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EMERGENCY SUPPORT TO VULNERABLE SMALLHOLDER FARMING HOUSEHOLDS AFFECTED BY THE ONGOING ECONOMIC CRISIS IN LEBANON

July 2025

SDGs:



Country:

Lebanon

Project Code:

TCP/LEB/3902

FAO Contribution:

USD 500 000

Duration:

31 October 2022-31 March 2025

Contact Info:

FAO Representation in Lebanon
FAO-LB@fao.org

Implementing Partners

Ministry of Agriculture (MoA) and Lebanese Agricultural Research Institute (LARI).

Beneficiaries

LARI, government officials and farmers.

Country Programming Framework (CPF) Outputs

United Nations Strategic Framework (UNSF) 2017-2021: Priority 3: Lebanon reduces poverty and promotes sustainable development while addressing immediate needs in a human rights/gender sensitive manner.

CPF 2023-2026 : Output 3: Resilience of agrifood actors increased following the HDP nexus approach for sustainable livelihoods, Sub-Output 3.1: Inclusive social protection interventions supported for vulnerable communities in the agrifood sector.



BACKGROUND

Lebanon is currently grappling with a severe economic and financial crisis that has significantly impacted food security across the country. Currency depreciation, rising inflation, and high dependency on food imports – particularly wheat – have made it increasingly difficult for households to meet their basic food needs. The country's wheat production sector, already vulnerable to the effects of climate change, has been further strained by the high cost of imported agricultural inputs and limited availability of locally produced seed. Compounding these crises, the Lebanese Agricultural Research Institute (LARI), which had previously provided farmers with wheat seeds at favourable prices, suspended its seed multiplication activities in 2019 due to financial constraints.

In response to these challenges, the Government of Lebanon, through the Ministry of Agriculture (MoA), requested technical assistance from the Food and Agriculture Organization of the United Nations (FAO) to strengthen domestic wheat production. The project sought to meet immediate needs by providing high-quality wheat seeds to vulnerable farming households, while building the capacity of farmers and agricultural institutions to support long-term input self-sufficiency and food security.

IMPACT

Through the provision of high-yielding wheat seed varieties and targeted technical training, the project enabled Lebanese farmers and agricultural institutions to sustain wheat production amid the economic crisis. By directly supporting vulnerable farming households, the project helped to strengthen national capacities, laying the groundwork for increased wheat production, enhanced food security and improved agricultural sustainability.

ACHIEVEMENT OF RESULTS

The project successfully surpassed its target by distributing 270 tonnes of high-quality soft wheat seeds to 2 066 farmers across two wheat seasons, more than double the initial goal. This was made possible by optimizing seed allocation per farmer, allowing the project to reach a larger number of beneficiaries amid the ongoing economic crisis. Farmers received seeds based on land size criteria, with seed allocation ranging from 50 kg for smaller holdings (0.5–4 dunums) to 150 kg for larger farms (7+ dunums) to ensure equitable distribution while maximizing impact across different farm scales. Distribution activities covered seven governorates in Lebanon, with Baalbeck-Hermel and Akkar receiving the largest allocations due to their significant wheat production areas. The project also successfully reached 421 female farmers (20.4 percent of total beneficiaries).

To build the capacity of both agricultural institutions and farming households, a comprehensive Training of Trainers (ToT) programme was implemented, reaching 29 technical staff from the MoA and LARI, with women comprising 48 percent of participants. These trained personnel acquired essential knowledge in cereal cropping systems, seed certification, good agricultural practices (GAPs) for wheat cultivation and integrated pest management (IPM). The ToT curriculum included both theoretical sessions and practical field visits to LARI's experimental plots and laboratories.

Subsequently, 454 farmers received technical training across 13 sessions. However, only half the target was achieved due to escalating security challenges. As a result of the instability, the project was unable to operate in conflict-affected areas, namely in the southern governorates. Training content focused on land preparation, optimal planting dates, seed quality assessment, fertilization practices, irrigation management and post-harvest handling techniques. Farmers also learned about informal seed production systems, which enabled them to save and produce their own high-quality seeds for future seasons.

The project significantly enhanced LARI's operational capacity by procuring two mobile seed screening, grading and dressing machines with a capacity of 2 tonnes per hour each, along with one portable weighbridge. This equipment modernized LARI's seed processing capabilities and improved efficiency compared to outdated fixed machinery.

