilience by improving agricultural productivity and supporting livelihood and income diversification (Doocy et al., 2017; Larsen & Lilleør, 2014; Sato et al., 2025). Other capacity-building approaches have also been linked to gender equity in low- and middle-income settings (Baliki et al., 2019). This may be especially relevant in crisis contexts, where women often bear a disproportionate share of the economic burden and face severe constraints limiting their business capacity (FAO, 2025d; Stojetz & Brück, 2024).

However, FFS or other capacity-building activities alone may not be sufficient to generate substantial production gains where compounding constraints persist (Waddington et al., 2014; McKenzie, 2021). Evidence suggests that bundled, integrated support packages are often more effective than one-off singular interventions. Combining complementary support modalities, such as input provision and capacity building, can address multiple constraints at once, which is

particularly important where markets are disrupted, and public or private services are weak (Banerjee et al., 2015; Ruel et al., 2018; Weiffen et al., 2025b).

In summary, there is clear potential for different agricultural support approaches in improving productivity, food security, and resilience of farmers, which may be especially valuable when they face repeated drought exposure and market volatility. However, it remains unclear whether these effects translate to the Syrian context, where farmers face overlapping shocks such as insecurity, volatile macroeconomic conditions, and recurring climate stress that can mute the returns of these investments.

2.3 Description of the FAO BLRS programme and activities

In Phase 1 of the BLRS, FAO implemented a comprehensive package of agricultural interventions in 19 sub-districts in five governorates across Syria (Aleppo, Deir-Ez-Zor, Hama, Homs, and Rural Damascus). The programme followed a holistic approach, combining various modalities of agricultural and livelihood support, and FAO reached approximately 20,000 households in Phase 1. Below, we describe these interventions, paying particular attention to the activities that were assessed in this impact evaluation.

One of FAO's core activities is Farmer Field Schools (FFS). FFS are participatory, field-based learning groups in which farmers meet regularly to develop their skills through hands-on experimentation and observation (FAO, 2026b). In BLRS Phase 1, FAO reached approximately 9,500 farming households through 390 FFS (FAO, 2026c). FFS activities targeted low-income farming households with limited landholdings (below 2.5 ha) who were not already enrolled in similar schools, and prioritised female-headed households and households caring for vulnerable members such as elderly persons or people with disabilities or chronic illness. In Phase 1, the FFS were implemented between July 2023 and April 2024 and can be grouped as follows:

Livestock Farmer Field Schools (henceforth "Livestock FFS") were delivered across three specialisations: cattle, sheep, and maize production for fodder use. Cattle and sheep FFS promoted appropriate vaccination protocols, early detection of symptoms to reduce disease outbreaks, and emphasised biosecurity measures. Maize FFS addressed sustainable fodder production. Across all three types of schools, Livestock FFS aims to strengthen animal health and productivity through practical training in balanced feed formulation, disease prevention, improved livestock management practices, and enhanced breeding techniques to increase

animal yields. In total, the cattle FFS enrolled 3,363 beneficiaries, the sheep FFS reached 1,431 beneficiaries, and the fodder maize FFS reached 492 beneficiaries (FAO, 2026c).

Crops Farmer Field Schools (henceforth "Crops FFS") were delivered across six specialisations: Summer Crops (e.g., sesame, peanuts, watermelon); Vegetables (e.g. tomato, eggplant, cucumber); Low Tunnel Vegetables (e.g., tomato, eggplant, cucumber, cultivated under plastic low tunnels); Open Field Vegetables (e.g okra, kidney beans), Winter Crops (e.g. lentils, garlic, potato, anise); and Fruits (e.g., grapes, olives, apricot, apple). Across all specialisations, the Crops FFS aim to strengthen agricultural productivity, sustainability, and climatic resilience by providing participatory, hands-on training in improved crop production and management. Farmers were supported in adopting Good Agricultural Practices (GAP) and Climate-Smart Agriculture (CSA) practices, enhancing resource-use efficiency, and applying locally adapted solutions suitable to specific agro-ecological conditions. In Phase 1, Crops FFS reached 4,307 households, who were required to have adequate access to water irrigation and prior experience in vegetable cultivation (FAO, 2026c).

During the same period, FAO provided livestock support in most of the FFS targeted villages[2], including artificial insemination and veterinary services, specifically:

Artificial insemination of cattle aims to improve herd genetics, increase calving rates, and reduce intervals between successive pregnancies, thereby enhancing the long-term productivity and resilience of livestock systems. By improving genetic quality and reproductive efficiency, the intervention is expected to contribute, over the medium to long term, to higher milk and meat production and, in turn, to improved food security and rural livelihoods. The intervention also strengthens disease control by reducing the risks associated with natural mating. Over 4,000 livestock breeders received support under this component.

Veterinary services were delivered to livestock-keeping households requiring animal health support and disease prevention services. These veterinary services aim to improve animal health to increase food production, strengthen food security among vulnerable households, and sustain the livelihoods of smallholder farmers. In total, almost 6,000 beneficiary households received veterinary services.[3]

In addition to the FFS and the provision of livestock services, FAO implemented a range of targeted interventions related to agro-processing, milk collection units, entrepreneurship

[2] 58 of the 65 FFS-targeted villages included in this study were targeted with artificial insemination and 59 were targeted with veterinary services.
[3] Additionally, there was a national cattle vaccination campaign unrelated to FAO's activities, which likely reached all beneficiary and non-beneficiary villages.

programmes, water rehabilitation activities, and women's empowerment and gender-focused interventions to address economic violence against women and early marriage.[4] More details on these activities, which are not covered explicitly as part of this impact evaluation, are provided in Table B1 in the Appendix.

2.4 Theory of change

The overall objective of BLRS is to strengthen the resilience of Syrian households, reduce dependence on emergency assistance, and prevent the use of harmful coping strategies. To address these objectives, FAO's interventions aim to improve farmers' capacities and abilities to withstand future shocks, and strengthen local agri-food systems. FFS support is expected to build farmers' knowledge and skills in crop production and livestock management. Given recurrent heat and water stresses due to drought episodes in Syria, FFS promotes practices to help farmers maintain adequate levels of livestock and crop production by improving crop and soil management and encouraging more climate-adaptive decision-making, thereby increasing the adoption of improved and sustainable practices. When combined with complementary inputs and services, such as animal health support, the adoption of improved practices can improve production and productivity, particularly for livestock.

In the short-term, higher production strengthens the food security and dietary diversity of households by increasing their access to own-produced food. In parallel, under continued economic and political uncertainty, greater reliance on home-produced food and key inputs (such as fodder or seeds) can reduce exposure to volatile markets and price spikes.

In the longer term, and conditional on market functionality, increased production and productivity can also support higher farm revenues and household income. The support is also expected to diversify and expand engagement in local value chains, such as agro-processing, as well as in the marketing of products, further increasing access to affordable food and opportunities for income generation.

Together, these channels can strengthen the resilience of farmers to maintain essential consumption and protect productive assets when shocks occur.

Finally, in a large number of FFS in Homs and Rural Damascus, farmers participated with their spouses in a couples' session to strengthen the economic role of women by improving joint

[4] FAO in collaboration with UNFPA, are implementing pilot interventions to reduce the economic violence against women and girls (VAWG pilot) in Homs and Rural Damascus under the Economic and Social Empowerment framework. Impact of these VAWG interventions will be provided as a separate report.

intrahousehold decision-making and gender-equitable attitudes. Although the FFS themselves did not include gender content, and the couples' sessions were not separately assessed in this evaluation, short-term improvements in shifting attitudes towards more gender equity among FFS beneficiaries are plausible.

3. Impact Evaluation Objective and Design

3.1 Objectives and learning questions

The primary purpose of this impact evaluation is to generate rigorous evidence on whether and by how much FAO support improves agricultural and welfare outcomes of farming households, and to translate learning into actionable recommendations to strengthen future programming. More specifically, the study assesses the short-term impacts of FFS (delivered alongside other agricultural support in the same communities) on food security, resilience, agricultural production and productivity, income, and attitudes related to gender-equity in line with the programme's theory of change as outlined in Section 2.4. Moreover, we examine the impacts of Livestock and Crops FFS separately to unpack any differential effects. The impact evaluation, hence, addresses two specific learning questions:[5]

LQ1. What are the short-term impacts of the programme on beneficiary farming households' food security, resilience, agricultural production and productivity, income, and attitudes related to gender-equity compared to non-beneficiary farming households?

LQ2. Do the impacts differ between beneficiaries enrolled in Livestock FFS and Crops FFS?

3.2 Study design and sampling strategy

To answer these learning questions, we design the impact evaluation using a quasi-experimental approach, where we compare changes in outcomes between FFS beneficiary households residing in villages targeted by FAO in Phase 1, and non-beneficiary households residing in non-targeted villages from the same subdistricts. Including the non-beneficiary group ensures that any changes in outcomes that we observe among beneficiaries in the before-versus-after comparisons can be uniquely attributed to the programme activities.

[5] These two specific learning questions are aligned with the overarching learning question posed in the Terms of Reference (Supporting Documentation) of this impact evaluation. The overarching question in the Terms of Reference was framed, however, more broadly as the final roll-out of the intervention and impact evaluation criteria were not yet finalised.

Targeted villages and beneficiary households are selected through a two-stage random proportional sampling based on location. In the first stage, we identified the villages that were targeted by FFS activities and livestock services under the BLRS programme. Then, we randomly selected a sample of villages proportional to the size of beneficiaries in each governorate from the full list of targeted villages that was provided by FAO. In the second stage, we then selected potential FFS beneficiaries residing in these targeted villages to take part in the survey.

Next, we selected non-targeted villages proportional to the number of beneficiary villages in each subdistrict. We first identified all Syrian villages with their geo-locations. Then, a sample of non-targeted villages was chosen randomly based on their geographic proximity to the targeted villages. This ensures that targeted and non-targeted villages have similar agro-climatic conditions, which is essential for estimating unbiased impacts of agricultural interventions at this scope. Approximately 20 households in each of these sampled villages were then selected at baseline to take part in the survey, such that they met the same selection criteria as beneficiary households that were part of the programme.

The planned sample comprised 1,945 households across 97 villages. For security reasons, four villages were excluded at baseline, and the baseline survey therefore reached 1,733 households in 93 villages. Following ex-post targeting adjustments, we excluded 386 non-beneficiary households residing in targeted villages to rule out spillover effects, resulting in a restricted baseline sample of 1,347 households.[6] We successfully followed up with 1,201 households in 90 villages (65 beneficiary and 25 non-beneficiary villages).[7] Further details on the sample composition are provided in Section 6.

Following the sampling strategy, the same beneficiary and non-beneficiary households were surveyed three times during the same agricultural season (January - March): at baseline in 2023 (before implementation), at midline in 2024 (during implementation), and at endline in 2025 (after completion of FFS activities). Conducting the follow-up surveys during the same months of the year reduces any seasonal effects on production cycles, food consumption patterns, and income generation, making the analysis more robust. The data were collected between January and March, during the growing season of winter crops, a period in which many rural households rely heavily on markets and purchase inputs to bridge seasonal gaps

[6] Over the impact evaluation period, there were changes in the assignment of some of the targeted villages. We continued surveying households in these villages and we changed the assignment from beneficiaries to non-beneficiaries.
[7] Assuming a small standardised effect size (Cohen's d = 0.15), the achieved sample size provides approximately 80% power at the 10% significance level.

before harvest. Furthermore, the surveys took place outside the month of Ramadan to avoid changes in daily food consumption and expenditure routines, which could also affect responses. The January-March 2023 baseline reflects conditions shaped by continued conflict-related disruption, weak institutions, and severe macroeconomic instability. By contrast, the endline in February 2025 took place in a markedly different, but still highly challenging, environment characterised by major policy changes and climatic stress.

In this report, the analysis uses the baseline - endline panel to estimate the short-term effects of FFS support after all implementation activities were completed.[8]

4. Data Collection, Outcomes, and Ethical Considerations

4.1 Questionnaire and outcome variables

In collaboration with the FAO's Monitoring and Evaluation (M&E) team, we developed the household survey questionnaire to address the learning questions stated in Section 3.1 using standardised modules, including FAO's Resilience Index Measurement and Analysis (RIMA II). We use multiple food security measures to capture its different dimensions. We adapted items to the Syrian context, for example, by using locally common examples for each food group. The questionnaire is translated from English to Arabic and coded into Excel forms to be used for data entry purposes. The questionnaire was thoroughly tested by the ISDC team, the FAO M&E team, and the enumerators during the training sessions. The same questionnaire is used to collect data at baseline and endline. We provide an overview of the main variables used in this report below and a more detailed description of outcome variables in Table B2 in the Appendix.

Food security and resilience

- ➔ The **Food Consumption Score** (FCS) includes information on the food consumed in households in the past seven days before the survey. The FCS indicates the frequency of consumption of weighted food categories (WFP, 2008).
- ➔ The **Household Dietary Diversity Score** (HDDS) measures the different types of food consumed by households in the past 24 hours before the survey (Swindale & Bilinsky, 2006).

[8] Midline data were excluded from the impact analysis because a large share of the FFS activities were not yet completed.

- ➔ The **Food Insecurity Experience Scale** (FIES) is an experience-based measure of household food security consisting of eight questions that focus on self-reported food-related behaviours and experiences associated with increasing difficulties in accessing food due to resource constraints in the past 30 days. The severity of the questions ranges from (1) being worried you or your household would not have enough food to eat (8) to you or others in the household going a whole day without eating (FAO, 2017).
- ➔ The **reduced Coping Strategies Index** (rCSI) captures households' food-related coping behaviors in the seven days prior to the survey, measuring frequency of five standard strategies (weighted by severity) when lacking food or money to buy it. Higher scores indicate greater food-access stress (Maxwell & Caldwell, 2008). Given that the questionnaire did not include the standard rCSI module, we approximate this measure by rescaling FIES items using the rCSI severity weights.
- ➔ The **Resilience Capacity Index** (RCI) measures household resilience to shocks and food insecurity by assessing four key pillars: Adaptive Capacity, Access to Basic Services, Assets, and Social Safety Nets. The RCI defines resilience as the ability of households, communities and systems to prevent, adapt to, and recover from shocks and stresses in ways that reduce chronic vulnerability and facilitate inclusive growth (FAO, 2016). The indicator was generated using FAO's RIMA II Shiny app (available online), which applies a two-stage factor analysis to compute a resilience score ranging from 0 to 100 for each household, where higher values indicate stronger resilience (FAO, 2016).

Agricultural production and productivity

- ➔ **Crop production** includes information on the main crops that were cultivated by households in the previous agricultural season, including land size used and harvest amount. For measuring crop productivity, we use harvest and cultivated land size to calculate yields for each of the main crops (harvest in tonne/land area in hectare).[9]

- ➔ **Livestock production** includes information on livestock ownership, focusing on cattle, sheep, goats, and poultry. If households own livestock, we also include specific modules to capture the number of livestock, including newborns, in the previous season. We measure animal milk productivity for cattle, goats, and sheep through the number of daily litres produced per animal.

[9] We also intended to measure these parameters for vegetables. However, we did not reach a sufficient number of observations per crop to conduct a comprehensive analysis.

Income

- ➔ **Household income** includes estimated household income over the past 12 months for overall income, crop production, livestock breeding, off-farm family business, wage and salary income, transfers, and social assistance.

- ➔ **Value chain income** includes receiving any income from value chains from the following activities: own crop sales (before processing), own crop sales (after processing), own livestock sales, trading of livestock (products), processing and storage, support services and agricultural inputs.[10]

Attitudes related to gender equity

- ➔ **Attitudes related to gender equity** include respondents' attitudes about roles and behaviours for men and women, both within the household and in the community. The module includes perceptions of women's equal participation, leadership, intra-household responsibilities, and child marriage.

4.2 Ethical considerations

ISDC adheres to stringent practices and guidelines to ensure the confidentiality, privacy, and protection of both data and participants, in line with its "do no harm" policy and internal ethical standards for fieldwork and empirical research.[11] Given the non-sensitive nature of this impact evaluation, we did not seek formal external ethical approval. Nevertheless, all activities were designed and implemented in accordance with ISDC's and FAO's ethical guidelines and policies to ensure the highest standards of participant protection.

First, all respondents were at least 18 years of age and had provided verbal informed consent prior to participation in the survey. The consent form, delivered in plain Arabic, clearly explained the purpose of the study, what participation entailed, how the data would be used, and participants' rights. Respondents were explicitly informed that participation was voluntary, that they could skip any question or withdraw at any time without any negative consequences.

[10] Although the data include information on the revenues from the sales across the value chain, we use binary indicators of engagement as the reported revenues are inconsistent and have a high number of outliers.

[11] These standards are in line with the FCDO's ethics principles and standards for research, evaluation and monitoring, including, for example, maximising benefits and minimising harm; respecting people's rights and dignity; acting with honesty, competence and accountability; and delivering work of integrity and merit (Department for International Development, 2019), and protection from harm, especially from sexual abuse, exploitation and harassment.

Second, participation in the study did not influence access to programme benefits. Participants were clearly informed that their participation would not affect any interventions they currently receive or may receive in the future. Similarly, we ensured that non-beneficiary households were not promised future benefits if they take part in the study.

Third, strict data protection protocols were implemented to safeguard respondents' privacy. Personally identifiable information (PII), including names and phone numbers, was collected solely for follow-up purposes and securely stored by FAO in Syria. ISDC did not have access to this personal information. Instead, anonymised unique household IDs were used to link baseline and endline survey data, and to track programme activities in coordination with FAO's M&E team. These IDs enable accurate longitudinal tracking while ensuring that survey responses remain fully anonymised and cannot be traced back to individuals.

Fourth, data collection procedures were designed to minimise respondent burden. Enumerators received comprehensive training and conducted pilot surveys to familiarise themselves with the questionnaire and ensure smooth data collection. Interviews were scheduled with participants in advance, typically one day prior, and conducted as efficiently as possible. No financial or in-kind compensation was provided to take part in the survey.

Lastly, both survey design and data collection activities align with FCDO's Principles for Digital Development (Department for International Development, 2018), particularly Principles 1 on designing with users, Principle 2 on understanding the local context, Principle 7 on reusing and improving tools and procedures as well as Principle 8 on addressing privacy and security. These principles were applied with careful consideration of the Syrian context to mitigate risks and uphold the commitment to "do no harm".

4.3 Enumerator training, data collection, monitoring, and data cleaning

Prior to the start of the data collection, the FAO M&E team in Syria, with support from ISDC, conducted comprehensive training of the enumerators. The FAO M&E team presented and explained the data tools and protocols in detail. ISDC provided guidance to the FAO M&E team based on lessons learnt from previous surveys conducted using similar modules, paying particular attention to prior errors made during data collection. In addition, ethical considerations and procedures were discussed during the training in compliance with ISDC's and FAO's data collection ethical standards. Enumerators conducted practice interviews before each survey round and discussed any unclear points with the FAO M&E team.

The final data collection team included around 40 enumerators for each round and one coordinator. Enumerators reported field challenges as they arose to the FAO M&E team so that solutions could be identified promptly. The trained enumerators conducted the household surveys with paper-based questionnaires at baseline, with data subsequently entered on Microsoft Access. At endline, data was directly entered on the Kobo Toolbox. The enumerators surveyed respondents who were available at the time of the data collection, with a priority for surveying the household head.[12] The survey took, on average, around 60 minutes to be completed.

After the completion of each wave of data, ISDC checked the data quality and addressed any irregularities with the FAO M&E team. Given that enumerators were recruited locally, we conducted back-end checks, including screening for enumerator-specific biases for a set of questions, and no concerning patterns were detected. We then cleaned the data very thoroughly. For example, each livestock variable (ownership, production, etc.) was cross-checked against related livestock indicators to ensure consistency and accuracy in the sample. Ambiguous entries were turned to missing. Any issues arising in the assignment of the villages or discrepancies between the data and the sampling protocol were addressed to ensure all the information on the beneficiary status of households was correct. We generated the variables and indicators as explained in Table B2 in the Appendix. We then merged the baseline and endline data using unique identifiers to match participants across waves. A clean panel dataset, including only respondents with both baseline and endline surveys, was prepared for the impact analysis.

Data access: Micro-level data will not be made publicly available. Upon reasonable request, de-identified data can be made available after prior approval from FAO Syria's Data Protection Unit and would be subject to appropriate safeguards.

4.4 Roles and responsibilities of various stakeholders

ISDC was responsible for the literature review, the impact evaluation design, the development of the questionnaire, providing support during the enumerator training and data collection, data quality check, data cleaning and analysis, interpretation of the findings, drawing lessons and recommendations, and the write-up and revision of the impact report.

[12] The survey was conducted by female and male enumerators. Given that the questionnaire focused mainly on agricultural production and livelihoods, no additional gender-sensitive measures, such as same-gender matching between enumerators and respondents, were applied. However, upon request, particularly for female respondents, surveys were conducted by enumerators of the same gender.

The FAO Syria M&E team co-designed the tools, obtained local approval for data collection, led the enumerator training, coordinated the data collection, conducted data entry checks, and provided early feedback on the first and revised drafts of the impact report.

The FAO Syria BLRS team was responsible for the implementation of the activities and shared context assessments that were conducted in the areas where the interventions are taking place to help with the framing and contextualisation of the findings in this report. They also provided feedback on the first draft of the report.

FCDO provided funding to the BLRS project, including the impact study. They have also provided their input and feedback on the design of the interventions and the first draft of the report.

The findings and lessons in this report were generated by ISDC and independently of other parties with an interest in the evaluation. They were presented and discussed with the FAO Syria BLRS team only for contextualisation.

5. Empirical Strategy and Methodology

We present all results using the balanced panel, which includes households surveyed at both baseline and endline. We start with baseline balance checks between the beneficiary and non-beneficiary groups to test the validity of the design (Section 6). We then provide a descriptive analysis of the sample (Section 7). We present descriptive trends across the two waves to show how the outcomes changed during the study period for all households regardless of their beneficiary status, with breakdowns by key household characteristics, where relevant.

