



INITIATIVE ON  
Fragility to Resilience in Central  
and West Asia and North Africa



## National Alliance of Stakeholders for the Wheat Sector in Lebanon Multistakeholder Workshop Report

Radisson Blu Verdun, Beirut

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## **Introduction**

On July 24, 2023, the International Center for Agricultural Research in the Dry Areas (ICARDA) and the Lebanese Agricultural Research Institute (LARI) under the Ministry of Agriculture organized a Multistakeholder Workshop on “National Alliance of Stakeholders for the Wheat Sector in Lebanon”. The agenda of the workshop is provided in Appendix 1. More than 20 representatives of various stakeholders attended the workshop, including officials of key government ministries and agencies, researchers from multiple research institutes, non-governmental and non-profit organizations, representatives of the United Nations (UN) agencies, and the private sector. The list of participants is provided in Appendix 2.

## **Context and objective of the workshop**

Policies are critical to improving agrifood systems innovations. Yet, agricultural policies are often implemented by a range of stakeholders with different interests and institutional goals. Spurring collaborations among different stakeholders including government agencies, policymakers, Development agencies, the private sector, policy research centers, universities, and individual researchers in Central and West Asia and North Africa (CWANA) including Lebanon are crucial to promoting evidence-based policymaking to promote resilient agrifood systems in Lebanon. Therefore, the purpose of this workshop was to promote a national expert network of various stakeholders to design and implement a vibrant wheat sector in Lebanon. The specific objectives of the workshop were to:

1. Gather the major stakeholders in the wheat seed sector and identify the challenges and opportunities of the seed sector in current unstable period,
2. Introduce the major stakeholders to the National Alliance of Stakeholders (NAS) and to the National Innovation Platform (NIP) under the new CGIAR Initiative on Fragility to Resilience in Central and West Asia and North Africa (F2R-CWANA).
3. Have clear and practical recommendations to develop a NAS seed roadmap for Lebanon that will contribute to the sustainable transformation of the agri-food system.

## **Opening session**

The opening welcome was addressed by Dr. Rola El Amil, Head of the Plant Breeding department of LARI and the F2R-CWANA Focal point. Dr. El Amil represented LARI's Director General who sent greetings and thanks to all stakeholders for their presence and their enthusiasm to join the meeting and wishes for fruitful brainstorming. Dr. El Amil highlighted the role of ICARDA in Lebanon since its establishment in 1975. In this 40-year journey, the impact in the country has been seen in the highly vulnerable smallholder farmers in rural communities, the technologies introduced, and finally, the capacity building of national early and mid-career scientists has been remarkable.

## **Presentation session**

### **Dr. Hassan Machlab, ICARDA Country Manager**

Theme: New ICARDA Initiatives to strengthen the resilience of the seed sector in Lebanon: F2R-CWANA.

Dr. Machlab gave a brief of ICARDA's global and regional mandate and main activities and the formulation of the new portfolio of 34 Initiatives with three thematic areas: Genetic Innovation, Resilient Agri-Food Systems, and Systems Transformation. ICARDA leads the Regional Integrated Initiative F2R-CWANA that specifically addresses needs of Central Asia, West Asia, and North Africa (CWANA) regions.

Dr. Machlab explained that the NAS is under WP1: Innovations in partnerships, policies, and platforms for the efficient, inclusive, and climate-resilient transformation of agrifood systems. He highlighted that under WP1 there are two outputs. The National Alliance of Stakeholders (NAS) and National Innovation Platforms (NIP).

The NAS will be the forum by which national issues, priorities, and innovations will be discussed and worked out. The assumption is that key partners will want to join and participate in the NAS because it will provide them with the opportunity to meet and influence other stakeholders while setting the priorities and direction for important national issues related to transforming agrifood systems whereas the NIP will serve as physical "Living Labs" situated on the ground in the agro-ecologies, and

communities, and partnership networks that are necessary to enable testing of technologies, tools, approaches, and ultimately innovations, developed by F2R-CWANA and other CGIAR Initiatives, for the people in CWANA. The Innovation Packages and Scaling Readiness work will be undertaken through NIPs. By setting up/strengthening NIPs, thereby providing excellent conditions for government, private sector, civil society, and INGOs to work together, it is anticipated that actors will work together to create efficient, inclusive, and resilient national agrifood systems.