LARI conducted valuable research activities, testing five promising soft wheat lines (M58, M60, M61, M63 and ACSAD 1133) across different agro-climatic zones. Results demonstrated high yield performance (5–6 tonnes per ha) and strong disease resistance, particularly to yellow rust, providing valuable data for future variety recommendations.

A key success factor was the strategic implementation of activities with a project funded by the Government of Japan titled "Enhance national food security and support sustainable food systems by increasing the resilience of Lebanon's wheat value chain" (OSRO/LEB/042/JPN). This collaboration enabled efficient resource utilization while maximizing the impact for beneficiaries. As part of these joint efforts, two field days were held at LARI's experimental plots, where various wheat varieties were tested for yield potential, grain quality, pest resistance and other key performance traits. During these events, 71 farmers learned about the promising wheat varieties and engaged with technical experts.

A comprehensive Post-Distribution Monitoring (PDM) survey revealed high levels of farmer satisfaction, with 97 percent of interviewed farmers expressing satisfaction with the seed distribution process. Despite challenging weather conditions affecting yields, 17.5 percent of farmers reported yield increases of 27.4 percent compared to previous seasons, demonstrating the potential of improved varieties under optimal conditions.

IMPLEMENTATION OF WORK PLAN AND BUDGET

The project was implemented within the approved budget, with activities successfully carried out through synergistic collaboration and efficient resource management with project OSRO/LEB/042/JPN. The project was granted several no-cost extensions (NCEs), extending its completion date from 30 October 2023 to 31 March 2025, to maintain alignment with the Government of Japan-funded project and accommodate delays caused by security challenges. These extensions were essential for completing equipment procurement and finalizing capacity-building activities under increasingly challenging security conditions.

The most significant constraint faced during implementation was the escalation of hostilities and security instability, particularly affecting southern Lebanon and the Bekaa and Baalbeck governorates. This situation limited access to villages in the south during the final months of the project, preventing the achievement of some training targets, forcing the exclusion of conflict-affected villages from the 2023–2024 seed distribution campaign. However, the decision to reduce seed quantities per farmer while maintaining quality enabled broader beneficiary coverage during the economic crisis.

Weather-related challenges also impacted project outcomes, with adverse conditions, including low rainfall and high temperatures during critical growth stages, significantly affecting wheat yields. These climatic stresses contributed to reduced wheat production outcomes, despite the provision of high-quality seeds.

The ongoing economic crisis and sharp devaluation of the Lebanese currency created additional challenges, rendering procurement financing wheat procurement difficult, preventing LARI from collecting harvested seeds for storage and multiplication purposes. Infrastructure limitations at LARI facilities also presented challenges. Initial assessments revealed that warehouse rehabilitation costs exceeded available budgets, requiring strategic adjustments to focus on equipment procurement rather than infrastructure repairs.

FOLLOW-UP FOR GOVERNMENT ATTENTION

To ensure the sustainability and continued impact of project interventions, several actions are recommended. There is a need to develop and approve comprehensive Seed Law legislation to regulate the seed sector and define institutional roles and responsibilities. While initial steps have been taken toward this goal, the development and approval of such legislation is a lengthy process and will require sustained institutional effort and stakeholder engagement.

It is also recommended that the MoA continue to mobilize trained technical staff to provide ongoing support and outreach to farmers. To maintain and expand LARI's seed multiplication activities, it is recommended to carry out the structural repairs of the warehouses in need of rehabilitation.



SUSTAINABILITY

1. Capacity development

The project laid the groundwork for sustainable impact by strengthening institutional and technical capacities. Through the ToT, staff from MoA and LARI were equipped to provide continued support to farmers through knowledge transfer beyond the project's timeline. Additionally, farmers trained in informal seed production are now positioned to share their skills within their communities through peer-to-peer learning, contributing to self-reliance, improved access to agricultural inputs and lower production costs.

2. Gender equality

The project promoted gender-inclusive participation by ensuring both women and men benefited from all activities. Women represented 48 percent of the technical staff trained in the ToT, 20 percent of seed distribution beneficiaries and 13 percent of farmer training participants. By providing high-quality seeds and technical training to female farmers, the project increased their access to inputs and strengthened their capacity in wheat production.