For the main impact analysis, we use difference-in-differences (DiD), which estimates programme effects by comparing changes over time between the beneficiary and the non-beneficiary group. Under the parallel trends assumption, DiD accounts for time-invariant differences between groups and common shocks affecting both groups, such as price changes or drought. The main DiD estimation includes only the time indicator, the beneficiary status, and their interaction. We also conduct two robustness tests. First, we apply entropy balancing weights based on baseline selection variables and governorate. Specifically, we balance on total household income, number of cattle owned, total cultivated land area, household-head gender, the presence of a household member with a disability, and governorate.[13] Entropy balancing

[13] Missing variables are imputed as zeros for weighting and for control variables.

reweights the non-beneficiary group on selected observed baseline characteristics to better resemble the beneficiary group. We included the same variables with their baseline values as control variables in the DiD regressions to improve the precision of the estimates. Second, we use a mixed-effects model with random village effects to account for unobserved differences between villages and adjust for the fact that households within the same village may be more similar to each other than households from different villages. We disaggregate the main findings by the gender of the household head and governorates to explore the heterogeneity of the impacts.

In a second set of analysis, we disaggregate impacts by FFS type at the village level: villages that received Livestock FFS and villages that received Crops FFS.[14] We then estimate separate DiD models comparing (i) Livestock FFS beneficiaries to non-beneficiary households and (ii) Crops FFS beneficiaries to non-beneficiary households. As robustness checks, we weight and adjust for the same set of variables used in the main analysis and additionally control for participation in the other FFS type. Again, we test the robustness of the results using a mixed effects model with random village effects.

6. Sample, Attrition, and Baseline Balance

Table 1 presents the household sample surveyed at both baseline and endline across the five governorates, disaggregated by household type (beneficiary and non-beneficiary households), along with attrition rates. Overall, the balanced panel consists of 1,201 households (758 beneficiary and 443 non-beneficiary households), out of 1,347 households that were reached at baseline. In the panel data set, 33% of the households reside in Aleppo, followed by 31% residing in Homs, 20% in Hama, 10% in Deir-Ez-Zor, and 6% in Rural Damascus.

We observe an overall attrition rate of 11%. This level of attrition is similar to other recent panel studies in Syria, ranging from 9-13% (Baliki et al., 2021; Baliki et al., 2024). The highest attrition in the sample is observed in Hama, where three entire villages could not be reached at endline (22.3%), followed by Rural Damascus (17.9%) and Homs (11.8%), while Aleppo and Deir-Ez-Zor show minimal attrition (both below 2%). Examining attrition by beneficiary status shows an 11% attrition rate for the beneficiary group and 10% for the non-beneficiary group, indicating that attrition is not systematically related to the beneficiary status of households.

[14] Identification operates at the village level. Households are classified as beneficiaries of a given FFS type based on residing in a village where that type was provided. In 63% of the beneficiary villages, both types of schools were provided. Households residing in these villages are included in both groups.

To check if attrition affects the study design, we compare baseline characteristics of attrited and non-attrited households of all 1,347 households reached at baseline (Table C1a). Overall, there are a few differences between attrited and non-attrited households. Non-attrited households are slightly larger in size and more likely to have a married household head (both $p < 0.01$). There are also some differences in livelihood composition: non-attrited households are more likely to rely on crop production (38.4% non-attrited vs. 24.4% attrited; $p < 0.01$), while attrited households more often report off-farm business income (25.4% attrited vs. 10.5% non-attrited; $p < 0.01$). One plausible explanation is that households engaged in agriculture had stronger incentives to take part in the study because of the agriculture-focused nature of the questionnaire. Taken together, the similarity of the attrition rate with other studies as well as the limited differences between attrited and non-attrited households, suggest that attrition is unlikely to pose a major threat to the validity of the analysis.

Table 1. Sample size and attrition rates by governorate and beneficiary status

Governorate	Beneficiaries			Non-beneficiaries			Total
	Baseline	Endline	Att. %	Baseline	Endline	Att. %	Att. %
Aleppo	279	276	1.1%	121	120	0.8%	**1.0%**
Deir-Ez-Zor	57	56	1.8%	61	60	1.6%	**1.7%**
Hama	218	165	24.3%	95	78	17.9%	**22.3%**
Homs	242	216	10.7%	179	155	13.4%	**11.8%**
Rural Damascus	59	46	22.0%	36	32	11.1%	**17.9%**
Total	855	759	11.2%	492	445	9.6%	**10.6%**
Panel sample	758	758	-	443	443	-	-

Note: *Attrition rates are calculated as the share of baseline households not re-surveyed at endline. "Total" combines beneficiaries and non-beneficiaries within each governorate. The panel sample includes households observed in both waves only.*

To assess the comparability of the households in the beneficiary and non-beneficiary groups, Table C1b in the Appendix compares baseline demographic and socio-economic characteristics between beneficiary and non-beneficiary households in the panel. On average, beneficiary households rely more on agriculture and livestock keeping as their main income sources compared to non-beneficiary households. Moreover, households in the beneficiary group are slightly larger than households in the non-beneficiary groups. All other demographic and

socio-economic characteristics do not differ statistically between groups, suggesting the beneficiary and non-beneficiary groups are broadly similar, decreasing the risk that pre-intervention differences could bias the impact estimates. For a detailed baseline balance analysis between the two FFS groups and the non-beneficiary group, see Tables C2 and C3 in the Appendix C.

7. Descriptive Statistics

Before presenting the impact results, we briefly describe the balanced panel sample at baseline and how key indicators evolved over time. Unless stated otherwise, the descriptive statistics pool beneficiary and non-beneficiary households together, and are intended to characterise the baseline and broader trends in the study areas.

As shown in Table C1b in the Appendix, around 34% of households are female-headed, and the average household head is 46 years old. A large proportion of female household heads are widowed, and 80% of the household heads can read and write. Households include around seven members on average, and about one-third include at least one member with a disability. Households primarily rely on livestock keeping (around 40% of the average income in the past 12 months) and crop production (around 38% of the average income in the past 12 months) for income generation, with minimal dependence on transfers or assistance.

Food access and diet quality were, on average, of acceptable levels at baseline. Over the study period, we observe improvements in both the FCS and the HDDS (Table C4). The average FCS rose from 57.1 at baseline by 3.2 points at endline, while HDDS increased from 6.6 to 7.2 food groups per day. Households owning livestock have, on average, substantially higher FCS (60.1 at baseline) than households who do not own any livestock (42.0 at baseline) and female-headed households have, on average, lower FCS than male-headed households (53.3 versus 58.0) (Figure C1a). We also observe clear regional variation of these indicators as shown in Figure C1b. Farmers in Aleppo have the highest average FCS (above 60 points), while farmers in Hama have the lowest average FCS (47 points).

Mild levels of food insecurity, as measured by FIES, were widely prevalent at baseline and remained relatively high over the study period (Table C4). Almost all households were unable to eat healthy food (reported by 97% of households at both baseline and endline), and had eaten only a few kinds of food (96% at both waves), and the share of households worrying about not having enough food was 75%. The share of households reporting experiences of moderate food insecurity was also relatively prevalent at baseline: 52% of households skipped

a meal or had to eat less than what they needed, and 18% of households ran out of food. More severe experiences of food insecurity were less common at baseline and improved markedly over the study period: the share of households that reported being hungry but were not able to eat dropped from 19% at baseline to 3% at endline, and the share of households who went a whole day without eating decreased from 11% to 1%.

These improvements in food security occurred alongside persistent, and in some dimensions, intensifying shocks affecting both beneficiary and non-beneficiary households (Figure C2a). At endline, 84% of households report high purchasing costs and 65% of households report low agricultural output prices. In line with country-level trends, exposure to climatic and livestock-related shocks increased: exposure to heatwaves rose from 13% to 35% over the study period, and livestock diseases increased from 16% to 24%. Drought exposure remained, however, constant at around 35%. We also detect a clear regional variation in shock exposure (Figure C2b). About four in five farmers in Aleppo experienced heatwaves at endline compared to one in five farmers at baseline. These farmers also reported increases in livestock disease over the same period. More than 80% of farmers in Rural Damascus were affected by the recent drought episodes, compared to 24% of households in Hama.

Crop portfolios also vary regionally, as shown in Figure C3. At baseline 75% of farmers in Aleppo and Deir-Ez-Zor cultivate irrigated wheat, and 55% of farmers in Aleppo cultivate maize, which is uncommon in other governorates. 47% of farmers in Homs cultivated olives at endline which increased from 30% at baseline. The cultivation of barley is most common among farmers in Rural Damascus and Hama, whereas rainfed wheat is mainly cultivated by farmers in Homs.

Farmers allocate the largest share of their land at baseline for the cultivation of maize (1.8 ha, on average) and irrigated wheat (1.5 ha, on average) (Table C4). These farmers produce 9.5 t of maize and 4.3 t of irrigated wheat, on average. Both the size of the land and the harvest amount did not substantially change over the study period. The average yields of maize and irrigated wheat are around 5.2 t/ha and 2.9 t/ha, respectively - which are in line with country-level statistics. On the other hand, less than 1 hectare of land was allocated for the cultivation of barley or rainfed wheat, and yields were slightly above 1 t/ha for both crops.

At baseline, 55% of households owned cattle with an average herd size of 1.9 animals. Poultry ownership stood at 39% with an average flock of 7.4 animals, and 36% of households kept sheep with average herd sizes of 14 animals. 8% of households owned goats with an average herd size of 3.3 animals. Livestock ownership and herd sizes across all species declined from

baseline to endline (Table C4), consistent with stress on livestock-based livelihoods during the period (FEWS NET, 2025).

Yearly household income at baseline was $2,625, where the main sources of income were from livestock keeping and crop cultivation. At endline, and after adjusting for currency exchange rates, the yearly household income was $3,800, representing a 45% increase (Table C4). In line with the rising income, resilience, as measured by the RCI, improved over the study period. However, female-headed households consistently show lower levels of resilience than male-headed households (Figure C4). Higher RCI values indicate a stronger capacity to absorb, adapt to, and recover from shocks, for example through greater assets, stronger safety nets, or improved climate-adaptive practices.

Finally, a significant share of respondents had positive attitudes related to gender equity (Figure C5). For example, the share of respondents supporting women's participation in public life was relatively high and continued to increase over the study period. At endline, 73% of respondents agreed or strongly agreed to let their daughters work outside the home to support herself and 77% of respondents support women speaking out without any personal harm inflicted on her. The share of respondents who agreed or strongly agreed that, in certain situations, marrying their daughter before the age 18 is acceptable was 45%.

In summary, the descriptive analysis is consistent with country-level trends: food availability has improved and households have better access to diverse foods, which can be explained by the higher real incomes and the rebounding of the Syrian Pound. Similarly, severe levels of food insecurity have dissipated. However, large shares of households continue to worry about food and to use mild and moderate strategies to deal with its shortage. Households, on average, are more resilient, even as households continue to face rising climatic and economic shocks. Livestock destocking and lower agricultural outputs and yields, particularly for rainfed crops, are becoming more common as episodes of drought and heatwaves continue to persist.

In the next section, we provide causal evidence on whether FAO's agricultural support under the BLRS has contributed directly to improving or safeguarding these outcomes.

8. Impact Findings

We begin by presenting the average programme impacts on food security and resilience indicators, followed by impacts on key agricultural outcomes, income, and gender-equitable attitudes. We also present the heterogeneous programme impacts by gender of household

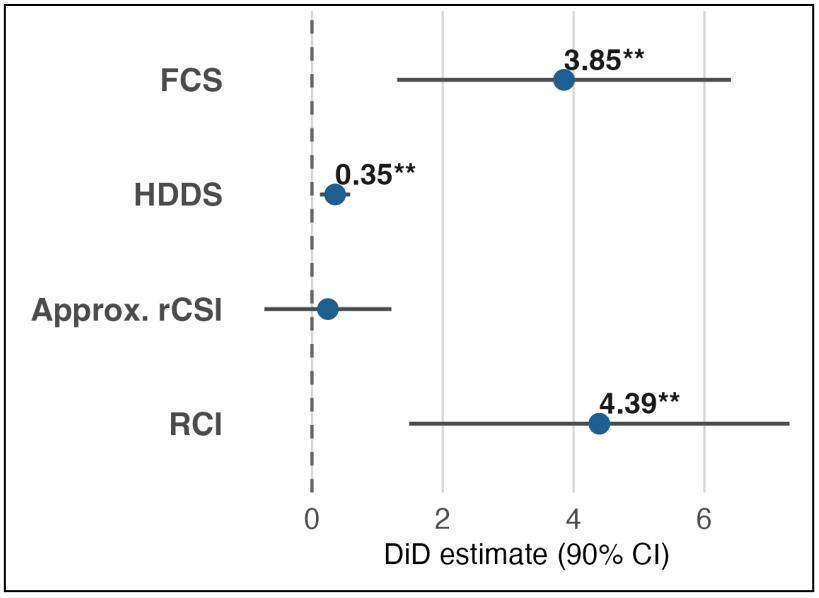
head and by governorate.[15] Finally, we present the impact findings for the two FFS groups separately. All the findings from these impact analyses are discussed in Section 10.

8.1 What are the short-term impacts of the programme on household food security and resilience?

Food consumption and dietary diversity

The programme significantly improved both the FCS and the HDDS, indicating that beneficiary households experienced short-term improvements in food consumption and dietary diversity (Figure 2). Specifically, the FCS increased by 4 points ($p < 0.05$), equivalent to a 6.5% increase relative to baseline levels. This result suggests, for example, that beneficiary households consumed on average one additional animal-sourced food item per week. Similarly, the HDDS increased by 0.35 points ($p < 0.05$), equivalent to a 5.1% increase compared to baseline levels. This improvement implies that one in three beneficiary households consumed one additional food group per day as a result of the programme.

Figure 2. Impact estimates on food security and resilience indicators



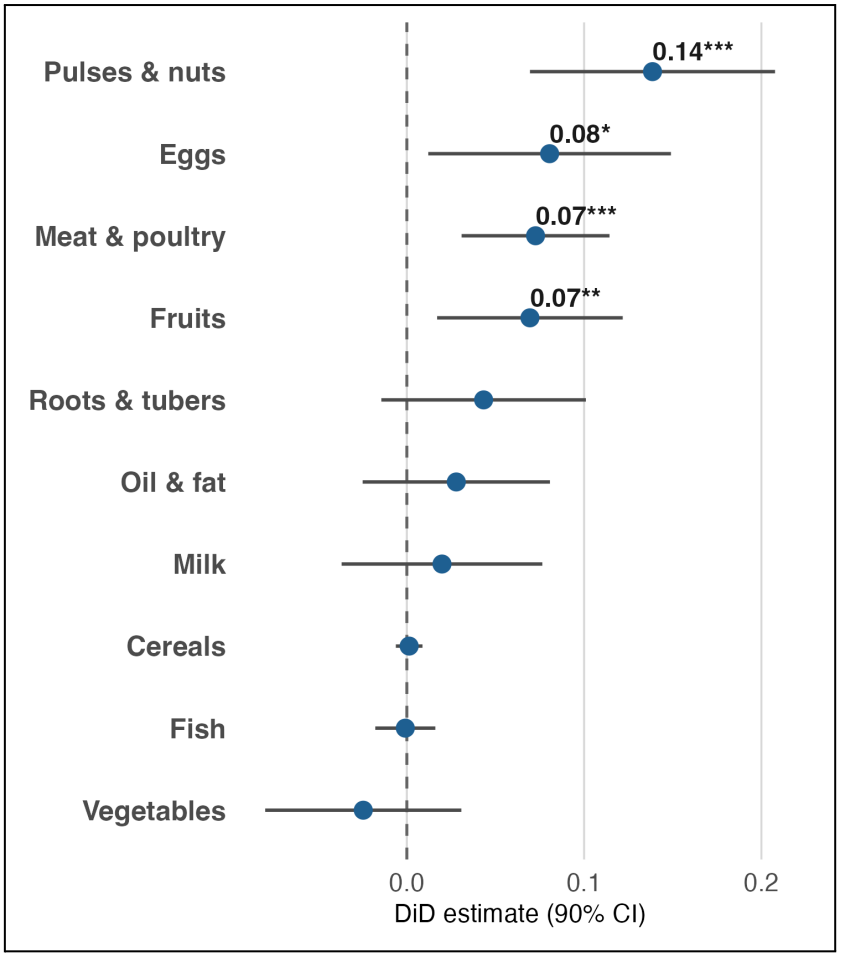
***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means of indicator values for reference: FCS = 58.98, HDDS = 6.81, approx. rCSI = 11.18, and RCI = 54.46. See Tables E1 and F1 in the appendix for robustness checks and heterogeneity analysis.*

[15] Note that smaller sample sizes in the heterogeneity analysis, particularly among female-headed households and at the governorate level, restrict statistical power to detect programme impact.

Although FCS increased by roughly 4 points for both male- and female-headed households, the effect is statistically significant ($p < 0.05$) only for male-headed households (Table F1). In addition, the programme increased HDDS by 0.44 points (6.4%, $p < 0.01$) among male-headed households, but only by 0.22 points (not statistically significant) for female-headed households, suggesting weaker improvements in food security and dietary diversity among female-headed households.

The programme's positive effects on food consumption and dietary diversity are mainly driven by higher consumption of pulses and nuts, fruits, eggs, and meat and poultry (Figure 3). Relative to baseline levels, the estimated increases are around 25% for pulses and nuts, 54% for fruits, 15% for eggs, and 88% for meat and poultry.

Figure 3. Impact estimates on the different HDDS food groups consumed (24h)



***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates indicate changes in share of households consuming these food items in the last 24 hours. Estimates are based on DiD models including treatment, wave, and their interaction. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means of proportions for reference: Pulses & nuts = 0.56; Eggs = 0.55; Meat & poultry = 0.08; Fruits = 0.13; Roots & tubers = 0.79; Oils & fats = 0.89; Milk & dairy = 0.81; Cereals = 1.00; Fish = 0.02; Vegetables = 0.73. See Table E1 in the appendix for robustness checks.*

By contrast, we do not observe changes in staples that were already widely consumed at baseline, such as cereals (consumed by nearly all households) and vegetables (73%), or in milk and dairy (81%), and there is little change for fish, which remains rarely consumed (around 2%).

Experience-based food insecurity

Figure 4 reports the impact on the FIES items.[16] Panel (i) shows the impact on the prevalence of experiencing food insecurity, and Panel (ii) shows the impact on the frequency of these experiences, both indicators reported for the past 30 days.

There are no programme impacts on mild food insecurity (Items 1 & 2) or severe food insecurity (Items 7 & 8). Since severe food insecurity became much less common over time for both beneficiary and non-beneficiary households, we find limited scope for additional improvement from the programme.[17] Programme impacts on moderate experiences of food insecurity (Items 3 - 6), however, tell a different story. On one hand, beneficiary households were more likely to report skipping a meal (increased by 19%; $p < 0.05$) and eating less than needed (increased by 12%; $p < 0.1$) during the same time period compared to non-beneficiary households. However, there were no changes to the frequencies of these experiences. On the other hand, and in line with the improvements detected for FCS and HDDS, beneficiary households were less likely to eat fewer varieties of food during the past month (decreased by 3%; $p < 0.1$) compared to non-beneficiary households. In other words, beneficiary households reported eating more varieties of food. This improvement is detected both for the prevalence and frequency of this experience.

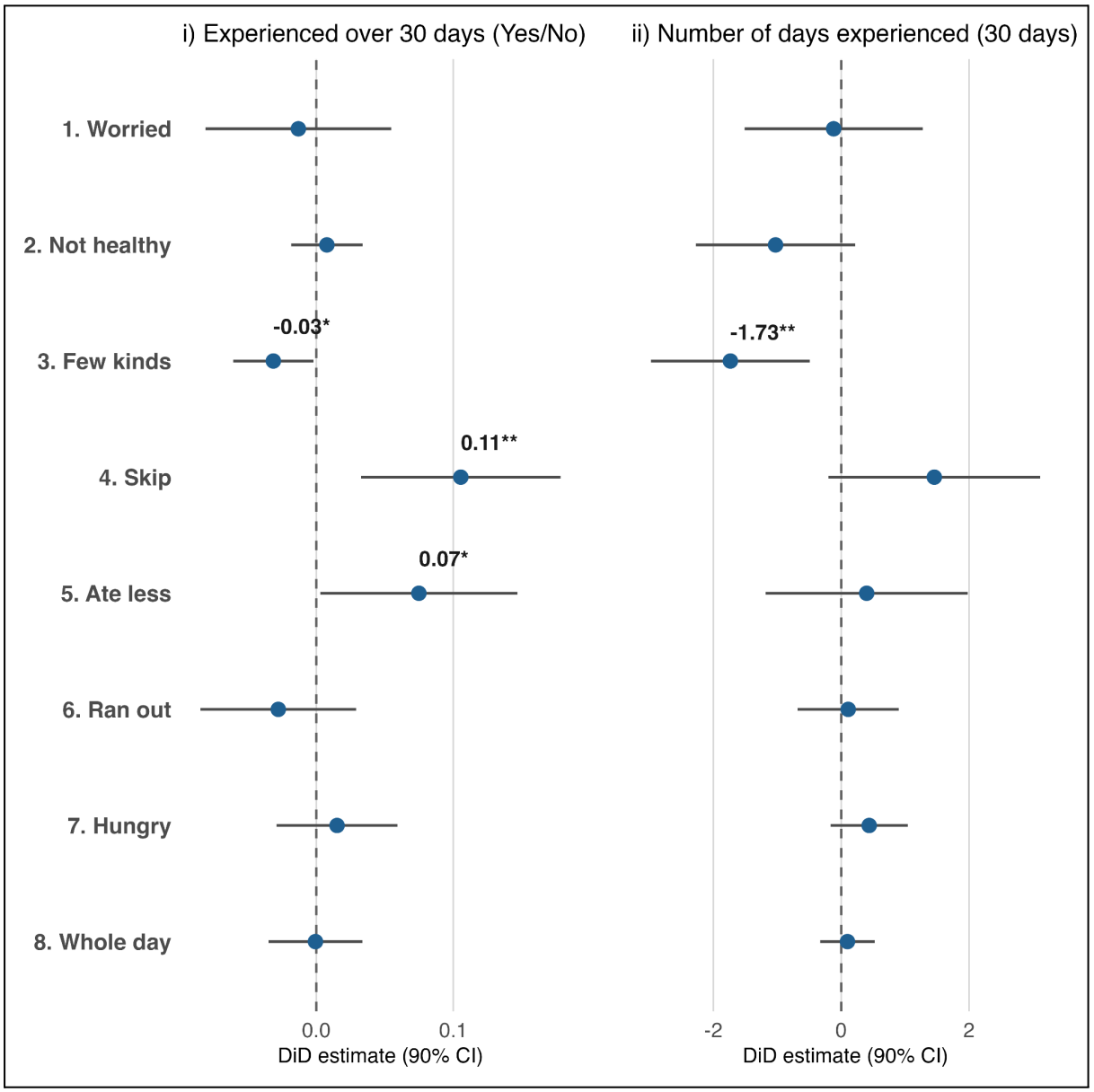
We observe gendered impacts in experiences of food insecurity (Table F1): For male-headed beneficiary households, the prevalence of skipping meals increased by 22% ($p < 0.05$) and of eating less than needed increased by 16% ($p < 0.1$) compared to male-headed non-beneficiary households. At the same time, male-headed households decreased the incidence of running out of food due to the programme compared to male-headed non-beneficiary households. However, none of these impacts are consistent with the frequency of experiencing the same indicators. There is no evidence of any impacts in FIES items for female-headed households.