**Dr. Rola El Amil, LARI Head of Plant Breeding, and F2R-CWANA focal point**

Theme: 1-The current status of research results on resilience cereal crops and seed multiplication at LARI

2-Importance of the NAS for the seed sector in Lebanon

The National Agricultural Strategy (2020-2025) states that “Wheat yields are relatively high, which might be in part explained by government support of this staple and its production is administered by the Ministry of Agriculture. However, the wheat support program administered by the Ministry of Economics and Trade is responsible for wheat imports as well as monitoring silos and the milling sector.

Total cereal production remained under 200,000 tons and had increased from less than 50,000 tons in 1988 to over 175,000 tons in 2012. This increase is directly linked with ICARDA-LARI's success story in seed production in 2012 reaching 8,000 tons of wheat (80 % durum wheat and 20 % bread wheat), barley, chickpeas, and lentils. Unfortunately, the process of seed production collapsed totally in 2019 with the currency devaluation and the action taken in pricing by the government was not aligned with the black-market price and this discouraged them from selling their production to the seed multiplication center.

Dr. El Amil explained to the audience the varieties demand creation, registration, release, and seed production process in detail. Wheat was just a fraction of the agricultural production over the last years, with a preference for durum wheat over bread wheat. Therefore, the release of varieties was focused on durum wheat mainly and little interest was given to bread wheat due to its susceptibility to yellow rust and farmers were more confident in growing durum wheat over the bread wheat, especially in the Bekaa region. LARI has been closely cooperating with ICARDA on

variety testing and release and most of the released varieties belonged to ICARDA germplasm. Since 2020, the Lebanese Multi-Locations Variety Trial (LMVT) has been designed to assess the performance of grown varieties within time, to assess the best genotypes from ICARDA based on product profile, and to replenish the Lebanese seed stock with superior new varieties. Yield and agronomic characteristics, and rust assessment are recorded to release superior varieties. ‘Margherita’, ‘Zagharin-02’, and ‘Red Grain’ were released in 2020 and 2021 showing superiority in yield advantage of 6%, 3-5%, and 5 % respectively.

Before the multiple back-to-back crises hit the country starting in 2019, there were no worries about Lebanon’s dependency on bread wheat imports. The situation became shaky when Lebanon failed to secure foreign currency. Food prices gradually increased by 400 percent between January and December 2020; plus, the geo-political status in the region and the Ukraine-Russia war. Likewise, Lebanon imported 83 percent of its consumption of cereals (bread wheat mainly) in 2018– a high proportion considering that cereals represent the products most consumed by the population (42 percent of their daily diet).

Dr. El Amil explained that NAS is a group of key stakeholders that will work together to reach a common understanding of the needs of farmers and rural smallholders for better agrifood systems (defined by LARI as: farms and firms on the production side, and households on the consumption side) transformation. Moreover, the idea of the wheat sector came up from the shortage of wheat for human consumption and the absence of formal and informal seed systems in a country where back-to-back crises started in 2019 such as the Beirut blast, economic crisis, the flux of refugees, local currency devaluation, and lately the conflicts and the high geopolitical risks in the region.