3. Environmental sustainability

The project promoted environmental sustainability through comprehensive training on GAPs for wheat production through both the ToT and farmers' training sessions, with a strong emphasis on IPM to reduce reliance on chemical pesticides. These practices contribute to soil health, biodiversity conservation and reduced environmental contamination.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

Throughout the project, human rights were upheld and activities were carried out transparently and without discrimination. The project empowered both men and women by distributing the soft wheat seeds, helping to reduce production costs and mitigate the effects of the economic and financial crisis. To ensure accountability, a PDM was conducted to assess beneficiary satisfaction. The project directly supported the right to food by providing seeds and enhancing farmers' capacity to cultivate wheat.



5. Technological sustainability

While the project did not introduce complex new technologies, it successfully introduced an improved soft wheat variety, adapted to Lebanese conditions, for breadmaking. This variety is high-yielding and disease-resistant, particularly to yellow rust, offering significant potential to enhance local wheat production and food security. Additionally, the equipment procured for LARI enhances the institution's technological capacity for seed processing and quality control.

6. Economic sustainability

The project's success in mobilizing additional resources, such as those from the Japan-funded project, demonstrates its potential to attract continued support in Lebanon's wheat sector. FAO is currently finalizing agreements with the United Nations Development Programme (UNDP) for continued technical assistance, further strengthening national food security. By reducing seed procurement costs and enabling farmers to produce their own seeds, the project generated immediate economic benefits, laying the foundation for financial resilience and sustainability.





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DOCUMENTS AND OUTREACH PRODUCTS

- ❑ **FAO.** 2024. *Launching of national campaign for the soft wheat seed distribution.* Beirut, Lebanon. <https://x.com/FAOLEbanon/status/1734496145689157901?s=20>
- ❑ **FAO.** 2024. *Launching of national campaign for the soft wheat seed distribution.* Beirut, Lebanon. <https://www.facebook.com/photo?fbid=287142734328458&set=a.161280576914675>
- ❑ **NNA-Leb.** 2024. *Launching of national campaign for the soft wheat seed distribution.* Beirut, Lebanon. <https://tinyurl.com/2ayrn96v>
- ❑ **FAO.** 2024. *Wheat distribution data (English).* Beirut, Lebanon. <https://x.com/FAOLEbanon/status/1763499286111600664>
- ❑ **FAO.** 2024. *Wheat distribution data (Arabic).* Beirut, Lebanon. <https://x.com/FAOLEbanon/status/1764928852977918139>

- ❑ **FAO.** 2024. *Wheat distribution data (English).* Beirut, Lebanon. <https://www.facebook.com/photo/?fbid=335060602870004&set=a.161280576914675>
- ❑ **FAO.** 2024. *Wheat distribution data (Arabic).* Beirut, Lebanon. <https://www.facebook.com/photo/?fbid=337362195973178&set=a.161280576914675>
- ❑ **FAO.** 2024. *Wheat distribution data (Arabic).* Beirut, Lebanon. <https://x.com/FAOLEbanon/status/1764928852977918139>
- ❑ **FAO.** 2024. *Technical trainings to farmers.* Beirut, Lebanon. <https://x.com/FAOLEbanon/status/1816417394790719656>
- ❑ **FAO.** 2024. *Technical trainings to farmers.* Beirut, Lebanon. <https://www.facebook.com/photo/?fbid=425548690487861&set=pcb.425548790487851>