[16] The severity classification for the FIES items is as follows: Mild food insecurity (items 1-2):"Worried" and "Not healthy"; Moderate food insecurity (items 3-6): "Few kinds of foods", "Skip", "Ate less" and "Ran out"; Severe food insecurity (items 7-8): "Hungry" and "Whole day".

[17] We do not report more impact estimates on the severe FIES items in this report because these were rarely reported at endline, leaving little or no scope for the programme to generate further measurable improvement. Hence, impact estimates may be misleading, as they are likely to reflect differences in baseline levels more than true differences in programme impact.

There were no changes to the rCSI, suggesting that while food consumption and dietary diversity improved among beneficiary households, constraints driving food-related coping persist and were not measurably reduced by the programme in the short term (Figure 2).

Figure 4. Impact estimates on the food insecurity experience scale items (FIES)



***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction, and in Panel (i) indicate changes in proportions, estimates in Panel (ii) indicate changes in days. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means for reference (30-day prevalence/number of days experienced in the last 30 days): Worried about food = 0.70 / 11.47; Unable to eat healthy food = 0.99 / 20.15; Ate few kinds of food = 0.96 / 19.06; Skipped a meal = 0.59 / 11.82; Ate less than needed = 0.58 / 11.68; Ran out of food = 0.15 / 2.14; Was hungry = 0.19 / 2.35; Went without eating all day = 0.10 / 1.12. See Tables E1 and F1 in the appendix for robustness checks and heterogeneity analysis.*

Resilience

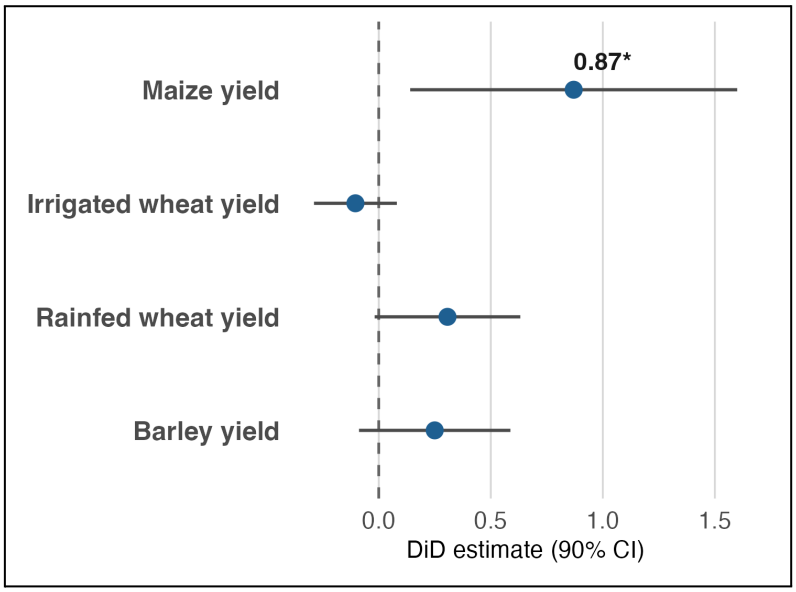
The programme substantially improved the resilience of beneficiary households, with an increase of 4.4 points on the RCI scale ($p < 0.05$), corresponding to an 8.1% improvement relative to non-beneficiary households' baseline levels (Figure 2). Similar to the HDDS indicator, the heterogeneity analysis for resilience (Table F1) shows that the programme effect is statistically significant among male-headed households (4.6 points, or 8.3%, $p < 0.05$), while the corresponding estimate for female-headed households is not significant.

8.2 What are the short-term impacts of the programme on agricultural production and yields?

Crop productivity

Maize and Barley are the main fodder crops in Syria, which followed an overall declining yield trend nationally during the study period (FEWS NET, 2025). Maize production was actively promoted in the livestock FFS. Against this backdrop, the programme significantly increased maize yields by about 1 t/ha (Figure 5). This corresponds to an increase of roughly 16% relative to the non-beneficiary group's baseline mean. The heterogeneity analysis by subgroup (Table F2) shows that the programme's impact on maize yields is mainly driven by improvements for male-headed households (1.29 t/ha, $p < 0.05$).

Figure 5. Impact estimates on the main crops' yields (last production season) among crop farmers



***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction and indicate changes in t/ha. Respondents who do not cultivate a certain crop are excluded from this analysis. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero.*

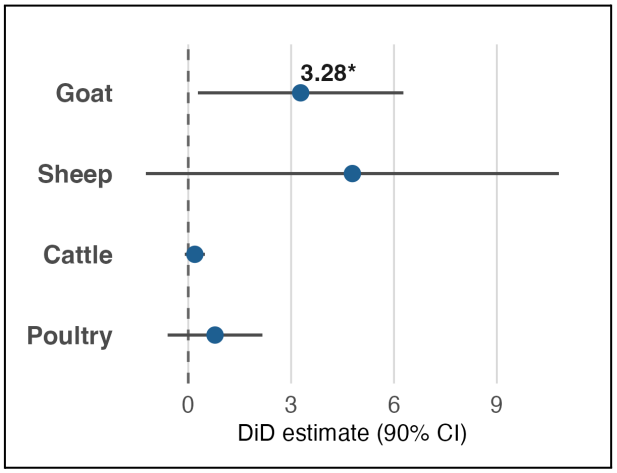
Non-beneficiary baseline means for reference: Maize = 5.55; Wheat (irrigated) = 2.86; Wheat (rainfed) = 1.22; Barley = 1.86 t/ha. See Tables E2 and F2 in the appendix for robustness checks and heterogeneity analysis.

We do not detect any significant programme impact on yields of the other main crops, which were not directly targeted through FFS in Phase 1. Although the average yields of barley and rainfed wheat were higher in the beneficiary group, these effects were not statistically significant (Figure 5).[18]

Livestock production and productivity

In the short term, the programme had no statistically significant impact on sheep or cattle ownership, despite both being directly addressed by the programme, though point estimates were positive for beneficiaries in both categories (Figure 6). Goats, by contrast, were not directly targeted by the FFS curriculum and only kept by 8% of the sample at baseline, yet beneficiaries owned on average 3.3 more goats than non-beneficiaries, an increase of 72% relative to baseline ($p < 0.1$). Still, the programme only marginally increased the net number of goats, but it ensured that beneficiaries could maintain their existing goat holdings while non-beneficiaries saw their livestock assets decline. As shown in Table F2, this effect was particularly evident for female-headed beneficiary households (+3.5 goats, $p<0.1$).

Figure 6. Impact estimates on livestock head ownership (past 12 months) among livestock keepers



***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction, and indicate changes in the number of livestock. This analysis includes only households that reported owning livestock in at least one survey wave. Observations were excluded for households that did not own any livestock throughout the study. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means for reference: Goat = 4.60; Sheep = 17.58; Cattle = 1.93 heads; Poultry = 8.00 heads. See Tables E2 and F2 in the appendix for robustness checks and heterogeneity analysis.*

[18] The non-significant effect for barley or rainfed yields could be driven by small sample size. We did not include the impact estimates for vegetables or fruits, as the sample size for each crop was insufficient.

Despite no overall statistically significant change in cattle and sheep milk productivity, we observe an increase in cattle milk productivity for beneficiary households in Aleppo ($p < 0.05$), and increases in sheep milk productivity in Aleppo ($p < 0.05$), Rural Damascus ($p < 0.1$), and Deir-Ez-Zor ($p < 0.05$) of approximately 0.5-1 litres per animal per day (Table F2). Notably, in arid Deir-Ez-Zor, goat milk productivity also increased ($p < 0.01$), while cattle milk productivity declined ($p < 0.1$), suggesting a shift toward smaller livestock potentially associated with the severe drought conditions in 2025.[19]

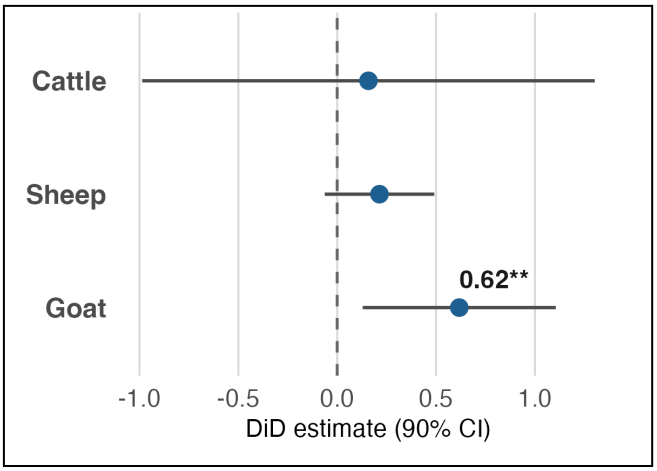
Overall, beneficiary households produced 0.6 litres more milk per goat per day ($p < 0.05$) relative to non-beneficiary households, equivalent to an 82% increase in productivity (Figure 7).[20] The decline in goat milk productivity by about 43% among non-beneficiary households suggests that the programme may have helped buffer productivity against adverse conditions. The heterogeneity analysis indicates that impacts are statistically significant among male-headed households (0.65, $p < 0.1$), but not among female-headed households (Table F2).

Taken together, the results suggest that FAO's activities helped safeguard fodder crop production and goat productivity, as well as regional sheep productivity, during a period of broader declines, likely linked to the severe drought conditions in 2025 and wider agricultural trends in Syria (FEWS NET, 2025). However, the programme did not reverse negative trends in the main livestock production for cattle, in the short term. The findings point to substantial regional heterogeneity in livestock productivity, where we observe noticeably larger improvements in Aleppo and Rural Damascus compared to other governorates, and a substitution effect from cattle towards smaller livestock in Deir-Ez-Zor.

[19] Note that these results should only be interpreted as indicative because of the small sample size.

[20] The original variable reports milk production in litres per day per animal. To enhance consistency, values were cross-validated using milk production and herd size. In cases where both values were sufficiently high (typically located in the upper right quadrant of the scatter plot), the ratio was recalculated to ensure alignment with average production patterns.

Figure 7. Impact estimates on livestock milk productivity (past 12 months)



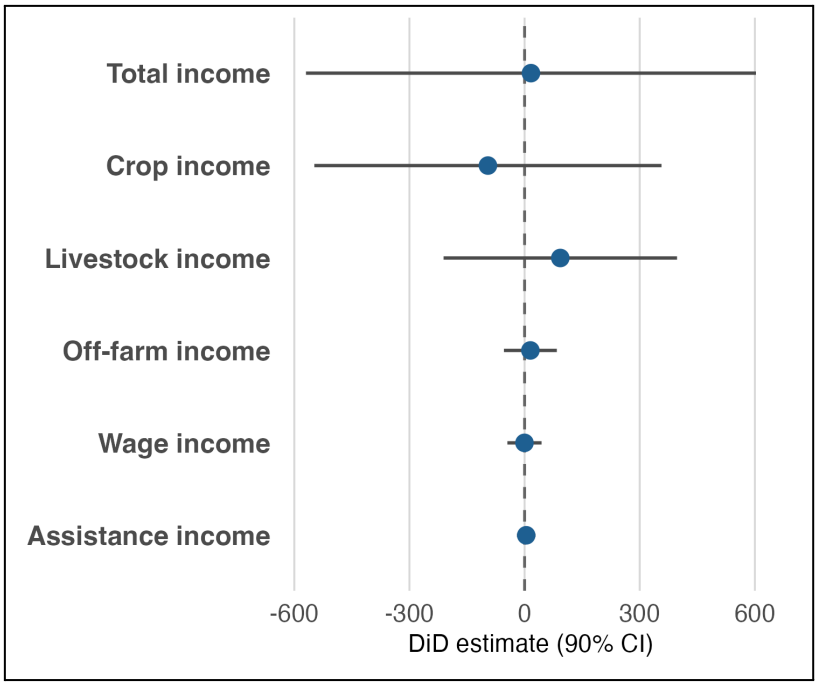
***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction and indicate changes in litres of milk per day per animal. Respondents who do not keep a certain livestock are excluded from this analysis. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Baseline non-beneficiary group means in liters/animal/day for reference: Cattle = 11.29; Sheep = 1.59; Goat = 0.76. See Tables E2 and F2 in the appendix for robustness checks and heterogeneity analysis.*

8.3 What are the short-term impacts of the programme on household income?

Household income

In line with the expectations considering the evaluation timeline, the macroeconomic conditions, and the severe droughts, there were no statistically significant programme impacts on yearly total household income in the short-term (Figure 8). We also detect no short-term effects on yearly income from crop farming or livestock keeping, which contributed to 79% of the yearly total income of households. There were also no significant impacts on yearly income from other sources, such as off-farm business, wages or transfers.

Figure 8. Impact estimates on income (past 12 months) in USD

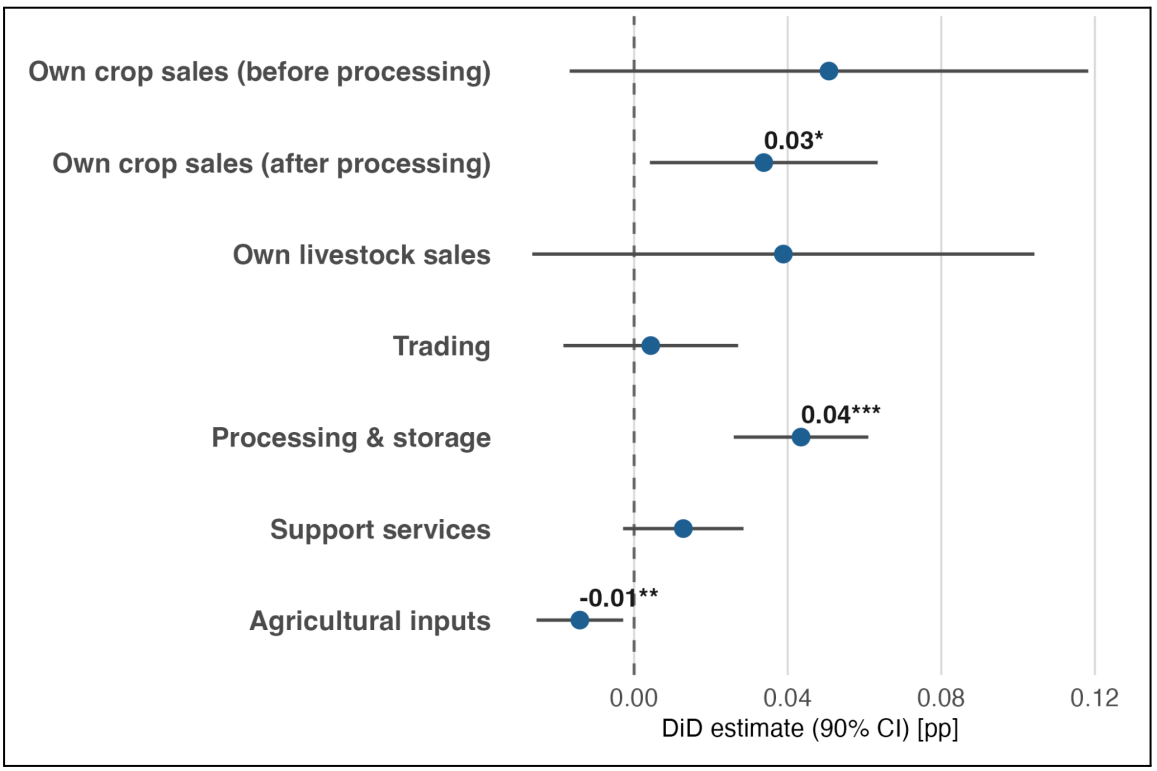


Note: *Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction, and indicate changes in USD. No income responses are coded as zero. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means (USD, past 12 months) for reference: Total income = 2187.78; Crop income = 1094.10; Livestock income = 821.60; Off-farm income = 148.43; Wage income = 96.99; Assistance income = 26.67. See Tables E3 and F3 in the appendix for robustness checks and heterogeneity analysis.*

Income from value chains

The programme improved engagement in income-generation from post-production activities. Beneficiary households were about twice as likely to earn income from processing and storage compared to non-beneficiary households ($p < 0.01$) (Figure 9) because of the programme. Still, participation in this activity remained low, with only around 2% of beneficiary households reporting income from this activity at endline (not displayed). The programme also doubled the share of households earning income from crop sales after processing, reaching about 8% of beneficiary households at endline ($p < 0.1$). In contrast, we find a small but statistically significant negative effect on earning any income from selling agricultural inputs.

Figure 9. Impact estimates on engagement in income-generation from value chains (past 12 months)



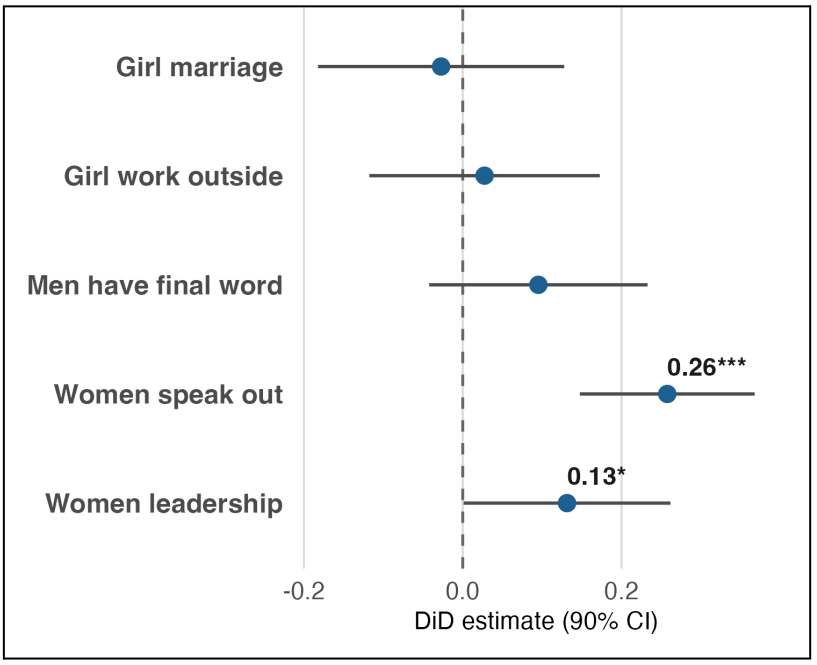
***Note**: The outcome variables are presented in proportion of households generating income from a certain source. Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction, and indicate changes in proportions. No income responses are coded as zero. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. Non-beneficiary baseline means for reference: Own crop sales (before processing) = 0.57; Own crop sales (after processing) = 0.03; Own livestock sales = 0.63; Trading income = 0.02; Processing & storage income = 0.04; Support services income = 0.01; Agricultural inputs income = 0.00. See Table E3 in the appendix for robustness checks.*

8.4 What are the short-term impacts of the programme on gender-equitable attitudes?

Although FSL activities do not address gender-equitable aspects explicitly, the programme increased support for women speaking out in public (+0.26, p < 0.01), equal to almost a 7% rise relative to the non-beneficiary group's baseline mean (Figure 10). In practical terms, this is roughly equivalent to about one in four respondents shifting one step toward greater acceptance of women speaking out on the five-point Likert scale from "strong disagreement" to "strong agreement". Similarly, attitudes towards women's leadership (+0.13, p < 0.1), equivalent to a 3.9% increase on the indicator or one in eight respondents increasing their acceptance, also improved. These findings suggest that the programme improved attitudes

toward women's agency in public life. In line with expectations, there were no programme effects on attitudes toward early marriage, women working outside the home, or men having the final word in household decisions.