Dr. El Amil highlighted the importance of collaboration as it is a key to success for any partnership and listed the main points for the brainstorming:

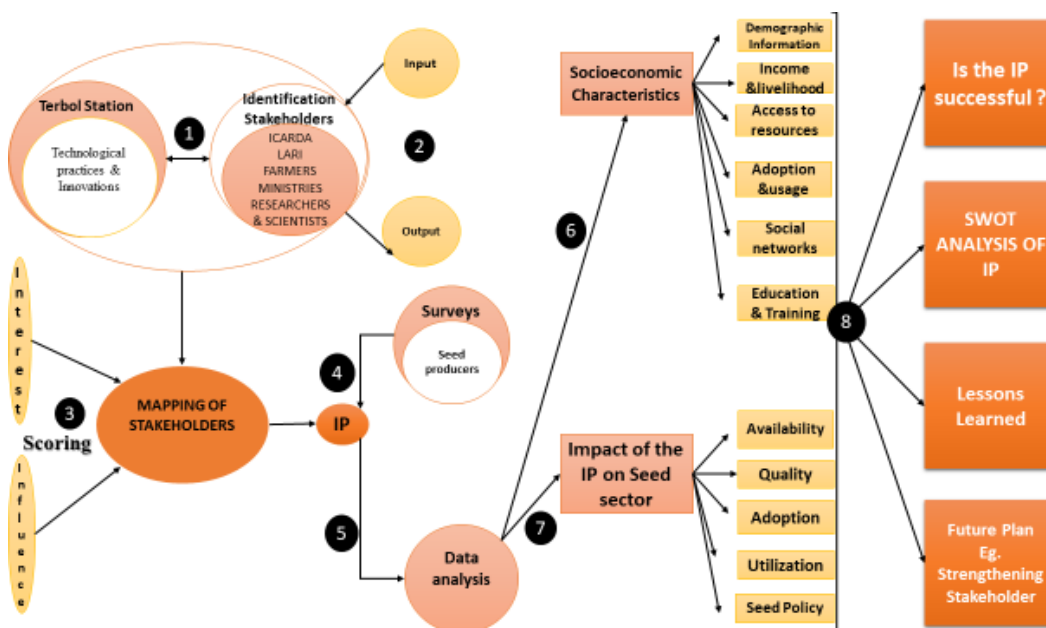
- Institutional and political constraints of the cereal seed sector in Lebanon.
- Mapping the major stakeholders and major innovations in the seed sector.
- Seed sector in Lebanon: challenges, constraints, and factors affecting the seed sector in Lebanon.

- Wish list of important traits of major stakeholders and demand creation.
- Potential of LARI-ICARDA promising lines.
- Adoption and registration.
- Opportunities for the private sector in the seed sector in Lebanon.
- Financial gaps and financial opportunities to support the cereal and seed sector in Lebanon (Financial and Development organizations – WFP, USAID, CGIAR, etc.).

**Ms. Sara Saad, Intern at ICARDA**

**Theme:** The evaluation of the effectiveness and performance of National Innovation Platforms on the seed sector Lebanon: The Terbol Station

Ms Sara Saad explained the innovation platform concept and its positive role in seed sector sustainability; it was conceptualized in the following figure:



The research question raised by Ms Saad was: What is the impact of an innovation platform on the efficiency and effectiveness of the wheat seed sector in Lebanon, and how do different factors within the platform contribute to this impact?

To answer this research question, a study was designed and carried out with sixteen seed producers with LARI in the NIP. The study identified six groups to assess the efficiency of the NIP:

- Seed availability and access,
- Knowledge and training,
- Seed production and market impact,
- Incentives, joint planning,
- Joint planning: Value Chain management, and
- The situation of the seed sector in Lebanon.

Mrs. Sara showed a correlation between the groups of the surveys and concluded with the following points:

- Policies and legislation should focus on the price, market, and farmers' protection,
- Farmers should be aggregated under unions, associations for lobbying and create a robust network that secures the market information, and
- LARI should enhance the seed production revival with key farmers and support them with inputs such as fertilizers, pesticides, and fuel for irrigation.