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ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Improve food and nutrition security of farmers' households affected mostly by the economic and financial crises that Lebanon is facing		
Outcome	Agricultural households' livelihoods and ability to maintain minimum food production are sustained through the provision of wheat seeds		
	Indicator	% of households targeted received wheat seeds and trainings as % of planned by modality.	
	Baseline	0	
	End Target	100%	
	Comments and follow-up action to be taken	<p>The project provided wheat seeds to 2 066 farmers over two wheat seasons and carried out training sessions for farmers to increase their knowledge on GAPs for wheat cultivation. By introducing a new high-yield wheat variety, the project will contribute to achieving food security and promoting sustainable agriculture by enhancing smallholder productivity and families' livelihoods. These efforts directly support the realization of SDG 2.</p> <p>The outcome indicator encompasses two targets, one on the percentage of targeted households who received wheat seeds and the second on the percentage of households that received training.</p> <p>For the first target, a total of 2 066 farmers received seeds, surpassing the target by 232 percent. The project team exceeded the target by limiting the quantity of seeds provided per farmer, which enabled the project to reach a greater number of beneficiaries. As a result, farmers were able to reduce the amount they spent on procuring seeds. For the second target, 454 farmers were trained, representing half the target of 890 farmers. This target could not be met due to the unstable security situation in the country. As a follow-up action, it is recommended that the MoA staff trained in wheat cultivation be mobilized to provide technical support to farmers.</p>	
Output 1	Enhance agricultural production (for 890 farmers: 4,450 individuals) through high-quality wheat seeds provision and technical training on improved wheat production practices (good agricultural practices and climate-smart agriculture)		
	Indicators	Target	Achieved
	# of farmers' households/people who received high-quality wheat seeds and trainings. Key farmers will be identified to provide wheat seeds to LARI after harvesting season for the multiplication programme.	890 farmers' households (4 450 individuals).	Partially
Baseline	0		
Comments	<p>The project was implemented in synergy with a project funded by the Government of Japan titled "Enhance national food security and support sustainable food systems by increasing the resilience of Lebanon's wheat value chain" (OSRO/LEB/042/JPN). The two projects shared human and financial resources, reducing implementation costs and enhancing operational efficiency.</p> <p>In total, 270 tonnes of soft wheat seeds were provided to 2 066 farming households, exceeding the initial target by 232 percent. This was achieved by reducing the quantity of seeds distributed per farmer, allowing a greater number to be supported, which was crucial, given the ongoing economic crisis. This approach supported a larger number of farmers and minimized the seed procurement costs for each farmer.</p> <p>Regarding capacity development, the project trained 454 farmers, which met half of the target of 890 farmers. Given the instability and security situation in the country, the project could not reach all planned areas to train farmers. Instead, training was limited to safe areas to avoid exposing staff and participants to potential risks. It was initially planned that the MoA staff trained by the ToT programme would conduct additional training for farmers. However, this was not achieved due to the escalation of hostilities in the country.</p>		
Activity 1.1	Select geographic areas and beneficiaries		
	Achieved	Yes	
	Comments	<p>The MoA launched a campaign for the distribution of soft wheat seeds and developed an application form for interested farmers. Applications were collected from the different MoA agricultural centres and eligibility was based on farmers' registration on the official farmers' registry. Farmers were also selected based on the size of their land. The allocation of wheat seeds to each farmer was determined using the following land size criterion: (i) 0.5 to 4 dn: 50 kg of seeds; (ii) 5 to 6 dn: 100 kg of seeds; and (iii) 7 dn and above: 150 kg of seeds. Eligible farmers were selected from across seven governorates of Lebanon: Akkar, Baalbeck-Hermel, Bekaa, Mount Lebanon, Nabatieh, North and South. However, villages affected by the conflict in southern Lebanon, particularly in Nabatieh governorate, were excluded from the distribution campaign for the 2023–2024 wheat season (see Tables 1 and 2 below). Due to the volatile security situation, these villages were among the most frequently targeted. As a result, farmers were unable to safely cultivate their land.</p>	