Figure 10. Impact estimates on attitudes related to gender equity



***Note**: Stars denote statistical significance levels: *** p<0.01; ** p<0.05; * p<0.1. Estimates are based on DiD models including treatment, wave, and their interaction. The dot represents the estimated DiD treatment effect, and the lines show 90% confidence intervals. Effects are statistically significant at the 10% level when the confidence interval does not cross zero. The figure reports the distribution of responses on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) for the following statements: (i) Girl Marriage - "In certain situations, marrying a daughter before the age of 18 is acceptable"; (ii) Girl Work Outside - "I would like my daughter to be able to work outside the home so she can support herself if necessary"; (iii) Man Final Word - "A man should have the final word about decisions in his home"; (iv) Women Speak Out - "Women should be able to safely speak out in her household and community without any personal harm inflicted on her"; (v) Women Leadership - "Women should hold more leadership positions in the community." For interpretation, note that Girl Marriage and Man Final Word are negatively framed statements; higher levels of disagreement with these items indicate more gender-equitable attitudes. Baseline non-beneficiary group means for reference: Girl marriage = 2.20; Girl work outside = 3.36; Men have final word = 3.68; Women speak out = 3.71; Women leadership = 3.35. See Table E4 in the appendix for robustness checks.*

8.5. Do the impacts differ between Livestock FFS and Crops FFS beneficiaries?

As shown in Table D1 in the Appendix, we detect larger improvements in FCS among Livestock FFS beneficiaries (+5.34 points, corresponding to a 9.1% increase relative to the non-beneficiary mean) compared to Crops FFS beneficiaries (+3.95 points or 6.7% increase). Similarly, HDDS increases were statistically significant only for the Livestock FFS group (+0.46 points, corresponding to a 6.8% increase relative to the non-beneficiary group mean). This implies that about every second household consumed one additional food group per day due to

the programme. We do not find clear differences in specific food groups that fully explain the stronger HDDS effect among Livestock FFS beneficiaries compared to Crops FFS beneficiaries. However, Livestock FFS beneficiaries consumed 18% more eggs due to the support and also showed larger, though not statistically significant, increases in the consumption of roots and tubers, milk and dairy products, and oils compared to Crops FFS. By contrast, Crops FFS beneficiaries experienced a marked increase in meat consumption.

The reduction in "Ate few kinds of food" is concentrated among Crops FFS beneficiaries with a 4% reduction compared to the non-beneficiary baseline mean ($p < 0.05$), while the detected increase in the overall analysis in meal skipping is concentrated among Livestock FFS. For the remaining FIES items, effects are generally small and not statistically significant across FFS types, indicating limited programme impacts on the prevalence or frequency of most food insecurity experiences.

Regarding food-related coping behaviour, there were no significant impacts for the approximated rCSI for Crops and Livestock FFS alike (Table D1). Taken together, these findings suggest that Crops FFS helped ease food constraints, whereas Livestock FFS benefits are more concentrated in improving diet quality rather than shifting the most severe food insecurity experiences.

In terms of resilience, RCI remains positive and statistically significant for beneficiaries of both FFS types, with larger gains among Livestock FFS beneficiaries (+6.7 points, $p < 0.01$, corresponding to a 12.3% increase relative to the non-beneficiary group mean) compared to Crops FFS beneficiaries (+4.1 points, $p< 0.05$, or 7.4%) (Table D1).

The overall impact on maize yields previously shown was primarily driven by Livestock FFS beneficiaries who experienced a larger gain by 17% (+0.95 t/ha, $p < 0.05$), while the effect for Crops FFS is not statistically significant (Table D2). This pattern is consistent with the programme's emphasis on fodder within the livestock FFS component. We also detect two statistically significant yield effects that were not evident in the earlier overall analysis (Table D2). Rainfed wheat yields increased among Crops FFS beneficiaries by 39% (+0.48 t/ha, $p < 0.05$). Second, barley yields increased among Livestock FFS participants by 25% (+0.47 t/ha, $p < 0.05$), consistent with barley's role as a key livestock feed crop. We do not find evidence for improvements in irrigated wheat yields in both types of schools, where no impact was expected by design.

There were no statistically significant effects on livestock herd sizes (goats, sheep, cattle, or poultry) for either FFS group (Table D2). While there was a significant increase in goat milk productivity in the overall analysis, subgroup estimates remain positive but statistically insignificant. In contrast, the overall tendency of the sheep milk productivity increase gained significance for Crops FFS beneficiaries (+0.35 liters per animal per day, 22%, $p < 0.1$).

Overall, there were no statistically significant effects on total household income or on any individual income component across specifications (Table D3). Similarly, no significant effects were observed for off-farm income, wage income, or assistance income for either FFS group.

9. Robustness and Limitations

9.1 Robustness

To assess the robustness of our main impact estimates reported in Section 8, we re-estimate the models using alternative specifications reported in Appendix E. First, we compare our main specification to models that apply entropy balancing weights on baseline selection-criteria to improve comparability between beneficiary and non-beneficiary households and additionally control for these variables. Second, we estimate impacts using mixed-effects models with village-level random effects to account for unobserved heterogeneity across villages and within-village correlation.

Overall, results are broadly robust in terms of magnitude and statistical significance across these checks. For the overall treatment effects, we identify only one exception: Once the model is weighted and controlled for the selection criteria, the marginally significant impact on the prevalence of eating less than needed becomes insignificant. We already interpreted this result as inconsistent in the results section, as it diverged from the corresponding frequency indicators. All other main effects remain robust.

In the subgroup analysis, we only find one inconsistency: For Livestock FFS, the significant effect on barley yield becomes insignificant when weighting and controlling for selection criteria, whereas for Crops FFS the observed programme impacts remain stable across specifications. Some effects become more salient under the alternative specification, particularly in the subgroup analysis, indicating that the interpretation of the main specification is conservative.

In summary, the robustness checks suggest that the results are generally consistent, while a small number of estimates are sensitive to weighting and controlling on selection criteria and should, therefore, be interpreted with caution.

9.2 Limitations

Below, we describe the main methodological and operational limitations of the impact evaluation:

1. **Scope of impact.** The analysis focuses on households receiving the FFS in FAO targeted villages. Hence, the evaluation does not isolate the effect of FFS or any other standalone component from the broader programme impact. To check whether other activities might be driving the results, we re-estimate the models using mixed-effects specifications with village random effects, which absorb unobserved differences between villages. Moreover, bundling the variety of FFS into two overarching groups does not account for the specificities of each topic. The main reason is that the schools overlapped much and reached too few households in the sample to allow reliable separate estimation. As a result, the findings should be interpreted as evidence on the short-term effects of FFS within the broader programme.
2. **Comparability of FFS subgroups.** The report compares outcomes across the Crop FFS and Livestock FFS subgroups. However, these two intervention types provide different forms of support and may operate through different impact pathways, affecting different outcomes, which limits the validity of direct comparisons between them. As a result, observed differences between Crop FFS and Livestock FFS households should not be interpreted as evidence that one intervention type is more effective than the other.
3. **Selection bias.** The study relies on a quasi-experimental design, where beneficiary and non-beneficiary households may differ in unobserved ways (e.g., motivation). Even though in the sampling strategy, we select the non-beneficiary group as comparable as possible to the beneficiary, baseline differences might still arise that could bias the impact estimates. To mitigate this risk of bias, we implement several strategies: First, we use a panel DiD approach, which removes time-invariant unobserved heterogeneity and estimates impacts from differential changes over time as long as there are no structural trend differences between non-beneficiary and beneficiary households. Second, we apply entropy balancing to increase the baseline comparability between beneficiary and non-beneficiary households based on selection criteria and test control

variables in robustness specifications to assess the sensitivity of the results. Third, we test for village-level effects with a mixed-effects model as a robustness test. While these steps cannot fully eliminate bias from time-varying unobservables, the consistency of results across specifications increases confidence that the main findings are not driven solely by structural differences between groups.

4. **Limitation in sample size.** Subsample analyses, for example, female-headed households in the heterogeneity analysis or production analyses restricted to producers of a certain product, are based on comparatively small sample sizes, which reduces statistical power and the precision of the estimates. As a result, some true programme impacts may not be detected in this analysis. For the cultivation of certain crops, for example, vegetables and fruits, we do not have enough observations to analyse these outcomes with confidence.
5. **Representativeness.** 11% of the households dropped out of the study over time. The observed attrition patterns indicate that the final panel may underrepresent certain household profiles. The results should therefore be interpreted as internally valid estimates for the observed panel.
6. **Compliance.** We do not have information on whether assigned beneficiaries actually participated in treatment activities. We therefore estimate impacts based on assignment to support (intention-to-treat) rather than confirmed participation, which may attenuate estimated effects if take-up was incomplete.
7. **Follow-up window.** Data were collected approximately 1.5 years after implementation began. Some programme effects, particularly on income, cattle productivity following artificial insemination, and longer-term resilience, likely require a longer time horizon to materialise and may not yet be detectable within this evaluation window.

10. Discussion of the Results

In this section, we interpret the findings of the impact evaluation in light of the programme's theory of change, current evidence on food security and livelihoods, and the Syrian context.

Food Security

FAO's agricultural support successfully improved household dietary diversity and quality. The magnitude of short-term improvements in food consumption and dietary diversity is in line with effects observed for similar agricultural and livelihood interventions in Syria (Baliki et al., 2021; 2023; 2024; Weiffen et al., 2025a). At the same time, we do not detect consistent short-term programme effects on experience- and coping-based measures of food insecurity,

as captured by FIES and the rCSI. These findings cannot be isolated from concurrent changes in food prices during the study period. Volatility in food prices and the USD-SYP exchange rate, alongside a rapidly changing political environment in 2025, were of key practical relevance to the impact findings. Following the political transition in December 2024, commodity prices, including food prices, declined sharply across Syria (FAO, 2025b). Consistent with this shift, the trend analysis indicates that food security improved across all aggregate indicators over the two-year study period, suggesting a broad upward shift affecting both beneficiary and non-beneficiary households alike. This improving environment likely explains why we observe such small or null programme effects on experience- and coping-based measures of food security. In other words, there is little room for additional improvement when food constraints are easing for everyone. Most notably, at endline, very few households reported experiencing the most severe food insecurity items, such as being hungry without eating or going a whole day without food, leading to a ceiling effect, where no further improvement is possible. However, milder forms of food insecurity persist and continue to expose vulnerable households to the risk of falling back into more severe food insecurity. To address this risk, recent evidence suggests that home or community gardens are promising ways to mitigate milder forms of food insecurity in crisis settings (Weiffen et al., 2025a; 2025b). Against this backdrop, the clear gains in food consumption and dietary diversity outcomes, as detected through FCS and HDDS indicators, point to a clear added value of the programme: even when overall food security is improving, agricultural support can still provide rural households in Syria with more diverse and nutrient-dense diets.

Agricultural production and productivity

Many of FAO's beneficiaries are not only food consumers, but also food producers. Therefore, they face compounding risks when climatic shocks and macroeconomic disruptions affect agricultural systems. We detect clear resilience effects in crop productivity among beneficiaries that can be attributed to the programme. Fodder crop yields improved among Livestock FFS beneficiaries and rainfed wheat yields increased for Crops FFS beneficiaries. Notably, the increase in wheat yields among farmers participating in FFS (which did not specifically focus on this type of crops) points to important knowledge spillovers: farmers are able to transfer improved practices, amplifying the impact of the intervention beyond what was intended. The programme did not lead to clear increases in cattle or sheep holdings overall. However, we observe region-specific gains in sheep productivity, as well as increases in both goat holdings and productivity, a pattern that was not foreseen given that cattle were a primary target of the artificial insemination and veterinary services provided. These effects are

mostly attributed to the protective effects of the programme: productivity among beneficiary farmers remained constant while among the non-beneficiary group, it declined.

These results in agricultural production and productivity are very promising, particularly because of a highly challenging agro-climatic environment for Syrian farmers during the study period. The findings highlight the potential of the programme to protect agricultural production when climatic and macroeconomic risks are high. Most visibly at endline, households faced the combined pressure of prolonged drought and high production risks due to the volatile market. This pattern contributed to declining crop output and dynamics of destocking and exit from livestock keeping in Syria, which is observed both through the programme data and also elsewhere in the literature (FAO, 2025c; FEWS NET, 2025). Hence, the crop productivity gains suggest that the interventions positively contributed to the recovery and resilience of the agricultural systems in Syria, helping farming households maintain or improve production even as the wider agricultural sector was under climatic and macroeconomic stresses.

With the available data, we cannot precisely disentangle the potential driving mechanisms of such productivity gains. However, the current evidence base suggests two driving pathways that likely explain the results. First, better feed access may have reduced reliance on purchased low quality inputs from volatile markets. Similar effects were also observed from agricultural policies and interventions in comparable settings (Chen, 2024; Kappes et al., 2023; Tahir et al., 2018). Second, the adoption of good agricultural practices and climate-smart agriculture can reduce sensitivity to rainfall variability through improved agronomic decisions, input use and management (Berhanu et al., 2024; Chandra et al., 2017; Pienaah et al., 2024). The tendency towards increased goat holdings and higher sheep and goat milk productivity is consistent with common climate-adaptation strategies that farmers or herders use when they face prolonged periods of heat and water stress. Sheep and particularly goats are a valuable adaptation asset in drought-prone regions, as they generally tolerate heat and water stress better and require fewer feed resources than cattle (Acosta et al., 2021).

There is no evidence of short-term impacts from the programme on cattle holdings or cow milk productivity, despite a large share of beneficiary livestock keepers receiving cattle-focused artificial insemination and veterinary services. The primary value of artificial insemination lies in medium- to long-term genetic improvement, calving rates, and reproductive efficiency, which does not raise milk yields in the short run. Hence, measurable herd-level effects would only emerge several years after implementation (Dizyee et al., 2019). Broad national

vaccination campaigns that reached both beneficiary and comparison households limit the scope to detect impacts of FAO's veterinary services. In addition, livestock disease incidence increased overall by 50%, an effect commonly observed in drought years, potentially constraining the extent to which improved service access could translate into higher productivity within the evaluation period (Catley et al., 2014).

Income

Even though we observe productivity gains and stronger engagement in income-generating value chain activities, these changes do not translate into detectable income gains among farming households. However, these results should be carefully interpreted against strong economy-wide movements during the study period: household income increased by around 45% for both beneficiary and non-beneficiary households over the study period (expressed in USD-equivalent terms). Under such conditions, it is unsurprising that programme impacts on income are marginal, as macro-level shifts affect all households in Syria alike. This finding is consistent with evidence from the broader literature, which shows that income improvement from micro-level targeted support is limited under macro-level constraints in the short run (McKenzie, 2021). A similar pattern is also documented for marginal income gains in the agricultural sector in Syria (Baliki et al., 2021).

Additionally, the observed crop production and livestock gains may not have translated into measurable income gains because of the timing of the evaluation window. Farming households in Syria faced a margin squeeze at the time of endline data collection, as they entered the production cycle with high input costs during a period of high inflation and were then confronted with low output prices (FAO, 2025b). Furthermore, in fragile settings with elevated production risk, households may prioritise subsistence consumption, feed use, and asset rebuilding over sales, implying that benefits materialise first through improved food availability and productive assets rather than immediate income earnings (Bozzoli & Brück, 2009).

Resilience

Despite these mixed findings, one result is consistent and robust: the resilience of beneficiary households improved significantly compared to non-beneficiaries, with the largest RCI gains among households receiving Livestock FFS. An increase in RCI means households have strengthened their capacity to absorb, adapt to, and recover from shocks, for example, through stronger assets or climate adaptation.

RCI gives substantial weight to assets, so interventions that protect or build livestock assets have larger impacts on RCI scores. This additional weighting helps explain the large gains among farmers participating in Livestock FFS. Additionally, higher fodder crop yields among Livestock FFS beneficiaries contributed to improved access to livestock feed, reducing reliance on volatile markets. The intervention activities may also have supported more resilience-building production decisions. More broadly, the literature indicates that livestock-keeping and agricultural asset ownership can function both as productive capital (supporting ongoing food and income generation) and as a relatively liquid buffer that can be mobilised in times of stress, thereby strengthening households' ability to cope with shocks (Acosta et al., 2021; Collishaw et al., 2023). To further strengthen these resilience gains, anticipatory action and integrated early warning systems might be an adequate solution to drought risk, as it enables households to prepare for forecasted shocks before losses fully materialise (De Brauw, 2025).

Gender-related outcomes

The programme aimed to prioritise women, and many FFS beneficiary households in Homs and Rural Damascus participated in couples' sessions addressing prevention and reduction of economic violence against women. The results show clear improvements among beneficiary farmers in supporting women's economic roles in society. Approval increased for statements such as "Women should be able to safely speak out in her household and community without any personal harm inflicted on her" and "Women should hold more leadership positions in the community." These shifts matter in the Syrian context, where conflict, displacement, and economic stress have reshaped household roles, but many women, especially in female-headed households, still face mobility, asset, and decision-making constraints (UNFPA, 2025).

The heterogeneity analysis shows that most of the programme gains in food security, resilience, and productivity were driven primarily by male-headed beneficiary households, not female-headed ones, despite the explicit intention to prioritise women. In a context where female-headed households are often more vulnerable, hold fewer assets, and are overall less resilient, this pattern is plausible but worrying. Existing evidence indicates that rural female-headed households often face larger losses than male-headed households under climate stress (FAO, 2025d), implying that shocks can more easily offset programme gains for female-headed households. At the same time, other evidence shows that agricultural support targeting small-scale agriculture can be particularly effective for female-headed households (Weiffen et al., 2025a). The more limited impacts observed among female-headed households

suggest that, beyond targeting alone, agricultural support may need to more explicitly address the structural constraints these households face in order to enable them to benefit more fully.

11. Conclusion

Overall, FAO's support under BLRS Phase 1 generated meaningful short-term gains in household welfare and resilience, even in an exceptionally volatile environment. The strongest and most consistent impacts of the programme are on food consumption, dietary diversity, and resilience capacity. These findings demonstrate that the programme added value beyond the general improvement in food security conditions observed during the study period. The clear improvements in resilience capacity show that the programme strengthened households' ability to absorb and adapt to future shocks.

The programme also helped sustain key agricultural indicators amid an overall declining trend, notably for crop yields (especially fodder crops and rainfed wheat) and sheep-and-goat-related production outcomes. Taken together, these findings suggest that agricultural support helped farmers maintain and safeguard production under drought, market instability, and changing policy conditions. These are important achievements in a context where many households face simultaneous pressure as both producers and consumers.

Despite these successes, there were no clear short-term impacts on overall household income. This result reflects the timing and context of the intervention: households were operating in a rapidly shifting macroeconomic environment, with strong price movements, high uncertainty, and continued exposure to shocks, particularly drought. Furthermore, the timeframe between the initiation of the programme and endline may have been too short for income gains to materialise.

Finally, the findings on gender attitudes and analyses by gender of head of household are mixed but important: even though not directly targeted in the first phase, the programme is associated with more gender-equitable attitudes, yet there were limited measurable welfare and productivity gains among female-headed households. These results point to persistent structural barriers and highlight the need for more intentionally targeted activities to ensure equitable benefits among households.

12. Lessons Learnt and Recommendations

This section summarises the main lessons from the impact evaluation and presents practical

recommendations for project implementers and donors. These lessons and recommendations are ordered by priority and are intended to strengthen the programme in its second phase and to inform future resilience-building interventions in food security, livelihoods, and agriculture in Syria. Where appropriate, the recommendation specifies the target audience and highlights areas for future learning.[2122]

1. Resilience against market volatility	
Lessons learnt	Volatile markets can squeeze margins. On-farm input production can strengthen resilience against such market volatility. For example, homestead fodder production can help households maintain productive capacity when commercial feed becomes scarce or unaffordable.
Recommendations	Programmes should continue promoting on-farm input production through FFS in the same fashion as livestock FFS promoted fodder production, reducing dependence on purchases during price spikes. In addition, future programmes should include well-designed and piloted adaptive measures to buffer producers against market shocks. For example, when input prices rise sharply, this may involve temporary vouchers or targeted subsidies for key inputs to protect productive capacity. When output prices are low, support should shift towards measures that help households preserve value, including storage or subsidised sales. These responses should be guided by market monitoring and linked to clear operational thresholds for adaptation. Evidence from these pilots should inform the policy dialogue and advice to the government on agricultural support mechanisms.
Area for future learning	In the next phase of BLRS, pilot studies can systematically test and compare different combinations of intervention modalities to identify which features most efficiently strengthen household resilience under varying market stress conditions.
2. Commercialisation and market linkages	
Lessons learnt	Macroeconomic factors can overshadow programme effects on income. Productivity and value chain gains are a necessary first step, but converting them into measurable income requires time and stronger value retention.
Recommendations	Future interventions should place stronger emphasis on commercialisation, with the aim of helping households secure more predictable revenue streams and improve value retention. More specifically, agricultural programming should strengthen the focus of FFS on post-harvest processing. In practice, this may involve complementing FFS with starter kits for basic processing activities, such as milk processing or the drying, pickling, and preservation of fruits and vegetables. Actors should

[21] Details of how these lessons will be shared with key stakeholders are set out in Appendix A.