### **Discussion session**

Following the presentations, the discussion session started among participants in a frank and calm atmosphere. The summary of suggestions, recommendations, and observations by stakeholders are as follows:

#### **The mills Representatives:**

Mr. Alex Keushkerian highlighted the following bottlenecks:

- Not satisfied with the quality of the locally grown wheat and it contains too much of impurities such as stones, weed grains, etc.
- Lack of silos and storage buffers in the country after Beirut blast.
- High prices compared with imported wheat.
- Lack of consistency in both quantity and quality (grain size, grain color, and high impurities in local wheat).

As the representative of Bakalian mill, he encouraged the Syndicate of cereals and grains to produce good quality and showed the will to buy the Lebanese wheat grain.

Mr. Dori Abboud mentioned the lack of availability and consistency in local bread wheat; for durum wheat, the Crown mill is buying from the local market, and they were satisfied with the quality of semolina production.

### **The Syndicate of Cereals and grains Representative**

Mr. Najib Fares stated many challenges facing the cereals sector:

- Climate change is affecting crop yields, especially rainfed when supplemental irrigation is not possible.
- High cost of production.
- Absence of extension service in the country and farmers are victims of inputs suppliers.
- Absence of efficient and effective agricultural strategy; farmers are not protected and are struggling with no support from the government and limited support from NGOs or UN agencies.

### **Engineer Charbel Sakr - Farmer and Green Bridge Representative**

As a farmer, Mr. Sakr raised the seed purity and pricing explaining that purity is very important to increase the yield and reach uniformity in grains especially durum wheat for processing pasta, burghul and semolina. He also mentioned the “contract farming” to link farmers with processors and reach a win-win alliance. Hence, contract farming needs deep reviews, legally, to protect farmers and processors equally. As he is working with a private seed company, he shows interest with ICARDA-LARI varieties after carrying out a demo-plot of Zagharin 02 on his lands. The company is seeing a potential in producing durum wheat seeds of their French varieties and exporting them to surrounding countries like Jordan and Saudi Arabia.

### **Mr Issam Abou Jaoudeh, Acting Director General, Ministry of Economics and Trade (MOET) Representative**

Mr. Abou Jaoudeh stated that he was newly appointed to the position. He is in favor of good coordination between ministries for the wheat sector and better to be managed by one entity from production to milling. He added that this sector is lacking seed law (policies and legislation). The MOET is not in favour of promoting or increasing the production of bread wheat; it is in favour of concentrating on improving the production



and quality of durum wheat, exporting the surplus to Jordan, Italy and Turkey for pasta making, and using the foreign exchange to import bread wheat from the Black Sea region.

### **Engineer Mona Sibli, Ministry of Agriculture Representative**

Mrs. Sibli assured us that the seed law draft was withdrawn from the parliament for revision and update. She invited all stakeholders to participate in improving the draft and adding their comments. She also added that LARI's laboratory is equipped to carry out ISTA tests: Germination, purity, TKW, etc. She also mentioned that the Lebanese Official Catalogue should be updated.

### **Berytech Representative**

Mrs. Soha Nasser stated that Berytech's vision is to support innovative companies to scale up and shape the technology and innovation scene in Lebanon and the region with the goal of creating jobs and offering the right ecosystem for innovative entrepreneurs to create and develop their startups and small and medium enterprises (SMEs), fostering innovation, technology, and entrepreneurship.

For the wheat sector, they tried to identify the challenges and find solutions. For farmers struggling with bird damage, they have already developed an environmentally friendly solution - a revolutionary bird-saver - a bird repellent technology to create a safe and effective barrier, warning birds from damaging wheat fields. Another major challenge is the market and price; they are trying to work legally on the "contract farming" to link farmers with processors. Mrs. Nasser showed her interest in scaling any technology in the seed sector to increase the farmer's profitability.

### **Professor Issam Bashour, American University of Beirut Representative**

Professor Bashour highlighted the importance of the meeting and the idea of putting people together. He pinpointed the subsidies that used to be operational in the past, but it needs to be studied and should adopt a new business model to revive the seed multiplication to help farmers and eventually improve food security. He added that cereals are very important crops in crop rotation and both durum and bread wheat are known for their wide adaptation to various agroclimatic zones and soil types (0 to 1500 m.a.s.l. in Lebanon).