Activity 1.2	Launch procurement process for the purchase of 178 tonnes of wheat seeds																																																																																										
	Achieved	Yes																																																																																									
Activity 1.3	Comments	<p>In November 2022, the project procured 178 tonnes of high-quality soft wheat seeds to be distributed for the 2022–2023 wheat season. For the 2023–2024 season, activities were implemented in synergy with the newly launched project funded by the Government of Japan. By sharing human and financial resources across both projects, implementation costs were reduced.</p> <p>In 2023, an international bid was launched to procure soft wheat seeds for both projects, of which an additional 92 tonnes of the same variety (ACSAD 1133) were procured from the Arab Centre for the Studies of Arid Zones and Drylands (ACSAD) under the current project. In total, the project procured 270 tonnes of soft wheat seeds. Seeds were packaged in 50 kg bags, each labelled with the project’s name, the logos of MoA and FAO, and the wheat seed specifications.</p>																																																																																									
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Activity 1.3	Achieved	Yes																																																																																									
	Comments	<p>Based on the criteria outlined under Activity 1.1, the project distributed a total of 178 tonnes of soft wheat seeds to 1 200 farmers in December 2022, out of which 11.6 tonnes were provided to LARI for multiplication purposes. Additionally, 92 tonnes were distributed to 866 farmers in December 2023. The distribution was carried out across the country as detailed in the tables below.</p> <p>Table 1. Distribution of soft wheat seeds (December 2022)</p> <table border="1"> <thead> <tr> <th>Governorate</th> <th>Amount of wheat seeds (Kg)</th> <th>Amount of wheat seeds (tonnes)</th> <th>Total farmers</th> <th>Female farmers</th> </tr> </thead> <tbody> <tr> <td>Akkar</td> <td>40 300</td> <td>40.3</td> <td>281</td> <td>53</td> </tr> <tr> <td>Baalbeck-Hermel</td> <td>101 000</td> <td>101.0</td> <td>728</td> <td>151</td> </tr> <tr> <td>Bekaa</td> <td>10 800</td> <td>10.8</td> <td>83</td> <td>15</td> </tr> <tr> <td>Nabatieh</td> <td>3 900</td> <td>3.9</td> <td>27</td> <td>6</td> </tr> <tr> <td>North</td> <td>9 700</td> <td>9.7</td> <td>67</td> <td>17</td> </tr> <tr> <td>South</td> <td>700</td> <td>0.7</td> <td>6</td> <td>1</td> </tr> <tr> <td>LARI for seed multiplication purposes</td> <td>11 600</td> <td>11.6</td> <td>8</td> <td>–</td> </tr> <tr> <td>Total</td> <td>178 000</td> <td>178.0</td> <td>1 200</td> <td>243</td> </tr> </tbody> </table> <p>Table 2. Distribution of soft wheat seeds (December 2023)</p> <table border="1"> <thead> <tr> <th>Governorate</th> <th>Amount of wheat seeds (Kg)</th> <th>Amount of wheat seeds (tonnes)</th> <th>Total farmers</th> <th>Female farmers</th> </tr> </thead> <tbody> <tr> <td>Akkar</td> <td>27 800</td> <td>27.80</td> <td>274</td> <td>49</td> </tr> <tr> <td>Baalbeck-Hermel</td> <td>53 050</td> <td>53.05</td> <td>476</td> <td>115</td> </tr> <tr> <td>Bekaa</td> <td>2 700</td> <td>2.70</td> <td>25</td> <td>4</td> </tr> <tr> <td>Mount Lebanon</td> <td>700</td> <td>0.70</td> <td>7</td> <td>0</td> </tr> <tr> <td>Nabatieh</td> <td>2 150</td> <td>2.15</td> <td>18</td> <td>3</td> </tr> <tr> <td>North</td> <td>4 700</td> <td>4.70</td> <td>55</td> <td>6</td> </tr> <tr> <td>South</td> <td>900</td> <td>0.90</td> <td>11</td> <td>1</td> </tr> <tr> <td>Total</td> <td>92 000</td> <td>92.0</td> <td>866</td> <td>178</td> </tr> </tbody> </table> <p>In total, 2 066 farmers and their households benefitted from the wheat seed distribution, exceeding the target by 232 percent.</p>	Governorate	Amount of wheat seeds (Kg)	Amount of wheat seeds (tonnes)	Total farmers	Female farmers	Akkar	40 300	40.3	281	53	Baalbeck-Hermel	101 000	101.0	728	151	Bekaa	10 800	10.8	83	15	Nabatieh	3 900	3.9	27	6	North	9 700	9.7	67	17	South	700	0.7	6	1	LARI for seed multiplication purposes	11 600	11.6	8	–	Total	178 000	178.0	1 200	243	Governorate	Amount of wheat seeds (Kg)	Amount of wheat seeds (tonnes)	Total farmers	Female farmers	Akkar	27 800	27.80	274	49	Baalbeck-Hermel	53 050	53.05	476	115	Bekaa	2 700	2.70	25	4	Mount Lebanon	700	0.70	7	0	Nabatieh	2 150	2.15	18	3	North	4 700	4.70	55	6	South	900	0.90	11	1	Total	92 000	92.0	866