[22] The lessons and recommendations are of equal importance; their ordering reflects narrative flow rather than priority.

	continue and scale the promotion of small-scale commercialisation through FFS. This may help generate more stable income streams and contribute to more stable local input markets. In the same fashion, inputs, such as fodder or seeds, may be commercialised. Market linkage support should also be strengthened through scaling broader arrangements such as milk collection units, as already implemented by FAO, or through other aggregation mechanisms that help farmers access more reliable buyers. Moreover, actors should continue to implement farmer business schools which help farmers to better explore the market needs and suitable market actors to partner with. Farmer cooperatives may play an important role in this regard by improving aggregation, strengthening bargaining power, and facilitating more stable market access.
Area for future learning	More evidence is needed on whether cooperative-based approaches can reduce dependence on volatile markets, strengthen local bargaining power, and improve market resilience at scale in fragile settings.
3. Livestock resilience and asset recovery	
Lessons learnt	Agricultural support can stabilise herd sizes and livestock productivity under severe drought conditions when other households destock.
Recommendations	Livestock programming should continue to promote drought-adaptive herd management through FFS and related advisory services. At the same time, future support should place greater emphasis on rebuilding productive asset stocks, such as cattle herds, including incentives to preserve improved livestock to allow stronger impact of artificial insemination and veterinary services to materialise. More specifically, this should include measures to preserve improved livestock, such as feed support or input subsidies, access to veterinary services, and targeted support for productive female livestock. To reduce distress sales and support herd recovery and livestock productivity, programmes should also assess the feasibility of complementary financial protection mechanisms, including livestock insurance, savings-based approaches, or access to credit. Such mechanisms should be designed carefully to ensure that they are accessible to more vulnerable households.
Area for future learning	Further research is needed to assess the longer-term impacts of livestock support. This may include systematically tracking herd developments, including livestock retention and productivity returns.
4. Climate resilient crop cultivation	
Lessons learnt	FFS contributes to climate resilience by building capacity to maintain crop production under severe drought conditions.
Recommendations	Future FFS and related agricultural services should continue to integrate climate adaptation systematically into programme design. This should include the promotion of drought-tolerant crop and fodder production strategies, for

	example through specific seed varieties, and water-efficient practices that are more robust under heat and water stress. Programmes may incorporate drought early warning systems to help farmers make more timely production and risk-management decisions, particularly in relation to input use, planting decisions, and asset protection. To be actionable, early warnings should be coupled with clear, practical recommendations. For example, warning messages may indicate not only the nature of the risk, but also the recommended pre-emptive response, such as the appropriate timing of pest treatment. Where feasible, such warnings could be disseminated through accessible communication channels, including mobile messaging. To enable this, donors should invest in trustworthy data systems and dissemination infrastructure to generate, translate, and communicate timely warnings effectively.
Areas for future learning	Where operationally feasible, donors should also test anticipatory action approaches that deliver time-bound agricultural support ahead of drought impacts using forecast-based triggers. By addressing key constraints before losses fully materialise, such approaches may help households protect productive assets, maintain production, and avoid negative coping strategies in a more cost-effective manner than late response. Any pilot should include clear trigger indicators, pre-agreed delivery protocols, and an embedded learning component.
	5. Gender-sensitive programming
Lessons learnt	Female-headed households did not show clear gains in food security and resilience while male-headed households experienced large robust gains. This pattern likely reflects distinct structural constraints faced by women and female-headed households, potentially related to assets, labour, mobility, time use, service access, and decision-making power. At the same time, the programme contributed to a positive shift in attitudes towards women's economic and social roles among beneficiaries, providing momentum for more gender-intentional programming.
Recommendations	For the next phase of the programme, strengthening women's participation in FFS and activities related to the value chain beyond targeting may lead to stronger impacts. Specifically, activities should be tailored more explicitly to the needs and constraints of female-headed households, for example by adapting the content of training, delivery modalities, supplementary assistance beyond the schools, follow-up support, and market linkage strategies. In the next phase, baseline data can be used more systematically to identify the specific needs of and barriers faced by female-headed households and to adapt support accordingly.
	6. Mitigating all levels of food insecurity
Lessons learnt	Although severe food insecurity declined over time in Syria, milder pressures on food access persist. Seasonal stress and short-term shocks to purchasing

	power or local supply may push households back to more severe types of food insecurity.
Recommen-dations	Timely response mechanisms to address risks of severe food insecurity, informed by market monitoring, should be tested in the next phase of the BLRS. Such support could help households smooth consumption and avoid harmful coping strategies, such as sales of productive assets, withdrawing children from schools, or the marriage of young girls. More specifically, market monitoring can be used to trigger temporary or one-off support based on pre-defined thresholds during acute lean periods or episodes of rapid price inflation, for example, after removing food or input subsidies. This monitoring could also inform the support modalities based on the nature of access constraints: Where food access is constrained primarily by prices and reduced purchasing power, programmes should prioritise temporary cash-based support. Where food access is persistently constrained by limited local availability or disrupted supply chains, programmes should enhance agricultural systems, for example, through seeds and input provision. Future programming in Syria in the next five years should continue to address milder forms of food insecurity. Apart from promoting local food production, donors may consider large-scale measures in areas with high prevalence of mild food insecurity that further ease pressure on household food budgets. One promising approach suggested by the literature is the establishment of home or community gardens, which can increase access to nutrient-rich and diverse foods, particularly for households with limited land or resources to produce independently, such as female-headed households.

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Appendix A: Use, Influence, and Communication Plan

This section outlines the use, influence, and communication plan to enable meaningful uptake of the impact findings of FAO's building local resilience in Syria (BLRS) programme. The plan identifies key audience groups and stakeholders, how they are anticipated to use the results of this impact evaluation, and the specific communication products to increase the evidence use and uptake.

Table A1 maps the various stakeholders and describes how the evidence from this impact report can be used, as well as how we aim to increase the outreach and uptake of these findings. This use and influence plan is based on the overall BLRS communication strategy developed by ISDC, included as supporting documentation of this report.

Table A1. Overview of key target audiences and evaluation uses

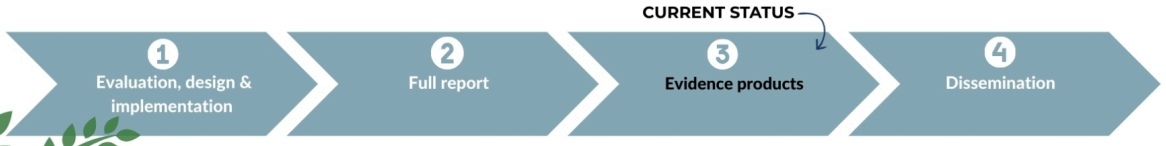
Stakeholder	Evaluation use	Outreach method
FAO programme and technical teams (country office and HQ)	Internal learning and programme adaptation: Understanding which specific interventions (e.g., livestock-focussed versus crop production-focussed) drove impact; refining programme design and scaling up of effective decisions.	• Impact evaluation report • Thematic and evidence briefs • Data access • Early findings internal presentation to FAO • Workshop to adapt the framework for Syria with relevant stakeholders
Donor (UK Foreign, Commonwealth & Development Office - FCDO) for Syria	Programme adaptation: using insights to inform programming within and across country contexts. Strategic planning of future resilience investments; use of evidence to justify multi-year project funding.	• Donor briefings • Impact evaluation report • Thematic and evidence briefs • Regular access to internal findings • Bilateral meetings • Presentations at policy- and practice-relevant forums, such as the annual *Fragile Lives* conference
Government (Ministry of Agriculture in Syria /Social Welfare)	Policy integration: align national agricultural recovery and resilience strategies with evidence on what works; support integration and scale up of successful interventions into national programmes.	• Thematic briefs (both the 2-page non-technical pdfs and the online equivalent) • Evidence brief on impact evaluation results of the food security and livelihoods interventions • Direct briefings and presentations for relevant experts

Multilateral agencies within and beyond Syria (e.g., UNFPA, UNHCR, World Bank, WHO)	Sectoral alignment: informing best practices based on findings from Syria and relevant global evidence	• Impact evaluation report • Thematic briefs (both 2-page non-technical pdfs and the online equivalent)
Local NGOs and civil society organisations	Best practices: integrating findings into work on social protection, policy, and advocacy	• Posts and infographics on social media and ISDC Newsletter • Thematic briefs (both 2-page non-technical pdfs and the online equivalent)
Academic and research institutes	Knowledge building: contributing to the global evidence base on rigorous impact evaluations in fragile and conflict-affected settings; generating evidence on resilience programming, agricultural livelihoods recovery	• Impact evaluation report • Findings through social media and ISDC Newsletter • Presentations and discussions at conferences such as the Fragile Lives and similar conferences. • Peer-reviewed academic journal open access article based on the findings of the report.
Programme participants	As the research and evaluation partner, ISDC does not engage with beneficiaries directly with the purpose of disseminating findings. ISDC also does not cover whether and how implementing partners will provide feedback to final beneficiaries on the findings.	• Oral presentation of results and other insights from the study to FFS participants held by FAO M&E team

Key communication products

ISDC is producing a range of different communications products to reach the target audiences and stakeholders. Details on these products can be found in the overall BLRS communication strategy, which is included as supporting documentation in this report's submission.

Figure A1. Implementation and dissemination plan



Audience	Primary Use	Format
FAO & Partners	Internal learning and programme adaptation	Impact evaluation report
Donor (FCDO)	Accountability and funding decisions	Thematic and evidence briefs
Government & Multilaterals	Policy integration	Thematic briefs
NGOs & CSOs	Advocacy and programming	Thematic briefs
Academia	Global evidence and learning on conducting impact evaluations	Journal articles

The implementation of the communication and influence plan is structured across four strategic phases (Figure A1). These phases are designed to progress from generating evidence to sharing knowledge externally. Phases 1 (evaluation) and 2 (full report) have been completed, providing the necessary evidence to assess the impact of the intervention. We are currently transitioning to Phase 3, which involves writing the evidence brief to synthesise the results and lessons from the impact evaluation reports of both FAO's and SRI's BLRS programme in Syria, and launching the online thematic brief covering BLRS programme overview on ISDC website. Moreover, we will write up peer-reviewed journal articles based on the findings from these impact evaluations, which will be made open access to contribute to key knowledge gaps in the academic literature. In Phase 4, we will present the findings in multiple policy and academic fora, and disseminate all the evidence and reports after obtaining appropriate clearances. We will adopt a strategic social media series designed to amplify the evaluation's findings and foster professional dialogue around its lessons and recommendations. This series will engage users on ISDC website, Linkedin, Bluesky, and the ISDC newsletter.

Appendix B: Additional Information

Table B1. Details of additional interventions implemented by FAO under BLRS Phase 1

Dairy Processing and Milk Collection: The milk intervention aimed to reduce post-harvest losses, promote value addition, and improve market access and incomes by strengthening milk collection and dairy processing systems. Through the establishment and support of milk collection centers and dairy processing units, the programme enhanced efficient milk handling, improved quality control, and facilitated stronger linkages between producers and markets. Activities include training, provision of equipment, and access to finance. The intervention was received by dairy producers and operators involved in milk collection and processing activities. In total, 274 beneficiaries received support under this component.
Entrepreneurship: The entrepreneurship component aimed to equip smallholders with entrepreneurial knowledge and practical business skills to strengthen income-generating capacities and promote sustainable agricultural enterprises. Implemented as a structured training programme, it followed a three-phase approach: Business Ideation Workshops, Business Development Workshops, and the implementation of selected agricultural businesses. The intervention was received by smallholder farmers interested in developing or expanding agricultural enterprises. In total, 462 beneficiaries participated in this component.
Water Rehabilitation: The water rehabilitation component is aimed at restoring and securing reliable access to irrigation water across cultivated land by repairing critically damaged infrastructure within irrigation and drainage systems. This included rehabilitating main water regulators, pumping stations, and associated field-level infrastructure to re-establish a functional and resilient water delivery network. To enhance long-term sustainability and reduce reliance on conventional energy sources, renewable energy technologies, particularly solar-powered systems, were integrated to operate rehabilitated water regulators and drainage pumping stations. The component was complemented by capacity-building activities, including the training of local engineers on the operation and maintenance of rehabilitated infrastructure, and awareness-raising activities for farmers in rehabilitated locations on irrigation management topics. At the field level, laser land levelling was also promoted to improve water use efficiency. The intervention was received by farming households dependent on irrigated agriculture. In total, 4,330 beneficiaries received support under this component.

Interventions to prevent violence against women and girls: Targeted interventions to strengthen survivor-centered, ethical, and culturally sensitive response systems and to prevent and reduce intimate partner violence through couple interventions, training against gender-based violence, community workshops, and discussion groups. This activity will be assessed in a separate study.

Table B2. Outcome variable definition

Variable	*Assessment*	*Method of scaling*
FCS/HDDS	Over the past 7 days, how many days have the household members consumed 1. Cereals (wheat, barley, rice) or roots and tubers (potato, sweet potato, etc.) (2) 2. Vegetables (carrots, lettuce, tomatoes, garlic) (1) 3. Fruits (apples, grapes, oranges, etc.) (1) 4. Meat, poultry or Eggs or Fish (4) 5. Pulses/legumes/nuts (beans, peas, peanuts) (3) 6. Milk/milk products (excluding butter) (4) 7. Oil/fats (including butter) (0.5) 8. Sweets (Sugar/honey/biscuits/ice cream/sweet beverages/juice) (0.5) 9. Fried and salty meals (chips, crackers) (0) 10. Sugar sweetened drinks (juice, soft drinks) (0) 11. Others (coffee, tea, condiments, spices, etc) (0) (Did you or your household consume this item in the past 24h?)	- FCS: Continuous indicator calculated based on the weighted sum of items (weights in parentheses) (0-112) - HDDS: Sum of binary indicators if food group was consumed 24h before assessment (0-14) (For types 1 and 4, we count every item)
FIES	During the last 30 days, was there a time because of a lack of money or other resources? 1. You or others in your household worried about not having enough food to eat? 2. You or others in your household were unable to eat healthy and nutritious food? (Rely on less expensive, lower quality food) 3. You or others in your household ate only a few kinds of foods? (Less diversity) 4. You or others in your household had to skip a meal? (Reduce number of meals per day) 5. You or others in your household ate less than you thought you should? (Limit portion size at meals) 6. Your household ran out of food, and you relied on your relatives or friends to have food? 7. You or others in your household were hungry but did not eat because there was not enough money or other resources for food? 8. You or others in your household went without eating for a whole day because of a lack of money or other resources? (For each item: Number of days this happened during the last 30 days (integer))	- Binary indicator for each item (1 = yes, 0 = no) based on 30-days recall period (prevalence) - Continuous indicator for each item on the number of days within the past 30 days (frequency) The severity classification for the FIES items is as follows: - Mild food insecurity (items 1-2) - Moderate food insecurity (items 3-6) - Severe food insecurity (items

		7-8)
Approximated rCSI	Below, we detail the standard rCSI coping strategies and our approximation using available FIES items: During the last 30 days, if there was not enough food or money to buy food, how many days did your household use the following coping strategies? - Relied on less preferred or less expensive foods? (1) → ITEM 2 - Borrowed food, or relied on help from relatives or friends? (2) → ITEM 6 - Reduced the number of meals eaten in a day? (1) → ITEM 4 - Reduced the portion size of meals? (1) → ITEM 5 - Reduced the quantity of food consumed by adults so that small children could eat? (3) → EXCLUDED	Continuous indicator based on the sum of weighted FIES items (frequency), with days reported over a 30-day recall period rescaled to 7-day equivalents. Weights are in parentheses. Score range: 0-35 (using 4 strategies). Standard rCSI range: 0-56 (using all 5 strategies).
RCI	The RCI was computed using the following indicators collected in the survey: <u>Access to basic services:</u> - Distance to school - Energy source - Distance to agricultural extension - Water access - Distance to transport - Irrigation access <u>Assets:</u> - Own house - Irrigation use - Own sheep/goat - Use pesticide - Own agricultural assets - Own land - Own house assets - Own poultry - Own cattle <u>Social safety nets:</u> - Cash transfers (formal) - In-kind transfers (non-government) - In-kind transfers (government) - In-kind (UN) - Support from family members - Associations support - Cash transfers (informal) <u>Adaptive capacity:</u>	Continuous composite indicator (0-100) computed using FAO's RIMA-II procedure via the RIMA Shiny app: Stage 1: Indicators within each pillar standardised and reduced via factor analysis to produce 5 pillar-level sub-indices (one per pillar + food security). Stage 2: Pillar sub-indices combined via final factor analysis, yielding the RCI score where higher values indicate greater resilience capacity against food insecurity shocks (FAO, 2016).

	- Wage salary - High quality seed - Agriculture income - Literacy of household head - Education of household head - Off-farm income - Transfers - Livestock income <u>Food security</u> - HDDS - FCS - Food expenditure share	
Income	In the past 12 months, how much of the HH's overall income was generated by: - Overall - Crop production - Livestock breeding - Off-farm family business - Wage and salary income - Transfers and social assistance (assessed in SYP)	- Continuous variables converted to USD-equivalent at time of data collection using 12 months averages exchange rates - Shares of the overall income for each
Income from value chains	How much income did you obtain from the following agricultural value chain activities over the past 12 months? - Sale of own crop produce without processing - Selling post-processing crop production (tomato paste, jams, dryers, etc.) - Sale of own livestock products (incl. honey, meat, milk) - Buying and sale (trade) of crop/livestock products - Selling products after the process, storage and other added values of the main product - Support services (inputs, labor) - Selling agricultural production inputs (seeds, fertilisers, pesticides, etc.) (assessed in SYP)	Binary indicators expressing whether the household generated any income from these activities. We refrain from reporting value chain income amounts because the engagement in these activities is too low to derive meaningful estimates. Instead, we focus on more reliable binary outcomes that indicate whether households engaged in specific value chain activities.
Crop production	Land size in hectares and harvest in t for - Irrigated wheat - Wheat - Barley	Continuous variables for each crop indicating land used, harvest, and yield (harvest/land)

	- Maize - Alfalfa (endline only) We also intended to collect the same data on vegetables and fruits, for which we did not manage to collect sufficient observations to analyse these outcomes with confidence.	
Livestock production	Ownership and number of heads, including newborns, of - Cattle - Sheep - Goats - Chicken Milk per animal per day of - Cattle - Sheep - Goats	Continuous variables
Attitudes related to gender equity	1. "In certain situations, marrying a daughter before the age of 18 is acceptable" 2. "I would like my daughter to be able to work outside the home so she can support herself if necessary"; 3. "A man should have the final word about decisions in his home"; 4. "Women should be able to safely speak out in her household and community without any personal harm inflicted on her"; 5. "Women should hold more leadership positions in the community"	Discrete indicator for each item ranging on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree)

Appendix C: Descriptive Tables and Figures

Table C1a. Drivers of attrition

Variable	*Overall*	*Attrited*	*Non-attrited*	*p-value*
N	1347	146	1201	
Aleppo	29.7	3.4	32.9	<0.001
Deir-Ez-Zor	8.8	1.4	9.7	
Hama	23.2	48.6	20.1	
Homs	31.3	34.2	30.9	
Rural Damascus	7.1	12.3	6.4	
HH type = Non-beneficiary(%)	36.5	33.6	36.9	0.486
Gender HHH (% Female)	34.2	39.7	33.6	0.164
Age of HHH (in years)	46.4 (11.8)	45.9 (12.8)	46.4 (11.7)	0.603
Education HHH (%)				0.101
None	28.4	23.3	29.1	
Primary	56.6	65.8	55.5	
Secondary	10.9	8.9	11.2	
Tertiary	4.1	2.1	4.3	
Literacy of HHH (%)	80.2	80.1	80.2	1.000
Marital Status of HHH (%)				**<0.01**
Divorced	1.1	2.1	1.0	
Married	79.8	69.9	81.0	
Single	4.0	4.1	4.0	
Widowed	15.1	24.0	14.0	
Number of HH members	6.8 (3.3)	5.5 (3.0)	6.9 (3.3)	**<0.01**
Member with disability (%)	32.0	30.1	32.2	0.684
Share from total income				
Crop production (%)	36.9 (35.4)	24.4 (30.4)	38.4 (35.7)	**<0.01**
Livestock keeping (%)	39.7 (34.7)	38.5 (33.4)	39.8 (34.8)	0.674
Wage work (%)	9.3 (21.4)	9.5 (20.4)	9.2 (21.5)	0.880
Off-farm Business (%)	12.1 (24.0)	25.4 (30.8)	10.5 (22.6)	**<0.01**
Transfer and assistance (%)	2.0 (9.4)	2.2 (9.1)	1.9 (9.4)	0.784

Note: *The table presents baseline household characteristics by attrition status (attrited vs. non-attrited) within the complete initial baseline sample (N=1,347). Means and standard deviations (in parentheses) are reported for continuous variables, and percentages for categorical variables. Reported p-values are based on tests of equality between attrited and non-attrited households; values below 0.1 indicate statistically significant differences. "Share from total income" variables indicate the percentage contribution of each income source (crop production, livestock, wage work, off-farm business, and transfers/assistance) to total household income in the past 12 months.*

Table C1b. Baseline balance in demographic and socio-economic characteristics

Variable	*Overall*	*Non-beneficiary*	*Beneficiary*	*p-value*
N	1201	443	758	
Governorate (%)				**<0.01**
Aleppo	32.9	26.9	36.4	
Deir-Ez-Zor	9.7	13.5	7.4	
Hama	20.1	17.4	21.8	
Homs	30.9	35.0	28.5	
Rural Damascus	6.4	7.2	5.9	
Gender HHH (% Female)	33.6	32.7	34.0	0.690
Age of HHH (in years)	46.4 (11.7)	46.3 (12.2)	46.4 (11.3)	0.843
Education HHH (%)				0.119
None	29.1	26.2	30.7	
Primary	55.5	57.8	54.1	
Secondary	11.2	10.4	11.6	
Tertiary	4.3	5.6	3.6	
Literacy of HHH (%)	80.2	79.7	80.5	0.797
Marital status of HHH (%)				0.476
Divorced	1.0	0.9	1.1	
Married	81.0	83.1	79.8	
Single	4.0	4.1	4.0	
Widowed	14.0	12.0	15.2	
HH members	6.9 (3.3)	6.7 (3.1)	7.1 (3.5)	**0.086**
Member with disability (%)	32.2	34.0	31.1	0.332
Share from total income				
Crop production (%)	38.4 (35.6)	36.5 (34.9)	39.4 (36.1)	0.176
Livestock keeping (%)	39.8 (34.8)	36.7 (34.9)	41.6 (34.7)	**0.021**
Wage work (%)	9.2 (21.5)	11.0 (24.2)	8.2 (19.6)	**0.026**
Off-farm business (%)	10.5 (22.6)	13.3 (26.4)	8.9 (19.9)	**<0.01**
Transfer and assistance (%)	1.9 (9.4)	2.2 (10.0)	1.7 (9.1)	0.409