He added that climate change will negatively affect crop yields in many areas, mainly due to higher temperatures affecting crop phenology and the shortening of the crop growing season. Supplemental irrigation will be needed for most crops, although the shortening of the growing season could reduce irrigation needs in some cases; here climate resilient genotypes are needed for the farmers.

### **Private sector Representatives**

Mrs. Nadine Khoury stated the main challenges for cereal wheat sector and mainly the high cost of production. She indicated that this sector needs to be restructured with a legal framework. She added that certification is primordial for them in the case of exporting. As a private company, they can support the public in demo-plots in different agroclimatic zones to promote the dissemination of new and performing varieties.

Mr. Khaled Sinno highlighted the lack of data availability in the country as the agricultural census was carried out in 2010 after thirteen years with all the changing socio-economic factors affecting the country. He also indicated that we need more innovation in Agriculture such as digital consultation, water efficiency, climate-resilient varieties, etc. He also wished that the Initiative would bring science-based solutions, scaling up and out the best bet solutions for rural smallholder farmers facing climate change.

### **UN agencies Representatives**

Mr. Elie Choueri stated that FAO is focusing on the analysis of the wheat value chain using a nutrition lens including the potential for local production of alternative grains that can substitute wheat in bread, or alternative staple food, describing the food environment regarding consumption including consumer behaviour as well as the institutional, governance and policy aspects of the study. Moreover, FAO will help LARI in seed multiplication Center revival, extension service, farmers awareness, etc. He recommended more coordination between all stakeholders to have an internal brief of their activities together and all this would be done to avoid overlapping in projects.

Mr. Dominique Choueiter explained that UNDP is in a preparation phase for a new project to support seed multiplication in Lebanon and implemented by LARI. This new project will be implemented in six stations across the country. The first phase of the project is more for land reclamation, land rehabilitation, and irrigation infrastructure.

The second phase will be mainly about seed multiplication of resilient and productive varieties of cereals and legumes already evaluated by LARI exclusively.

#### **Engineer Amine Jbeily, Industrial Research Institute Representative**

Mr. Jbeily expressed his thanks to be present in this meeting and happy to see so many stakeholders in wheat chain. For IRI, they can work closely with LARI on technological traits for both bread and durum wheat and this will ensure that the farmers will grow the right varieties for processors, and this is a win-win procedure for both. He pinpointed that some varieties are not meeting the standard technological traits and are still in farmers' hands. Consequently, it would be better to raise awareness and withdraw these varieties from the market.

#### **Dr. Rola El Amil, LARI Representative**

Dr. El Amil indicated to the audience that the crop improvement program did not stop after 2019. LARI is still jointly working with ICARDA trials on durum and bread wheat in many locations. LARI is conducting variety demand creation based on product profiles and trying to disseminate the new performant varieties with farmers in many locations.

#### **Recommendations and strategic actions**

At the end of the discussion session, some practical ingredients to include the road map for Lebanon with strong commitment from all stakeholders:

- Follow up closely with the Ministry of Agriculture about the seed law draft and coordinate with all stakeholders to add their comments.
- Review the release and registration mechanism. As LARI oversees testing so an outsider committee is recommended for release and registration.
- Update the Lebanese Official Catalogue with local and imported varieties and withdraw susceptible varieties from the market.
- Scale up and out the best bet solutions for seed producers like the smart climate resilient packages (from the seed to post-harvest) and engage more farmers with the National Innovation Platform for quick dissemination and adoption.
- Engage more relevant stakeholders for instance the Directorate of Cooperatives to enhance the informal seed sector in the country.

- Keep track on varieties demand creation by engaging major stakeholders and based on product profile.