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Activity 1.4	Design a training programme throughout the season and develop training materials	
	Achieved	Yes
Activity 1.5	Comments	<p>A Letter of Agreement (LoA) was signed between FAO and LARI for the period of 29 April to 31 July 2024 to develop training materials and deliver training sessions to LARI and MoA staff as well as to farmers.</p> <p>Two training materials were developed on GAPs for wheat cultivation and seed production. One was designed as a ToT targeting technical staff from MoA and LARI, while the other was tailored for farmer training sessions.</p> <p>The ToT training material included theoretical sessions as well as a field visits to the LARI wheat experimental plots and laboratory, and covered the following topics:</p> <ul style="list-style-type: none"> - Introduction to cereal cropping system and wheat production; - Introduction to national seed system components and functions including seed certification, registration of varieties and labelling; - GAPs for quality and healthy seed production including land preparation, IPM, fertilization, irrigation and crop inspection for varietal purity; - Standard Operating Procedures (SOPs) for seed multiplication; - Wheat seed harvesting; - Post-harvest processing for quality and healthy seeds; and - Introduction to informal seed system with a case study. <p>The training also included a field visit to the experimental plots of wheat, where participants had the opportunity to observe tested wheat varieties and learn about the GAPs being implemented. The tour continued with visits to the seed laboratory and seed warehouse, where participants were introduced to laboratory seed testing procedures and had a demonstration on the use of the seed screening, sorting and dressing machine.</p> <p>The training material for farmers was developed to raise farmers' knowledge on GAP for wheat cultivation including ploughing, planting dates, seeds' quality, seed rate, sowing, fertilization, irrigation, IPM for the main wheat pests in Lebanon, cereals growth stages and management of storage pests. The training also covered the seed production in the informal seed system, and how farmers can produce their own healthy and quality seeds while preserving the purity of the wheat variety.</p>
	Achieved	Yes
Activity 1.6	Comments	<p>Under the LoA signed between FAO and LARI stated above, experts in seed production at LARI conducted a two-day ToT for 29 technical staff (14 female, 15 male) from the MoA and LARI who showed high interest and acquired knowledge in cereal seed systems, GAP for wheat cultivation and seed production. This will enable them to provide more effective coaching to wheat farmers, help ensure the sustainability of the project's outcomes and contribute to achieving its overall objectives.</p>
	Achieved	Yes
Activity 1.6	MoA facilitators and LARI team conduct technical training sessions to farmers throughout the cropping season	
	Achieved	Yes
Activity 1.6	Comments	<p>Under the LoA signed with LARI, and with MoA support, 13 training sessions were held across Lebanon in the presence of MoA representatives. A total of 454 farmers attended the trainings of whom 58 were women.</p> <p>These training sessions increased farmers' knowledge in GAPs for wheat cultivation and seed production in the informal seed system. Farmers learned about how to prepare their land, the best time for planting and the recommended seed rate. They also gained expertise in IPM for the main wheat pests in Lebanon, as well as post-harvest practices to ensure quality and healthy seeds. Farmers were taught how to save their own seeds by selecting the best wheat spikes at maturity and storing them for the next season. These technical trainings will help farmers make informed decisions while cultivating wheat and will guide them to minimize the costs of production, increase wheat yield and thus increase their profits.</p> <p>The project was only able to achieve half the planned target due to the prevailing security situation in the country during the final months of the project, which hindered the full implementation of planned activities. As a result, the project was unable to operate in certain areas, namely Baalbek-Hermel, Bekaa, South, and Nabatieh Governorates.</p>
	Achieved	Yes