Note: *The table presents baseline household characteristics by beneficiary status (non-beneficiary vs. beneficiary) within the final panel sample (N=1,201). Means and standard deviations (in parentheses) are reported for continuous variables, and percentages for categorical variables. Reported p-values are based on tests of equality between attrited and non-attrited households; values below 0.1 indicate statistically significant differences. "Share from total income" variables indicate the percentage contribution of each income source (crop production, livestock, wage work, off-farm business, and transfers/assistance) to total household income.*

Table C2. Baseline balance in demographic and socio-economic characteristics (Livestock FFS)

Variable	*Overall*	*Non-beneficiary*	*Livestock FFS*	*p-value*
N	972	443	529	
Governorate (%)				**< 0.01**
Aleppo	29.5	26.9	31.8	
Deir-Ez-Zor	10.9	13.5	8.7	
Hama	17.5	17.4	17.6	
Homs	37.2	35.0	39.1	
Rural Damascus	4.8	7.2	2.8	
Gender HHH (% Female)	33.7	32.7	34.6	0.587
Age of HHH (in years)	46.2 (11.6)	46.3 (12.2)	46.0 (11.0)	0.654
Education HHH (%)				0.125
None	27.4	26.2	28.4	
Primary	55.6	57.8	53.7	
Secondary	12.4	10.4	14.2	
Tertiary	4.6	5.6	3.8	
Literacy of HHH (%)	81.0	79.7	82.0	0.395
Marital Status of HHH (%)				0.698
Divorced	0.9	0.9	0.9	
Married	81.5	83.1	80.2	
Single	4.3	4.1	4.5	
Widowed	13.3	12.0	14.4	
HH member (in number)	6.8 (3.2)	6.7 (3.1)	6.9 (3.3)	0.286
Members with disability (%)	33.4	34.0	33.0	0.780
Share from total income				
Crop production (%)	35.3 (34.1)	36.6 (34.9)	39.5 (36.1)	0.312
Livestock keeping (%)	40.2 (33.8)	36.7 (34.9)	41.57 (34.68)	**<0.01**
Wage work (%)	10.5 (23.1)	11.1 (24.2)	8.18 (19.66)	0.497
Off-farm Business (%)	11.5 (23.9)	13.3 (26.4)	8.93 (19.89)	**0.034**
Transfer and assistance (%)	2.3 (10.3)	2.2 (10.0)	1.8 (9.1)	0.808

Note: *The table presents baseline household characteristics by beneficiary status (non-beneficiary vs. Livestock FFS) within the livestock baseline subsample (N=972). Means and standard deviations (in parentheses) are reported for continuous variables, and percentages for categorical variables. Reported p-values are based on tests of equality between attrited and non-attrited households; values below 0.1 indicate statistically significant differences. "Share from total income" variables indicate the percentage contribution of each income source (crop production, livestock, wage work, off-farm business, and transfers/assistance) to total household income.*

Table C3. Baseline balance in demographic and socio-economic characteristics (Crops FFS)

Variable	*Overall*	*Non-beneficiary*	*Crops FFS*	*p-value*
N	934	443	491	
Governorate (%)				**<0.01**
Aleppo	234 (25.1)	119 (26.9)	115 (23.4)	
Deir-Ez-Zor	103 (11.0)	60 (13.5)	43 (8.8)	
Hama	203 (21.7)	77 (17.4)	126 (25.7)	
Homs	317 (33.9)	155 (35.0)	162 (33.0)	
Rural Damascus	77 (8.2)	32 (7.2)	45 (9.2)	
Gender HHH (% Female)	33.6	32.7	34.4	0.634
Age of HHH (in years)	46.4 (11.9)	46.3 (12.2)	46.5 (11.6)	0.848
Education HHH (%)				**0.091**
None	27.6	26.2	28.9	
Primary	54.9	57.8	52.3	
Secondary	12.6	10.4	14.7	
Tertiary	4.8	5.6	4.1	
Literacy of HHH (%)	79.8	79.7	79.8	1.000
Marital Status of HHH (%)				0.327
Divorced	1.2	0.9	1.4	
Married	80.7	83.1	78.6	
Single	4.2	4.1	4.3	
Widowed	13.9	12.0	15.7	
HH member (in number)	6.8 (3.2)	6.7 (3.1)	6.9 (3.4)	0.364
Members with disability (%)	34.4	34.0	34.7	0.880
Share from total income				
Crop production (%)	37.1 (36.0)	36.6 (34.9)	37.6 (36.9)	0.660
Livestock keeping (%)	38.6 (35.9)	36.7 (34.9)	40.3 (36.6)	0.131
Wage work (%)	10.7 (22.8)	11.1 (24.2)	10.4 (21.4)	0.662
Off-farm Business (%)	11.4 (23.9)	13.3 (26.4)	9.6 (21.3)	**0.021**
Transfer and assistance (%)	2.1 (9.7)	2.2 (10.0)	1.9 (9.5)	0.632

Note: *The table presents baseline household characteristics by beneficiary status (non-beneficiary vs. Crops FFS) within the crops baseline subsample (N=934). Means and standard deviations (in parentheses) are reported for continuous variables, and percentages for categorical variables. Reported p-values are based on tests of equality between attrited and non-attrited households; values below 0.1 indicate statistically significant differences. "Share from total income" variables indicate the percentage contribution of each income source (crop production, livestock, wage work, off-farm business, and transfers/assistance) to total household income.*

Table C4. Mean outcome values at baseline and endline overall and disaggregated by beneficiary status

	Baseline			Endline		
Outcome	*Overall*	*Control*	*Treatment*	*Overall*	*Control*	*Treatment*
Food security & resilience indicators						
Food Consumption Score (FCS)	57.10	58.98	56.01	60.30	59.74	60.62
Household Dietary Diversity Score (HDDS)	6.57	6.81	6.43	7.15	7.17	7.14
Approx. rCSI	10.37	11.18	9.88	7.95	8.61	7.55
RCI	52.30	54.46	51.05	57.01	56.39	57.38
Food groups consumption						
Cereals (24h)	1.00	1.00	1.00	1.00	1.00	1.00
Roots and tubers (24h)	0.77	0.79	0.76	0.79	0.78	0.79
Vegetables (24h)	0.75	0.73	0.76	0.85	0.85	0.85
Fruits (24h)	0.10	0.13	0.08	0.27	0.26	0.27
Meat and poultry (24h)	0.06	0.08	0.05	0.14	0.11	0.16
Eggs (24h)	0.55	0.55	0.54	0.62	0.57	0.65
Fish (24h)	0.01	0.02	0.01	0.02	0.02	0.01
Pulses and nuts (24h)	0.47	0.56	0.42	0.45	0.45	0.45
Milk and dairy (24h)	0.80	0.81	0.79	0.78	0.78	0.78
Oils and fats (24h)	0.88	0.89	0.87	0.77	0.76	0.77
FIES - Experienced over the past 30 days (Yes/No, proportion)						
Worried about food	0.74	0.70	0.77	0.60	0.56	0.62
Unable to eat healthy food	0.97	0.99	0.95	0.97	0.98	0.96
Ate few kinds of food	0.96	0.96	0.95	0.96	0.98	0.95
Skipped a meal	0.52	0.59	0.48	0.45	0.46	0.45
Ate less than needed	0.52	0.58	0.48	0.38	0.39	0.37
Ran out of food	0.18	0.15	0.19	0.19	0.18	0.20
Hungry	0.19	0.19	0.18	0.03	0.02	0.03
Whole day	0.11	0.10	0.11	0.01	0.01	0.01
FIES - Days experienced (last 30 days)						

Days worried about food	11.51	11.47	11.52	7.41	7.46	7.39
Days unable to eat healthy food	19.70	20.15	19.43	16.57	17.67	15.92
Days ate few kinds of food	19.06	19.06	19.06	16.92	18.01	16.27
Days skipped meals	10.28	11.82	9.36	7.80	8.43	7.42
Days ate less than needed	10.12	11.68	9.19	6.44	7.74	5.66
Days ran out of food	2.17	2.14	2.18	1.62	1.53	1.68
Hungry	2.14	2.35	2.02	0.29	0.22	0.33
Whole day	1.12	1.12	1.12	0.09	0.03	0.12
HH that cultivate (Yes/No, proportion)						
Maize	0.19	0.11	0.24	0.20	0.12	0.24
Wheat (irrigated)	0.42	0.40	0.43	0.42	0.36	0.45
Wheat (rainfed)	0.07	0.08	0.07	0.09	0.09	0.08
Barley	0.10	0.15	0.08	0.10	0.09	0.11
Land size						
Maize land size	1.78	1.45	1.86	1.72	1.87	1.67
Wheat land size (irrigated)	1.48	1.19	1.63	1.49	1.47	1.50
Wheat land size (rainfed)	0.62	0.64	0.60	0.70	0.83	0.62
Barley land size	1.23	1.74	0.64	1.18	1.71	0.91
Harvest						
Maize harvest	9.54	8.72	9.74	9.61	9.60	9.61
Wheat harvest (irrigated)	4.29	3.32	4.81	4.15	4.11	4.17
Wheat harvest (rainfed)	0.66	0.72	0.61	0.78	0.76	0.79
Barley harvest	1.11	1.16	1.08	1.17	1.64	0.94
Crop yields (t/ha)						
Maize yield	5.24	5.55	5.16	5.71	5.34	5.82
Wheat yield (irrigated)	2.88	2.86	2.88	2.77	2.82	2.74
Wheat yield (rainfed)	1.23	1.22	1.24	1.09	0.89	1.22
Barley yield	1.80	1.86	1.74	1.05	0.96	1.10
Livestock ownership (Yes/No, proportion)						
Cattle ownership	0.55	0.50	0.58	0.48	0.43	0.51

Poultry ownership	0.39	0.41	0.38	0.30	0.33	0.29
Sheep ownership	0.36	0.35	0.36	0.29	0.26	0.31
Goat ownership	0.08	0.09	0.07	0.06	0.05	0.07
Livestock ownership (heads)						
Cattle	1.87	1.93	1.84	1.65	1.58	1.69
Poultry	7.38	8.00	7.00	6.91	7.04	6.83
Sheep	13.98	17.58	11.95	10.59	11.13	10.29
Goat	3.27	4.60	2.39	2.80	2.15	3.23
Livestock milk production (liter/animal/day)						
Cattle milk production	11.80	11.29	12.06	8.43	7.81	8.75
Sheep milk production	1.59	1.59	1.59	1.08	0.94	1.15
Goat milk production	0.76	0.76	0.76	0.80	0.43	1.04
General income past 12 months (USD)						
Total income	2625.38	2187.78	2881.12	3799.57	3351.50	4061.45
Crop income	1442.12	1094.10	1645.51	1808.15	1520.42	1976.30
Livestock income	938.52	821.60	1006.85	1567.44	1391.79	1670.09
Off-farm income	131.76	148.43	122.01	226.39	233.53	222.21
Wage income	90.90	96.99	87.34	153.51	159.77	149.85
Transfer and assistance income	22.08	26.67	19.40	44.10	45.99	42.99
Value chain income (Yes/No, proportion)						
Own crop sales (before processing)	0.59	0.57	0.59	0.64	0.60	0.67
Own crop sales (after processing)	0.03	0.03	0.03	0.07	0.05	0.08
Own livestock sales	0.69	0.63	0.72	0.64	0.56	0.68
Trading income	0.02	0.02	0.03	0.03	0.02	0.03
Processing & storage income	0.02	0.04	0.01	0.01	0.01	0.02
Support services income	0.01	0.01	0.01	0.02	0.00	0.02
Agricultural inputs income	0.01	0.00	0.02	0.00	0.00	0.00
Women's empowerment attitudes (1-5 Likert scale)						
Girl marriage	2.26	2.20	2.30	2.64	2.59	2.67

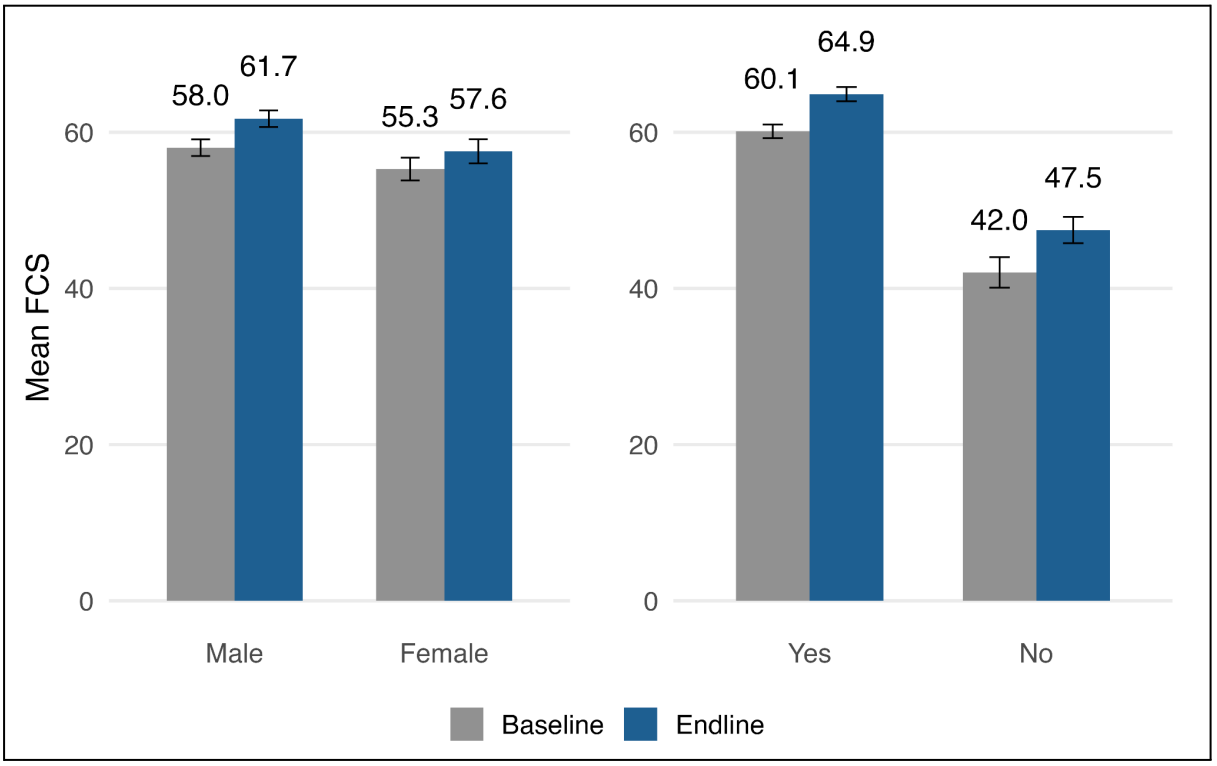
Girl work outside	3.31	3.36	3.29	3.64	3.67	3.63
Men have final word	3.58	3.68	3.52	3.47	3.51	3.45
Women speak out	3.62	3.71	3.57	3.74	3.67	3.79
Women leadership	3.31	3.35	3.29	3.51	3.47	3.54

Note: The table presents baseline and endline means of the outcomes, overall and by beneficiary status, at baseline and endline.

Figure C1a. Food consumption by gender of HHH and livestock ownership

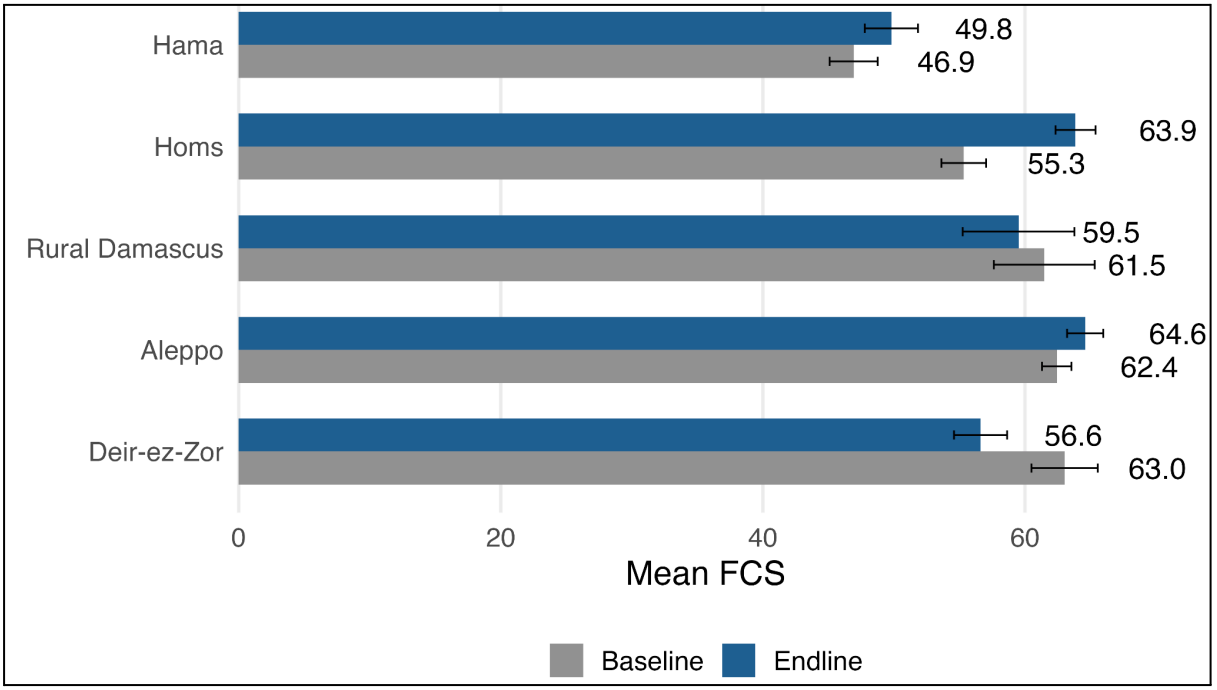
i) FCS by gender of HHH

ii) FCS by livestock ownership



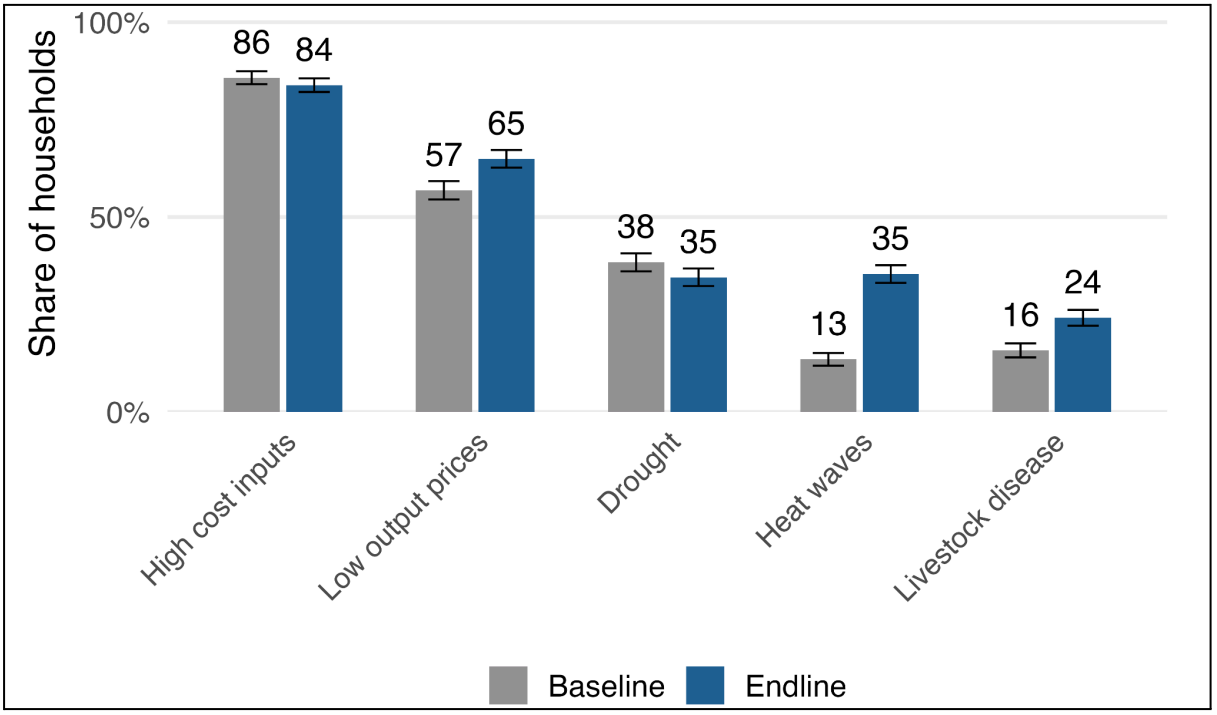
Note: *Bars show the mean FCS at baseline and endline. Error bars represent 90 percent confidence intervals around the mean.*