## Appendix 1

### National Alliance Stakeholder

Workshop for major stakeholders in the wheat sector in Lebanon

#### Agenda

**Date: Monday, 24 July 2023, 9:30 am**

**Venue of the meeting: Radisson Blu Verdun, Beirut**

9:30 - 10:00	Registration of participants and welcome coffee
10:00 - 10:10	Official welcome of participants and opening remarks LARI/ICARDA
10:10 - 10:30	Presentation of new ICARDA initiatives to strengthen the resilience of the seed sector in Lebanon: F2R CWANA initiative
10:30 - 10:45	Importance of the <b>National Alliance Stakeholders</b> for the seed sector in Lebanon
10:45 - 11:15	The current status of research results on resilient cereal crops and seed multiplication at LARI
11:15 - 11:30	Coffee break
11:30 - 13:00	<ul style="list-style-type: none"><li>• Institutional and political constraints of the cereal seed sector in Lebanon</li><li>• Mapping the major stakeholders and major innovations in seed sector</li><li>• Seed sector in Lebanon: Challenges, constraints and factors affecting seed sector in Lebanon.</li><li>• Wish list of important traits of major stakeholders and demand creation</li><li>• Potential of LARI/ICARDA promising lines</li><li>• Certification, adoption, and registration</li><li>• Opportunities for Private sector in seed sector in Lebanon</li></ul>

	<ul style="list-style-type: none"> <li>• Financial gaps and financial opportunities to support cereal and seed sector in Lebanon (Financial and development organizations – FAO, WFP, UNDP, CGIAR, etc....)</li> </ul>
13:00 - 13:30	Conclusion, recommendations, and closing remarks: Roadmap to enhance seed sector in Lebanon
13:30 - 14:30	Lunch

## Appendix 2

### List of participants

No	Name	Gender	Organization	Position
1	Issam Bashour	M	American University of Beirut	Professor
2	Issam Abou Jaoude	M	Ministry of Economics and Trade- Cereals office	Acting Director General
3	Amine Jbeily	M	Industrial Research Institute	Baking technologist
4	Petra Youssef	F	Industrial Research Institute	Food technologist
5	Alex Keushkerian	M	Bakalian Mill	Production Manager
6	Aline Bsaibes	F	Freelancer-private sector	Agricultural expert
7	Khaled Sinno	M	Private sector	Seed company
8	Hadi Meselmani	M	National Development Committee (NDC)	Agricultural Engineer
9	Youssef Abou Nakad	M	Robinson Agri	Agricultural Engineer-Bekaa Area
10	Sara Saad	F	ICARDA	Intern
11	Dominique Choueiter	M	UNDP	Project manager
12	Maher Mekanna	M	UNDP	Project officer
13	Elie Choueiri	M	FAO	Division manager Food security
14	Soha Nasser	F	Berytech	Innovation Unit
15	Rima Hijazi	F	Berytech	Innovation Unit
16	Rania Hayek	F	Ministry of Agriculture	Head of Quarantine department
17	Maya Baaklini	F	LibanAgri- Seed importer	Agricultural Engineer
18	Nagham Nasrallah	F	LibanAgri- Seed importer	Agricultural Engineer
19	Nadine Khoury	F	Robinson Agri/QOOT Cluster	CEO
20	Roy Moussa	M	Green bridge Seed importer and producer	Agricultural Engineer

21	Charbel Sakr	M	Green bridge Seed importer and producer	Agricultural Engineer
22	Najib Fares	M	Syndicate of cereals and grains	Head of Syndicate
23	Dori Abboud	M	Crown mill	Operations Manager
24	Mona Siblini	F	Ministry of Agriculture	Head of Crop Production department
25	Lamis Chalak	F	Lebanese University	Professor
26	Hassan Machlab	M	ICARDA	Country Manager
27	Safaa Kumari	F	ICARDA	Seed Health Unit
28	Rola El Amil	F	LARI	Plant Breeding department F2R-CWANA Focal point