Post Distribution Monitoring					
Activity 1.7	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #e6f2ff; width: 15%;">Achieved</td> <td>Yes</td> </tr> <tr> <td style="background-color: #e6f2ff;">Comments</td> <td> <p>This activity was conducted in synergy with Activity 2.6 of project OSRO/LEB/042/JPN, which had the same objective.</p> <p>A PDM survey was conducted through phone calls, with the support of five trained enumerators. The PDM was carried out to assess the wheat seeds distribution campaign by directly collecting farmers’ feedback. Out of the 866 beneficiaries who received seeds in December 2023, 90 farmers were contacted.</p> <p>For this, the project developed a questionnaire consisting of one section on wheat planting, agricultural practices and yield, and another section on farmers’ satisfaction with the wheat seeds distribution.</p> <p>The results of the PDM survey indicated that 97 percent of the interviewed farmers were satisfied with the seed distribution process, while the remaining three percent expressed dissatisfaction, primarily due to the late delivery of seeds.</p> <p>In terms of accessibility, 41.5 percent of respondents reported that the long distance to the distribution centre and the lack of transportation were major barriers preventing easy access to the distribution site.</p> <p>Regarding the overall quantity of soft wheat seeds, 52.6 percent of respondents expressed dissatisfaction, citing that the amount was too small to meet their production needs.</p> <p>When asked about crop yield, 63 percent of farmers reported satisfaction, whereas the remaining 37 percent were unsatisfied, primarily because they were unable to harvest their crops due to low yields. This was largely attributed to the adverse weather conditions, including low rainfall and high temperatures, which negatively impacted wheat production.</p> <p>For the wheat season 2023–2024, 17.5 percent of farmers reported a yield increase by 27.4 percent compared to previous season; 48.5 percent indicated a decrease of 45.6 percent, while the remaining 34 percent reported no change in yield. This is due to the aforementioned adverse weather conditions.</p> </td> </tr> </table>	Achieved	Yes	Comments	<p>This activity was conducted in synergy with Activity 2.6 of project OSRO/LEB/042/JPN, which had the same objective.</p> <p>A PDM survey was conducted through phone calls, with the support of five trained enumerators. The PDM was carried out to assess the wheat seeds distribution campaign by directly collecting farmers’ feedback. Out of the 866 beneficiaries who received seeds in December 2023, 90 farmers were contacted.</p> <p>For this, the project developed a questionnaire consisting of one section on wheat planting, agricultural practices and yield, and another section on farmers’ satisfaction with the wheat seeds distribution.</p> <p>The results of the PDM survey indicated that 97 percent of the interviewed farmers were satisfied with the seed distribution process, while the remaining three percent expressed dissatisfaction, primarily due to the late delivery of seeds.</p> <p>In terms of accessibility, 41.5 percent of respondents reported that the long distance to the distribution centre and the lack of transportation were major barriers preventing easy access to the distribution site.</p> <p>Regarding the overall quantity of soft wheat seeds, 52.6 percent of respondents expressed dissatisfaction, citing that the amount was too small to meet their production needs.</p> <p>When asked about crop yield, 63 percent of farmers reported satisfaction, whereas the remaining 37 percent were unsatisfied, primarily because they were unable to harvest their crops due to low yields. This was largely attributed to the adverse weather conditions, including low rainfall and high temperatures, which negatively impacted wheat production.</p> <p>For the wheat season 2023–2024, 17.5 percent of farmers reported a yield increase by 27.4 percent compared to previous season; 48.5 percent indicated a decrease of 45.6 percent, while the remaining 34 percent reported no change in yield. This is due to the aforementioned adverse weather conditions.</p>
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Output 2	Quality wheat seeds production capacity is improved/enhanced within the existing LARI seeds multiplication center		
	Indicators	Target	Achieved
	- LARI multiplication center operational/functional capacity strengthened/improved. - Wheat production increased at farm level.	- Revive the seed production unit at LARI and guarantee the sustainability of the seed production. - 10 to 12% increase in production.	Partially
Baseline	<ul style="list-style-type: none"> - Two fixed large sieving units with 15 T/hr. - Two mobile units (1-2T/hr). - Rainfed: from 1-2 tonnes per ha. - Supplemental irrigation: 3 to 4 tonnes. 		
Comments	<p>Under this technical cooperation programme (TCP), which was implemented in synergy with the OSRO/LEB/042/JPN project, two mobile seed screening, grading and dressing machines – each with a capacity of 2 tonnes per hour – along with one weighbridge (portable truck scale) were procured. This equipment was essential for enhancing the efficiency, capacity and overall functionality of the seed multiplication unit at LARI.</p> <p>According to PDM results, while only 17.5 percent of farmers reported a yield increase for the 2023–2024 wheat season, they witnessed an average increase of 27.4 percent compared to the previous season. These benefits were not widespread due to the adverse weather conditions negatively affected wheat production that season.</p> <p>The outcome indicator target was assessed against two baselines – one for rainfed wheat fields, which had an average yield baseline of 1.5 tonnes/ha (equivalent to 150 kg/dn), and the other for wheat fields with supplemental irrigation, which had an average baseline of 3.5 tonnes/ha (equivalent to 350 kg/dn). The outcome target aimed for an average of increase 11 percent in wheat production at the farm level, which is equivalent to 166.5 kg/dn for the rainfed fields and 388.5 kg/dn for fields with supplemental irrigation. The PDM results indicated that 21 beneficiaries out of 90 (23.3 percent) did not harvest their fields due to low production caused by adverse weather conditions and the volatile security situation. As a result, the responses from the remaining 69 farmers were used as the measuring the target achievement. Out of the 69 farmers, 35 had rainfed wheat cultivation with an average yield of 144.26 kg/dn achieving 83.62 percent of the target. The remaining 34 farmers had supplemental irrigation in their wheat fields, with an average yield of 241.31 kg/dn achieving 62.11 percent of the target.</p>		
Activity 2.1	Maintain the existing seed unit equipment		
	Achieved	Partially	
	Comments	<p>This activity was carried out in synergy with the OSRO/LEB/042/JPN project as a continuation of this TCP project.</p> <p>The project contracted a consulting company to conduct site assessments for eight warehouses used to store wheat seeds and other related machinery and equipment for seed multiplication. These included three concrete warehouses with a sandwich panel roof, and five fully concrete warehouses.</p> <p>During the site visits, several major issues were identified that required intervention. The assessment report detailed the necessary repairs, covering architectural, structural, mechanical and electrical works, along with corresponding cost estimates. However, the estimated costs for rehabilitating the warehouses exceeded the allocated budget, even for a single warehouse. The report emphasized that major structural and architectural repairs should be implemented before any minor electrical or structural repairs, as it could result in wasted resources.</p> <p>In addition to the infrastructure rehabilitation, the project initially planned to maintain two mobile seed screening machines (capacity: 1-2 tonnes/hour) and two fixed units (capacity: 15 tonnes/hour). However, the fixed machines are highly labour-intensive, which would be costly to LARI, especially amid the current economic crisis. Moreover, one of the machines was outdated and no longer in service.</p> <p>After consulting with the FAO technical division, the project decided to procure two mobile seed screening, sorting and dressing machines (each with a capacity of 2 tonnes/hour), instead of repairing the outdated and labour-intensive equipment. The new mobile machines are significantly more efficient and practical. The procurement was covered by project OSRO/LEB/042/JPN.</p> <p>The two existing mobile machines were also inspected and found to require only minimal maintenance. Due to the low estimated cost and the unstable security situation during the last few months of the project, LARI covered the maintenance expenses independently.</p>	