Figure C1b. Food consumption by governorate



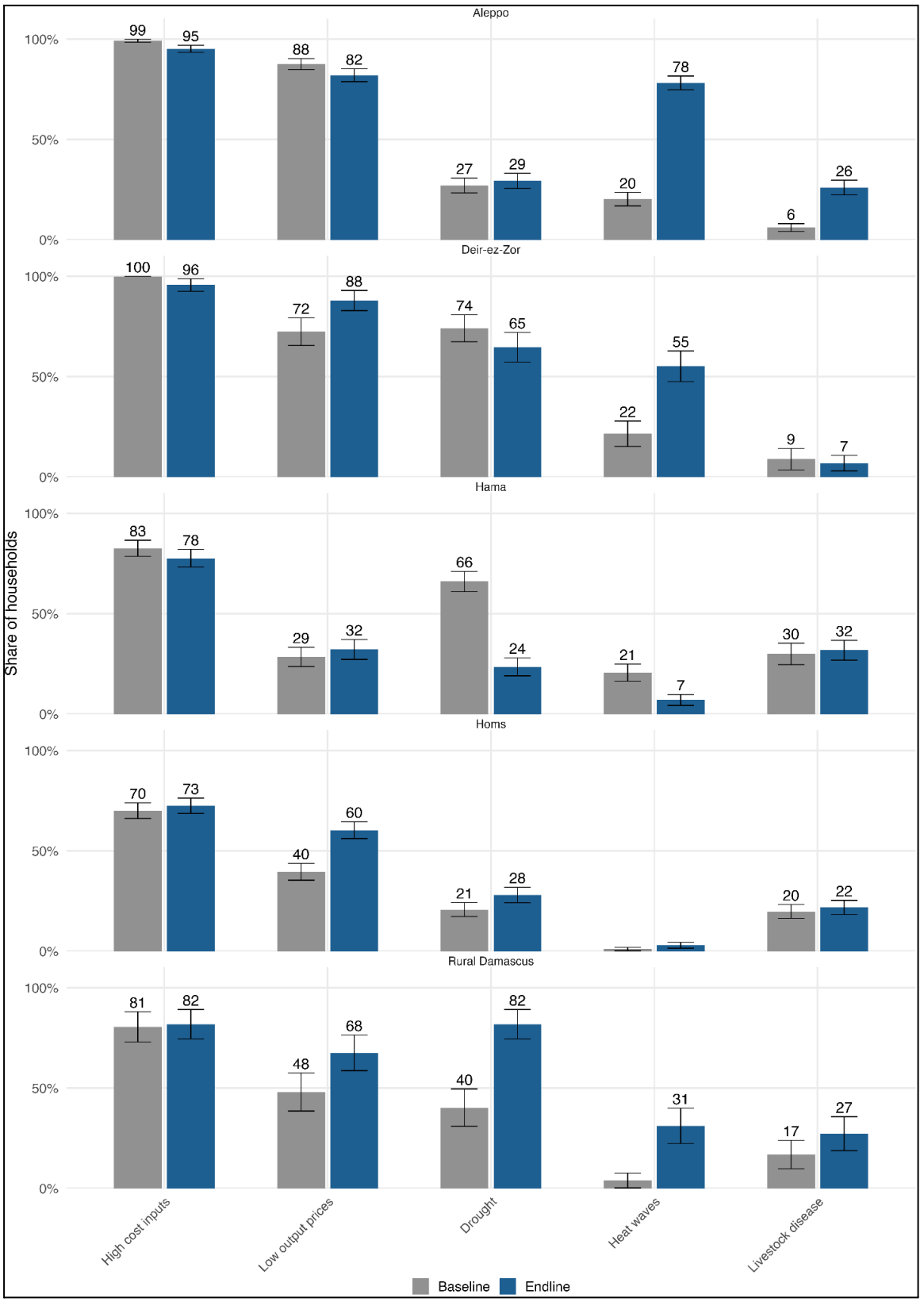
Note: *Bars show the mean FCS at baseline and endline. Error bars represent 90 percent confidence intervals around the mean.*

Figure C2a. Share of households affected by shocks



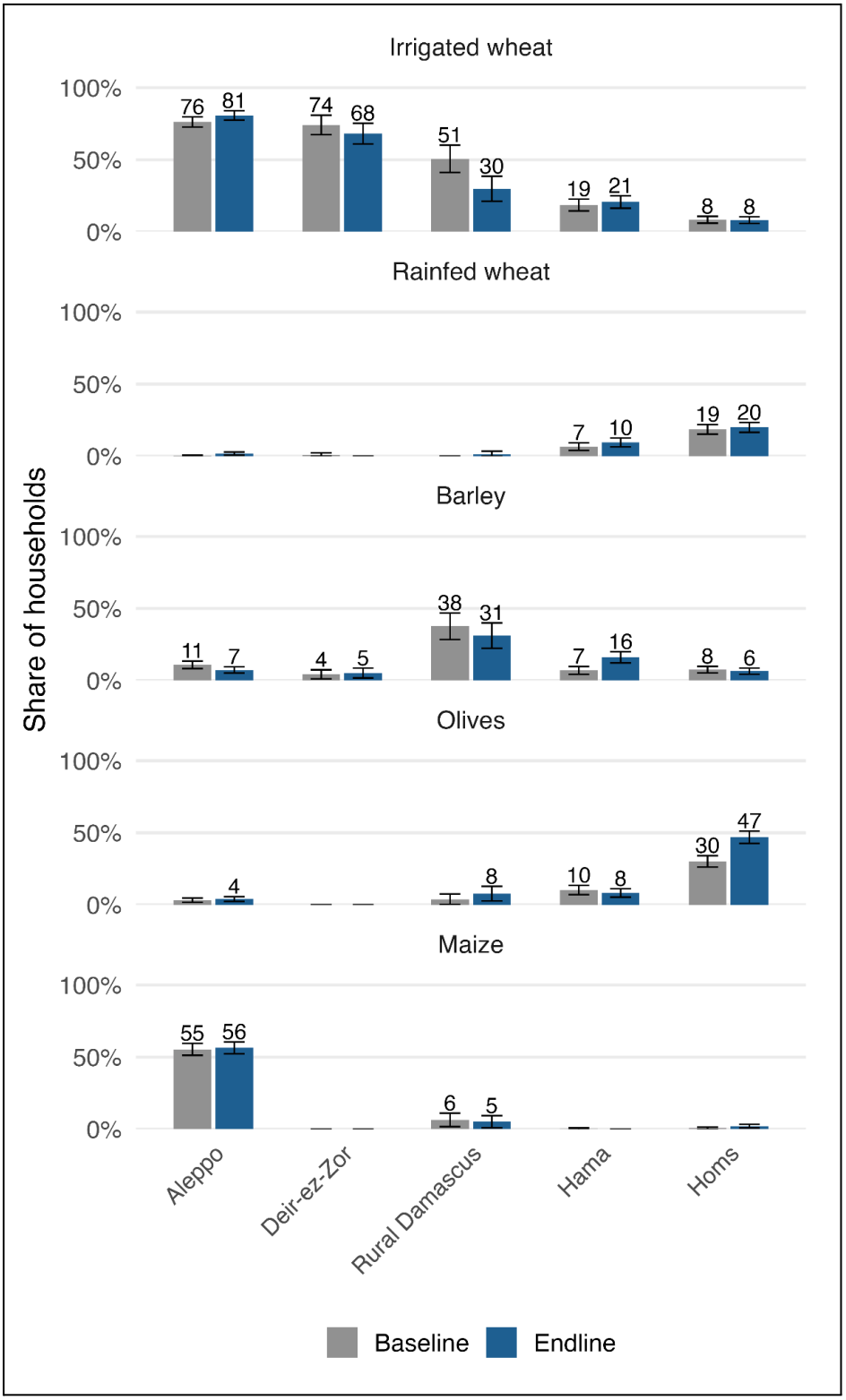
Note: *Bars display the share of households reporting exposure to selected economic and climatic shocks in the past 12 months. Percentages are calculated over the full sample in each wave. Error bars represent 90 percent confidence intervals around the mean.*

Figure C2b. Share of households affected by shocks (by governorate)



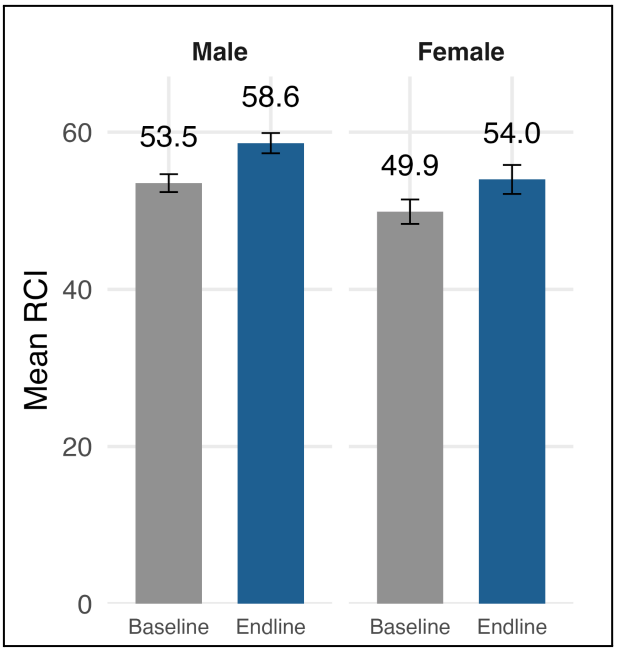
Note: *Bars display the share of households reporting exposure to selected economic and climatic shocks in the past 12 months. Percentages are calculated over the full sample in each wave. Error bars represent 90 percent confidence intervals around the mean.*

Figure C3. Share of households cultivating major crops (by governorate)



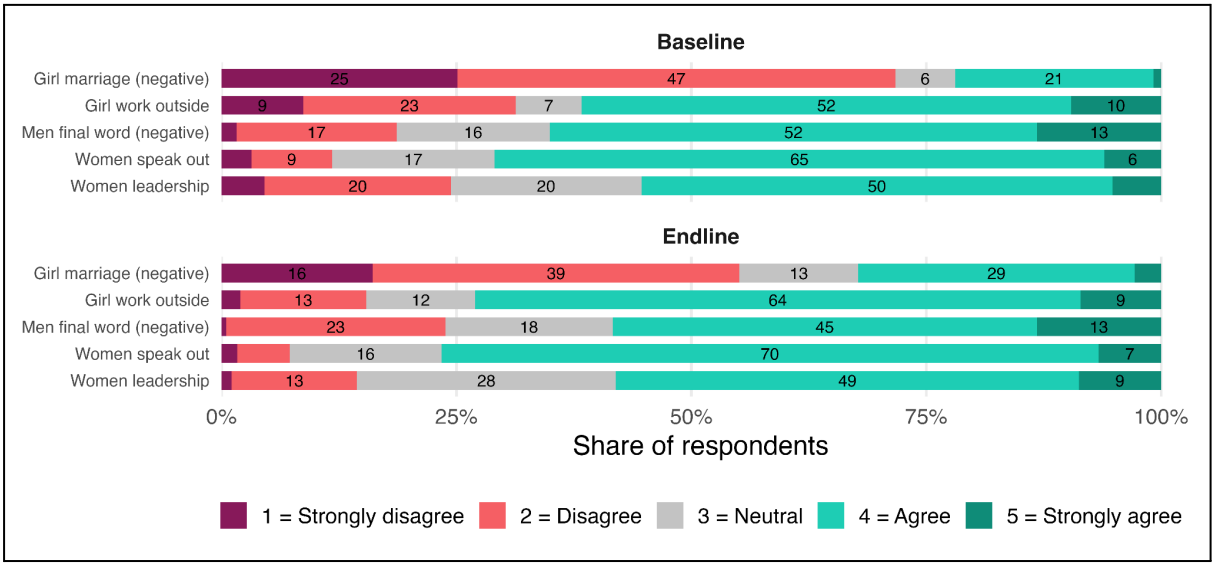
Note: *The figures display the share of households cultivating each crop by governorate at baseline and endline. Percentages are calculated within the governorate and wave. Error bars represent 90 percent confidence intervals around the mean.*

Figure C4. Resilience Capacity Index (RCI) by household head gender



Note: *Bars show the average RCI by household head gender at baseline and endline. The RCI is computed using the FAO's RIMA II methodology and combines four pillars: Adaptive Capacity, Access to Basic Services, Assets, and Social Safety Nets, along with food security indicators. Error bars represent 90 percent confidence intervals around the mean.*

Figure C5. Attitudes related to gender equity



Note: *The figure reports the distribution of responses on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) for the following statements: (i) Girl Marriage - "In certain situations, marrying a daughter before the age of 18 is acceptable"; (ii) Girl Work Outside - "I would like my daughter to be able to work outside the home so she can support herself if necessary"; (iii) Man Final Word - "A man should have the final word about decisions in his home"; (iv) Women Speak Out - "Women should be able to safely speak out in her household and community without any personal harm inflicted on her"; (v) Women Leadership - "Women should hold more leadership positions in the community." For interpretation, note that Girl Marriage and Man Final Word are negatively framed statements; higher levels of disagreement with these items indicate more gender-equitable attitudes. Percentages are calculated over all respondents in the sample.*

Appendix D: Differential Impacts by FFS Type (Livestock FFS versus Crops FFS)

Table D1. Impact estimates on food security and resilience outcomes

Outcome	Non-beneficiary baseline mean	Overall (N=2402)	Livestock FFS (N=1944)	Crops FFS (N=1868)
Food security & resilience indicators				
FCS	58.98	3.85** (1.55)	5.34*** (1.61)	3.95** (1.71)
HDDS	6.81	0.35** (0.14)	0.46*** (0.15)	0.24 (0.16)
Approx. rCSI	11.18	0.24 (0.59)	0.02 (0.64)	-0.67 (0.67)
RCI	54.46	4.39** (1.77)	6.69*** (1.84)	4.05** (1.96)
Food groups consumption				
Cereals (24h)	1.00	0.00 (0.00)	0.00 (0.01)	0.00 (0.01)
Roots and tubers (24h)	0.79	0.04 (0.04)	0.06 (0.04)	-0.03 (0.04)
Vegetables (24h)	0.73	-0.02 (0.03)	-0.00 (0.04)	-0.03 (0.04)
Fruits (24h)	0.13	0.07** (0.03)	0.06 (0.03)	0.07** (0.04)
Meat and poultry (24h)	0.08	0.07*** (0.03)	0.04 (0.03)	0.10*** (0.03)
Eggs (24h)	0.55	0.08* (0.04)	0.10** (0.04)	0.05 (0.05)
Fish (24h)	0.02	-0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)
Pulses and nuts (24h)	0.56	0.14*** (0.04)	0.14*** (0.05)	0.13*** (0.05)

Milk and dairy (24h)	0.81	0.02 (0.03)	0.05 (0.04)	0.00 (0.04)
Oils and fats (24h)	0.89	0.03 (0.03)	0.05 (0.03)	0.01 (0.04)
FIES - Experienced over the past 30 days (Yes/No) (proportion)				
Worried about food	0.70	-0.01 (0.04)	-0.06 (0.04)	-0.04 (0.04)
Unable to eat healthy food	0.99	0.01 (0.02)	0.01 (0.02)	0.00 (0.02)
Ate few kinds of food	0.96	-0.03* (0.02)	-0.02 (0.02)	-0.04** (0.02)
Skipped a meal	0.59	0.11** (0.04)	0.11** (0.05)	0.07 (0.05)
Ate less than needed	0.58	0.07* (0.04)	0.07 (0.05)	-0.00 (0.05)
Ran out of food	0.15	-0.03 (0.03)	-0.03 (0.04)	-0.05 (0.04)
FIES - Days experienced (last 30 days)				
Days worried about food	11.47	-0.12 (0.85)	-0.70 (0.91)	-1.08 (0.96)
Days unable to eat healthy food	20.15	-1.03 (0.76)	-1.10 (0.81)	-0.81 (0.84)
Days ate few kinds of food	19.06	-1.73** (0.76)	-1.62** (0.81)	-1.31 (0.85)
Days skipped meals	11.82	1.46 (1.01)	1.29 (1.08)	0.41 (1.13)
Days ate less than needed	11.68	0.40 (0.96)	0.21 (1.04)	-1.54 (1.08)
Days ran out of food	2.14	0.11 (0.48)	-0.15 (0.54)	-0.47 (0.57)

Note: *This table reports the estimated impact of the intervention on food security and resilience outcomes. Each cell corresponds to a separate OLS regression. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. See Table E1 for robustness checks.*

Table D2. Impact estimates on crop yields and livestock production outcomes

Outcome	Non-beneficiary baseline mean	Overall (N=2402)	Livestock FFS (N=1944)	Crops FFS (N=1868)
Crop yields (t/ha)				
Maize yield	5.55	0.87* (0.44)	0.95** (0.46)	0.66 (0.51)
Wheat yield (irrigated)	2.86	-0.10 (0.11)	-0.10 (0.12)	-0.10 (0.13)
Wheat yield (rainfed)	1.22	0.31 (0.20)	0.22 (0.20)	0.48** (0.20)
Barley yield	1.86	0.25 (0.21)	0.47** (0.22)	0.17 (0.22)
Livestock ownership (heads)				
Cattle ownership	1.93	0.19 (0.18)	0.29 (0.19)	0.23 (0.20)
Sheep ownership	17.58	4.79 (3.66)	5.62 (3.97)	1.95 (4.51)
Goat ownership	4.60	3.28* (1.82)	3.21 (2.15)	2.28 (2.01)
Poultry ownership	8.00	0.78 (0.84)	1.34 (0.87)	0.11 (0.98)
Livestock milk production (liter/animal/day)				
Cattle milk production	11.29	0.16 (0.70)	0.80 (0.71)	0.48 (0.77)
Sheep milk production	1.59	0.21 (0.17)	0.07 (0.19)	0.35* (0.18)
Goat milk production	0.76	0.62** (0.30)	0.50 (0.33)	0.39 (0.30)

Note: *This table reports the estimated impact of the intervention on crop yields and livestock production outcomes. Each cell corresponds to a separate OLS regression. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. See Table E2 for robustness checks.*

Table D3. Impact estimates on income outcomes

Outcome	Non-beneficiary baseline mean	Overall (N=2402)	Livestock FFS (N=1944)	Crops FFS (N=1868)
General income past 12 months (USD)				
Total income	2187.78	16.61 (356.34)	133.32 (338.74)	-175.24 (326.98)
Crop income	1094.10	-95.52 (274.92)	-17.59 (235.24)	-71.95 (241.29)
Livestock income	821.60	93.05 (184.87)	116.75 (197.02)	-152.81 (194.70)
Off-farm income	148.43	15.10 (41.89)	22.60 (48.70)	9.04 (48.71)
Wage income	96.99	-0.28 (27.07)	1.67 (31.03)	22.03 (31.56)
Transfer and assistance income	26.67	4.26 (14.58)	9.89 (17.06)	18.45 (15.91)

Note: *This table reports the estimated impact of the intervention on income outcomes. Each cell corresponds to a separate OLS regression. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. See Table E3 for robustness checks.*

Appendix E: Robustness Tables

Table E1. Impact estimates on food security and resilience outcomes (Robustness)

Outcome	Non-beneficiary baseline mean	Overall (N=2402)			Livestock FFS (N=1944)			Crops FFS (N=1868)		
		M1	M2	M3	M1	M2	M3	M1	M2	M3
Food security & resilience indicators										
FCS	58.98	3.85**	4.06***	3.85***	5.34***	4.99***	5.41***	3.95**	3.96**	3.97***
		(1.55)	(1.41)	(1.19)	(1.61)	(1.40)	(1.31)	(1.71)	(1.62)	(1.39)
HDDS	6.81	0.35**	0.36***	0.36***	0.46***	0.43***	0.47***	0.24	0.23	0.25*
		(0.14)	(0.13)	(0.12)	(0.15)	(0.14)	(0.13)	(0.16)	(0.15)	(0.14)
RCI	54.46	4.39**	4.83***	4.40***	6.69***	6.39***	6.78***	4.05**	4.05**	4.08**
		(1.77)	(1.61)	(1.37)	(1.84)	(1.59)	(1.49)	(1.96)	(1.86)	(1.60)
rCSI	11.18	0.24	0.07	0.58	0.02	0.03	0.21	-0.67	-0.59	-0.47
		(0.59)	(0.49)	(0.44)	(0.64)	(0.54)	(0.49)	(0.67)	(0.57)	(0.51)
Food groups (proportion)										
Cereals (24h)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Roots & tubers (24h)	0.79	0.04	0.04	0.04	0.06	0.05	0.06	-0.03	-0.04	-0.03
		(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)

Vegetables (24h)	0.73	-0.02	-0.02	-0.02	-0.00	-0.01	-0.00	-0.03	-0.03	-0.03
		(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)
Fruits (24h)	0.13	0.07**	0.08**	0.07**	0.06	0.05	0.06*	0.07**	0.08**	0.07**
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)
Meat & poultry (24h)	0.08	0.07***	0.08***	0.07***	0.04	0.04	0.04	0.10***	0.11***	0.10***
		(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Eggs (24h)	0.55	0.08*	0.09**	0.08**	0.10**	0.10**	0.10**	0.05	0.06	0.05
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
Fish (24h)	0.02	-0.00	0.00	-0.00	0.00	0.00	0.00	-0.00	-0.01	-0.00
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Pulses and nuts (24h)	0.56	0.14***	0.12***	0.14***	0.14***	0.13***	0.14***	0.13***	0.11**	0.13***
		(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)
Milk and dairy (24h)	0.81	0.02	0.02	0.02	0.05	0.05	0.05*	0.00	0.01	0.00
		(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)
Oils and fats (24h)	0.89	0.03	0.02	0.03	0.05	0.04	0.05*	0.01	0.01	0.01
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)
FIES - Experienced over the past 30 days (Yes/No) (proportion)										
Worried about food	0.70	-0.01	-0.03	-0.00	-0.06	-0.04	-0.05	-0.04	-0.07	-0.03
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Unable to eat healthy food	0.99	0.01	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.00
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)

Ate few kinds of food	0.96	-0.03*	-0.03*	-0.03*	-0.02	-0.03	-0.02	-0.04**	-0.04*	-0.04**
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Skipped a meal	0.59	0.10**	0.09**	0.13***	0.11**	0.12***	0.13***	0.07	0.06	0.09**
		(0.04)	(0.04)	(0.03)	(0.05)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
Ate less than needed	0.58	0.08*	0.06	0.11***	0.07	0.07	0.09**	-0.00	-0.01	0.02
		(0.04)	(0.04)	(0.03)	(0.05)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
Ran out of food	0.15	-0.03	-0.03	-0.03	-0.03	-0.01	-0.03	-0.05	-0.05	-0.05
		(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)
Was hungry	0.19	0.02	-0.00	0.03	-	-	-	-	-	-
		(0.03)	(0.03)	(0.02)						
Went without eating all day	0.10	-0.00	-0.01	0.01	-	-	-	-	-	-
		(0.02)	(0.02)	(0.02)						
FIES - Days experienced (last 30 days)										
Days worried about food	11.47	-0.12	-0.48	0.09	-0.70	-0.38	-0.58	-1.08	-1.36	-0.96
		(0.85)	(0.76)	(0.71)	(0.91)	(0.83)	(0.76)	(0.96)	(0.88)	(0.80)
Days unable to eat healthy food	20.15	-1.03	-0.93	-0.97*	-1.10	-1.22	-1.08*	-0.81	-0.46	-0.86
		(0.76)	(0.69)	(0.59)	(0.81)	(0.75)	(0.64)	(0.84)	(0.78)	(0.66)
Days ate few kinds of food	19.06	-1.73**	-1.73**	-1.66***	-1.62**	-1.80**	-1.61**	-1.31	-0.82	-1.29**
		(0.76)	(0.70)	(0.58)	(0.81)	(0.75)	(0.64)	(0.85)	(0.79)	(0.66)
Days skipped meals	11.82	1.46	1.10	2.16***	1.29	1.46	1.73**	0.41	0.23	0.81
		(1.01)	(0.87)	(0.77)	(1.08)	(0.97)	(0.87)	(1.13)	(1.02)	(0.90)

Days ate less than needed	11.68	0.40 (0.96)	-0.03 (0.84)	1.06 (0.74)	0.21 (1.04)	-0.15 (0.93)	0.54 (0.82)	-1.54 (1.08)	-1.53 (0.97)	-1.03 (0.85)
Days ran out of food	2.14	0.11 (0.48)	0.07 (0.46)	0.11 (0.41)	-0.15 (0.54)	0.04 (0.52)	-0.15 (0.46)	-0.47 (0.57)	-0.39 (0.56)	-0.48 (0.49)
Days was hungry	2.35	0.44 (0.37)	0.28 (0.35)	0.54* (0.32)	-	-	-	-	-	-
Days without eating all day	1.12	0.10 (0.26)	0.02 (0.25)	0.18 (0.23)	-	-	-	-	-	-
Controls		No	Yes	No	No	Yes	No	No	Yes	No
Entropy balancing		No	Yes	No	No	Yes	No	No	Yes	No
Mixed effects model		No	No	Yes	No	No	Yes	No	No	Yes

Note: *This table reports the estimated impact of the intervention on food security and resilience outcomes. Each cell corresponds to a separate regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. Results are presented for three beneficiary definitions: (i) Overall participation, (ii) Livestock FFS, and (iii) Crops FFS. For each beneficiary definition, three model specifications are estimated. Models M1 are based on the initial specification in the main analysis. Models M2 apply entropy balancing and adjust for control variables in OLS models. Models M3 apply mixed effects models with village-level random intercepts.*

Table E2. Impact estimates on crop yields and livestock production (Robustness)

Outcome	Non-beneficiary baseline mean	Overall (N=2402)			Livestock FFS (N=1944)			Crops FFS (N=1868)		
		M1	M2	M3	M1	M2	M3	M1	M2	M3
Crop yields (t/ha)										
Maize yield	5.55	0.87*	1.19***	1.64***	0.95**	1.21***	1.81***	0.66	0.78	1.30**
		(0.44)	(0.40)	(0.44)	(0.46)	(0.44)	(0.46)	(0.51)	(0.51)	(0.54)
Wheat yield (irrigated)	2.86	-0.10	-0.02	-0.04	-0.10	-0.01	-0.04	-0.10	-0.02	0.00
		(0.11)	(0.11)	(0.10)	(0.12)	(0.12)	(0.11)	(0.13)	(0.13)	(0.12)
Wheat yield (rainfed)	1.22	0.31	0.27	0.29*	0.22	0.26	0.26	0.48**	0.48**	0.50***
		(0.20)	(0.19)	(0.16)	(0.20)	(0.18)	(0.16)	(0.20)	(0.19)	(0.16)
Barley yield	1.86	0.25	0.26	0.23	0.47**	0.29	0.47**	0.17	0.25	0.13
		(0.21)	(0.20)	(0.21)	(0.22)	(0.21)	(0.23)	(0.22)	(0.22)	(0.22)
Livestock ownership (heads)										
Cattle ownership	1.93	0.19	0.24*	0.19	0.29	0.39***	0.29*	0.23	0.20	0.23
		(0.18)	(0.13)	(0.15)	(0.19)	(0.13)	(0.15)	(0.20)	(0.14)	(0.17)
Sheep ownership	17.58	4.79	3.40	4.76	5.62	4.86	5.59	1.95	1.64	1.92
		(3.66)	(3.40)	(3.30)	(3.97)	(3.93)	(3.53)	(4.51)	(4.15)	(4.06)
Goat ownership	4.60	3.28*	2.99*	3.28*	3.21	3.09	3.21	2.28	2.28	2.28
		(1.82)	(1.73)	(1.79)	(2.15)	(2.15)	(2.10)	(2.01)	(1.98)	(1.97)

Poultry ownership	8.00	0.78 (0.84)	0.74 (0.81)	0.78 (0.74)	1.34 (0.87)	1.38* (0.80)	1.38* (0.74)	0.11 (0.98)	0.02 (0.92)	0.13 (0.88)
Livestock milk production (liter/animal/day)										
Cattle milk production	11.29	0.16 (0.70)	0.55 (0.68)	0.16 (0.64)	0.80 (0.71)	0.85 (0.68)	0.80 (0.64)	0.48 (0.77)	0.62 (0.75)	0.48 (0.71)
Sheep milk production	1.59	0.21 (0.17)	0.24 (0.15)	0.22 (0.14)	0.07 (0.19)	0.06 (0.16)	0.07 (0.16)	0.35* (0.18)	0.36** (0.16)	0.35** (0.15)
Goat milk production	0.76	0.62** (0.30)	0.69** (0.29)	0.62** (0.28)	0.50 (0.33)	0.48 (0.32)	0.50 (0.31)	0.39 (0.30)	0.45 (0.29)	0.39 (0.29)
Controls		No	Yes	No	No	Yes	No	No	Yes	No
Entropy balancing		No	Yes	No	No	Yes	No	No	Yes	No
Mixed effects model		No	No	Yes	No	No	Yes	No	No	Yes

Note: *This table reports the estimated impact of the intervention on crop yields and livestock production. Each cell corresponds to a separate regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests.*
Results are presented for three beneficiary definitions: (i) Overall participation, (ii) Livestock FFS, and (iii) Crops FFS. For each beneficiary definition, three model specifications are estimated. Models M1 are based on the initial specification in the main analysis. Models M2 apply entropy balancing and adjust for control variables in OLS models. Models M3 apply mixed effects models with village-level random intercepts.

Table E3. Impact estimates on income outcomes (Robustness)

Outcome	Non-beneficiary baseline mean	Overall (N=2402)			Livestock FFS (N=1944)			Crops FFS (N=1868)		
		M1	M2	M3	M1	M2	M3	M1	M2	M3
General income past 12 months (USD)										
Total income	2187.78	16.61	-87.65	4.83	133.32	95.69	161.08	-175.24	-112.15	-170.58
		(356.34)	(208.28)	(264.95)	(338.74)	(196.43)	(237.66)	(326.98)	(196.59)	(256.24)
Crop income	1094.10	-95.52	-152.15	-102.58	-17.59	-35.12	-2.93	-71.95	-55.94	-73.13
		(274.92)	(164.69)	(208.21)	(235.24)	(135.98)	(169.89)	(241.29)	(143.18)	(183.52)
Livestock income	821.60	93.05	34.45	87.63	116.75	88.39	129.75	-152.81	-98.43	-148.19
		(184.87)	(157.96)	(161.60)	(197.02)	(165.12)	(167.43)	(194.70)	(163.97)	(178.24)
Off-farm income	148.43	15.10	19.87	15.70	22.60	29.30	22.71	9.04	7.83	9.40
		(41.89)	(42.09)	(40.88)	(48.70)	(48.16)	(47.64)	(48.71)	(48.57)	(47.64)
Wage income	96.99	-0.28	6.46	-0.29	1.67	3.89	1.24	22.03	14.89	21.81
		(27.07)	(26.44)	(25.86)	(31.03)	(30.41)	(29.73)	(31.56)	(31.11)	(30.28)
Transfer and assistance income	26.67	4.26	3.72	4.25	9.89	9.23	9.77	18.45	19.51	18.39
		(14.58)	(15.18)	(14.07)	(17.06)	(17.34)	(16.50)	(15.91)	(15.74)	(15.28)
Value chain income (Yes/No) (proportion)										
Own crop sales (before processing)	0.57	0.05	0.05	0.05	0.07*	0.07*	0.07**	0.09**	0.09**	0.09**
		(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)

Own crop sales (after processing)	0.03	0.03*	0.04**	0.03**	0.05**	0.05**	0.05***	0.07***	0.07***	0.07***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Own livestock sales	0.63	0.04	0.05	0.04	0.05	0.06	0.05	0.05	0.06	0.05
		(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
Trading income	0.02	0.00	0.00	0.00	-0.01	-0.01	-0.01	0.01	0.01	0.01
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Processing & storage income	0.04	0.04***	0.04***	0.04***	0.04***	0.04***	0.04***	0.05***	0.04***	0.05***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Support services income	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Agricultural inputs income	0.00	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Controls		No	Yes	No	No	Yes	No	No	Yes	No
Entropy balancing		No	Yes	No	No	Yes	No	No	Yes	No
Mixed effects model		No	No	Yes	No	No	Yes	No	No	Yes

Note: *This table reports the estimated impact of the intervention on income outcomes. Each cell corresponds to a separate regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. Results are presented for three beneficiary definitions: (i) Overall participation, (ii) Livestock FFS, and (iii) Crops FFS. For each beneficiary definition, three model specifications are estimated. Model M1 is based on the initial specification in the main analysis. Model M2 applies entropy balancing and adjusts for control variables in OLS models. Model M3 applies mixed effects models with village-level random intercepts.*

Table E4. Impact estimates on attitudes related to gender equity (Robustness)

Outcome	Non-beneficiary baseline mean	Overall (N=2402)		
		M1	M2	M3
Girl marriage	2.20	-0.03	-0.12	-0.03
		(0.09)	(0.09)	(0.08)
Girl work outside	3.36	0.03	0.06	0.03
		(0.09)	(0.08)	(0.07)
Men have final word	3.68	0.10	0.07	0.10
		(0.08)	(0.08)	(0.07)
Women speak out	3.71	0.26***	0.24***	0.26***
		(0.07)	(0.07)	(0.06)
Women leadership	3.35	0.13*	0.13*	0.13**
		(0.08)	(0.07)	(0.06)
Controls		No	Yes	No
Entropy balancing		No	Yes	No
Mixed effects model		No	No	Yes

Note: *This table reports the estimated impact of the intervention on attitudes towards gender equity. Each cell corresponds to a separate regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. Three model specifications are estimated. Models M1 are based on the initial specification in the main analysis. Models M2 apply entropy balancing and adjust for control variables in OLS models. Models M3 apply mixed effects models with village-level random intercepts.*

Appendix F: Heterogeneity Analysis by Household Head Gender and Governorate

Table F1. Heterogeneous Impact estimates on food security and resilience outcomes

Outcome	Overall (N=2402)	Female HH only (N=817)	Male HH only (N=1585)	Aleppo (N=790)	Deir-Ez-Zor (N=232)	Hama (N=484)	Homs (N=742)	Rural Damascus (N=154)
Food security & resilience indicators								
FCS	3.85** (1.55)	3.91 (2.69)	3.99** (1.89)	4.42* (2.32)	6.30 (3.89)	4.29 (3.56)	1.21 (2.81)	7.95 (7.01)
HDDS	0.35** (0.14)	0.20 (0.25)	0.44*** (0.17)	0.31 (0.21)	0.99** (0.49)	0.42 (0.37)	0.22 (0.23)	-0.31 (0.51)
rCSI	0.24 (0.59)	1.12 (1.04)	-0.20 (0.71)	-0.98* (0.52)	3.04*** (1.08)	2.06 (1.34)	-1.72 (1.04)	-0.45 (2.11)
RCI	4.39** (1.77)	4.30 (3.07)	4.62** (2.15)	4.42* (2.68)	7.28* (4.40)	7.12* (4.06)	1.24 (3.16)	7.98 (7.98)
FIES - Experienced over the past 30 days (Yes/No) (proportion)								
Worried about food	-0.01 (0.04)	-0.06 (0.07)	-0.00 (0.05)	-0.00 (0.08)	0.17 (0.12)	-0.10 (0.08)	-0.02 (0.07)	-0.52*** (0.16)
Unable to eat healthy food	0.01 (0.02)	-0.01 (0.02)	0.01 (0.02)	0.05* (0.03)	0.04 (0.04)	0.03 (0.03)	-0.07*** (0.03)	0.07 (0.09)
Ate few kinds of food	-0.03* (0.02)	-0.03 (0.02)	-0.03 (0.02)	0.04 (0.03)	0.00 (0.03)	0.00 (0.04)	-0.14*** (0.03)	-0.06 (0.12)

Skipped a meal	0.11**	0.04	0.13**	0.13**	0.08	-0.03	0.10	-0.11
	(0.04)	(0.08)	(0.05)	(0.06)	(0.12)	(0.09)	(0.07)	(0.17)
Ate less than needed	0.07*	0.04	0.09*	0.10	0.15	-0.04	-0.05	-0.06
	(0.04)	(0.08)	(0.05)	(0.06)	(0.12)	(0.09)	(0.07)	(0.16)
Ran out of food	-0.03	0.07	-0.08*	-0.11**	-0.11	0.05	0.09	-0.35***
	(0.03)	(0.06)	(0.04)	(0.05)	(0.08)	(0.07)	(0.07)	(0.13)
FIES - Days experienced (last 30 days)								
Days worried about food	-0.12	0.21	-0.42	-1.27	1.25	1.54	-0.63	-10.05***
	(0.85)	(1.52)	(1.01)	(0.90)	(1.78)	(2.27)	(1.47)	(2.88)
Days unable to eat healthy food	-1.03	0.04	-1.56*	-3.41***	1.63	5.96***	-4.42***	4.97
	(0.76)	(1.24)	(0.95)	(1.10)	(2.27)	(1.67)	(1.26)	(3.30)
Days ate few kinds of food	-1.73**	-0.72	-2.20**	-3.78***	1.53	4.47**	-5.89***	6.70*
	(0.76)	(1.27)	(0.93)	(1.07)	(2.04)	(1.81)	(1.26)	(3.55)
Days skipped meals	1.46	1.52	1.40	0.65	3.70*	-0.84	1.08	-1.25
	(1.01)	(1.81)	(1.21)	(0.84)	(2.01)	(2.34)	(1.87)	(4.55)
Days ate less than needed	0.40	0.47	0.37	0.31	8.05***	-0.17	-5.25***	1.46
	(0.96)	(1.69)	(1.17)	(0.61)	(2.05)	(2.33)	(1.77)	(3.86)
Days ran out of food	0.11	1.39	-0.53	-0.87	-0.18	1.94*	0.62	-3.56**
	(0.48)	(0.93)	(0.56)	(0.65)	(0.22)	(1.02)	(1.10)	(1.40)

Note: This table reports the estimated impact of the intervention on food security and resilience outcomes. Each cell corresponds to a separate OLS regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests. Results are presented for the full sample ("Overall") and for selected subsamples defined by household head gender (female-headed and male-headed households) and governorate (Aleppo, Deir-Ez-Zor, Hama, Homs, and Rural Damascus). All specifications are unweighted and include no additional control variables.
Estimates rely on within-subsample variation across beneficiary status and survey waves. In some subsamples, estimates are based on limited outcome variation and should therefore be interpreted with caution.

Table F2. Heterogeneous impact estimates on crop yields and livestock production

Outcome	Overall (N=2402)	Female HH only (N=817)	Male HH only (N=1585)	Aleppo (N=790)	Deir-Ez-Zor (N=232)	Hama (N=484)	Homs (N=742)	Rural Damascus (N=154)
Crop yields (t/ha)								
Maize yield	0.87* (0.44)	-0.34 (0.71)	1.29** (0.55)	0.93** (0.42)	NA	NA	NA	NA
Wheat yield (irrigated)	-0.10 (0.11)	-0.06 (0.21)	-0.12 (0.13)	0.02 (0.13)	-0.22 (0.21)	0.09 (0.43)	-0.09 (0.64)	0.75 (0.50)
Wheat yield (rainfed)	0.31 (0.20)	0.33 (0.50)	0.27 (0.22)	NA	NA	0.05 (0.54)	0.30 (0.20)	NA
Barley yield	0.25 (0.21)	0.06 (0.43)	0.18 (0.24)	-0.22 (0.33)	NA	0.24 (0.20)	-0.30 (0.50)	0.29 (0.52)
Livestock ownership (heads)								
Cattle ownership	0.19 (0.18)	-0.05 (0.24)	0.31 (0.24)	-0.37 (0.42)	0.18 (0.23)	-0.07 (0.37)	0.44** (0.20)	0.19 (1.45)
Sheep ownership	4.79 (3.66)	11.30 (7.20)	2.35 (4.21)	1.23 (2.13)	24.38 (24.44)	-3.26 (2.41)	-3.77 (17.91)	1.00 (10.66)
Goat ownership	3.28* (1.82)	3.54* (1.98)	3.12 (2.57)	0.89 (1.93)	3.74* (1.94)	NA	NA	NA
Poultry ownership	0.78 (0.84)	2.17 (1.32)	0.17 (1.07)	1.66 (1.40)	3.47* (1.91)	-0.89 (1.65)	-2.15* (1.19)	0.96 (5.00)
Livestock milk production (liter/animal/day)								

Cattle milk production	0.16 (0.70)	0.25 (1.22)	0.14 (0.85)	3.52** (1.51)	-1.82* (1.10)	1.11 (1.98)	-1.07 (1.08)	4.56 (3.25)
Sheep milk production	0.21 (0.17)	0.27 (0.28)	0.21 (0.21)	0.47** (0.21)	0.54** (0.25)	-0.52 (0.39)	-0.33 (0.50)	1.06* (0.55)
Goat milk production	0.62** (0.30)	0.57 (0.49)	0.65* (0.37)	1.03 (0.62)	1.26*** (0.37)	NA	NA	NA

Note: This table reports the estimated impact of the intervention on crop yields and livestock production outcomes. Each cell corresponds to a separate OLS regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01, based on two-sided t-tests.

Results are presented for the full sample ("Overall") and for selected subsamples defined by household head gender (female-headed and male-headed households) and governorate (Aleppo, Deir-Ez-Zor, Hama, Homs, and Rural Damascus). All specifications are unweighted and include no additional control variables.

Estimates rely on within-subsample variation across beneficiary status and survey waves. NA entries indicate that the corresponding model could not be estimated due to insufficient outcome data or a lack of identifying variation within the subsample. In some subsamples, estimates are based on limited outcome variation and should therefore be interpreted with caution.

Table F3. Heterogeneous impact estimates on income

Outcome	Overall (N=2402)	Female HH only (N=817)	Male HH only (N=1585)	Aleppo (N=790)	Deir-Ez-Zor (N=232)	Hama (N=484)	Homs (N=742)	Rural Damascus (N=154)
General income past 12 months (USD)								
Total income	16.61 (356.34)	416.16 (435.03)	-130.87 (484.39)	-815.87 (832.84)	624.45 (701.98)	191.96 (257.41)	-200.40 (325.14)	511.76 (841.44)
Crop income	-95.52 (274.92)	257.58 (311.81)	-242.53 (380.36)	-572.14 (725.17)	84.90 (222.31)	-126.81 (111.14)	-47.61 (105.67)	257.00 (269.36)
Livestock income	93.05 (184.87)	61.36 (242.90)	132.78 (248.98)	-204.80 (384.40)	408.68 (537.13)	164.31 (221.45)	-199.15 (302.74)	510.18 (793.57)
Off-farm income	15.10 (41.89)	67.44 (47.16)	-10.80 (58.46)	-42.60 (103.45)	41.88 (46.13)	133.94 (91.25)	11.78 (53.30)	-89.24 (124.79)
Wage income	-0.28 (27.07)	33.15 (36.13)	-17.37 (36.46)	31.41 (47.67)	71.74 (64.28)	-20.59 (62.05)	15.14 (52.29)	-139.98** (69.26)
Transfer and assistance	4.26 (14.58)	-3.37 (28.14)	7.06 (16.70)	-27.74 (39.26)	17.25 (37.40)	41.11** (18.38)	19.44 (17.94)	-26.20 (19.71)

Note: This table reports the estimated impact of the intervention on income outcomes. Each cell corresponds to a separate OLS regression estimated for a given outcome and model specification. Coefficients are reported with standard errors in parentheses. Statistical significance is denoted by * p < 0.1, ** p < 0.05, and *** p < 0.01,
Results are presented for the full sample ("Overall") and for selected subsamples defined by household head gender (female-headed and male-headed households) and governorate (Aleppo, Deir-Ez-Zor, Hama, Homs, and Rural Damascus). All specifications are unweighted and include no additional control variables.
Estimates rely on within-subsample variation across beneficiary status and survey waves. In some subsamples, estimates are based on limited outcome variation and should therefore be interpreted with caution.

Appendix G: List of Supporting Documentation

This report was submitted along with the following supporting documentation:

- Scope of Work including the Terms of Reference
- ISDC's BLRS Communication Strategy

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