Activity 2.2	Receive the wheat seeds from key farmers by June-July	
	Achieved	No
Activity 2.3	Comments	In December 2022, a total of 11.6 tonnes of soft wheat seeds were provided to LARI, which distributed them to specialized farmers for multiplication purposes. However, due to the ongoing economic crisis and the sharp devaluation of the local currency, the government was unable to finance the procurement of the wheat yield. Therefore, LARI could not collect and store the wheat seeds in its warehouses.
	Stock the seeds in warehouse at Tal Amara	
Activity 2.3	Achieved	No
	Comments	Due to the escalating hostilities and the deteriorating security situation in Lebanon, LARI's Tal Amara station was closed and therefore unable to receive or store the harvested seeds. As a result, farmers arranged for the cleaning and treatment of the seeds through a private company at their own expense.
Activity 2.4	Plant and harvest at Tal Amara the bread wheat promising lines	
	Achieved	No
Activity 2.4	Comments	In line with its mandate, LARI continuously tests new wheat varieties to assess their adaptability and performance under Lebanese agro-climatic conditions. This includes assessing key performance indicators such as yield, grain quality, pest resistance, and other relevant traits. Following several years of experimentation, LARI selected five promising soft wheat lines – suited for bread – from germplasm of the International Center for Agricultural Research in the Dry Areas (ICARDA), in order to evaluate their performance under different agro-climatic zones Testing spanned promising lines, including M58, M60, M61, M63 in addition to ACSAD 1133. These varieties were planted during the 2022–2023 wheat season in two locations: Tal Amara (905 m altitude) and Arida (10 m altitude). All varieties exhibited high resistance to yellow rust, except for ACSAD 1133 which showed only moderate resistance to the disease. The varieties demonstrated a strong yield performance, with an average of 6 tonnes/ha in Tal Amara and 5 tonnes/ha in coastal areas, by applying one supplemental irrigation in late April.
	Conduct a field day for farmers at Tal Amara	
Activity 2.5	Achieved	Yes
	Comments	An LoA was signed between FAO and LARI to conduct field days at LARI to showcase the results of the wheat field experiments to farmers. This activity was conducted in synergy with the Government of Japan-funded project. Two field days were organized at the experimental plots at LARI, where various wheat varieties were tested and evaluated for yield, grain quality, pest resistance and other key performance traits. During these events, farmers and trainers engaged in discussions about the performance of several promising wheat varieties, particularly those with high yield potential and strong resistance to rust. They also reviewed the implementation of GAPs. These field visits enhanced farmers' knowledge, encouraged the adoption of high-quality wheat seeds, and ultimately contributed to improved wheat production in terms of quantity, quality, and pest resistance. In total, 71 farmers attended field days including 11 women.

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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