



**National Development Committee – Lebanon**

**Revival Agricultural Program – Interim Report / July 27, 2021**

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**This interim report provides update on two key “Revival” projects, as we approach the one-year launch of the program**

**I. Legumes and Grains Project**

**Outcomes of the 2020-21 season and projections for 2021-22 Season**

**1. Grains: Wheat and Barley**

In the 2020-21 season, 260 kgs of wheat and barley were planted on four lots of land in Zawtar – Nabatiyeh, totaling 7600 m2. The crop has been collected and pure seeds of the 3 wheat varieties and one barley variety were harvested as follows:

- Durum Red: 300 kg (250 kg per dunum)
- Durum White: 700 kg (304.3 kg per dunum)
- Soft: 850 kg (386.4 kg per dunum)
- Barley: 285 kg (219.2 kg per dunum)
- Mixed grain of the above: 135 kg

... for a total 2,270 Kg, which averages 298.7 Kg per dunum or 8.7 Kg crop for every kilo planted.

During the past year, contacts have been made with 6 new areas of Lebanon to initiate the plantation of wheat and barley for the 2021-22 season using the crops above. Field visits already made to 5 of these areas and the grains will be distributed to them as follows:

Area	Partner Group	Amount of Seed for Plantation by Type (Kg)				Land Area (dunums)
		Durum Red	Durum White	Soft	Barley	
South Lebanon	Revival – Nabatiyeh Ali Tawbeh	-	100	100	-	8-10
	Ali Ahmad	100	50	-	23	8-9
	Khiyam Agric. Co-op	80	290	-	-	15-17
	Sarada Agric. Co-op / Wazzani	-	-	276	50	18-20
	AWFA Assoc. – Ein Ebel	50	-	50	-	4-5
	Devept. Montada - Hasbaya	50	50	-	-	4-5
North	Revival / Dhaniyeh Agric. Co-op	-	100	200	50	14-16
Beqaa	Leb. Assoc. Urban Agric. (LAUA)	-	100	100	50	11-13
<b>Total to be Replanted (Kg)</b>		<b>280</b>	<b>690</b>	<b>726</b>	<b>173</b>	<b>77-90</b>
Other*	Revival		10	120	66	
Other**	Revival	205 Kg mixed seeds				
<b>Total</b>	<b>All Types: 2,270 Kg</b>	<b>300</b>	<b>700</b>	<b>850</b>	<b>285</b>	<b>77-90</b>

\*Seeds used to sprout green feed (fodder) for the poultry project

\*\* Mixed seeds used as dry feed for the poultry project

	<u>2020-21 Season</u>	<u>2021-22 Season</u>
Amount Planted (Kg)	260	1870 (83% of total)
Area Planted (or to be) - dunums	7.6	77-90
Geographic Areas (# farmers)	1 (1)	7 (9)
Projected Crop (based on 2021 average)	2270 Kg	16,250 Kg

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**2. Legumes (Chickpeas, Lentils, Fava Beans, vetch)**

Will be coordinated with the Lebanese Agriculture Research Institute (LARI) in September 2021

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**Science-driven crop care**



**Certified hybrid varieties**



**Maintain variety purity**



**Barley**



**Durum White**



**Durum Red**



**Soft**



**New Land in North Lebanon for 2021-22 season grain planting**



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## II. Poultry Project

A pilot project in raising poultry was initiated in March 2021. The project had five main objectives:

1. Experiment the performance of dual-purpose poultry variety in a backyard free-range setting.
2. Develop the expertise in cultivating green feed: sprouted seeds of the grains of wheat, barley, and corn; and legumes: vetch, and sunflower.
3. Develop the expertise of cultivating a mealworm colony as a rich protein, minerals, and amino acid food source for the chicken.
4. Examine the quality of meat and eggs of this poultry variety which is expected to be similar in quality to the “baladi” variety; while offering superior meat quality of the broiler males, with higher egg productivity by the layer females.
5. Develop expertise in establishing local village and area-based market venues for poultry meat and eggs; in accordance with achieving the project’s food security goals of this key component of the Lebanese diet, as a protein dietary source.

A flock of dual-purpose chicken of the Hubbard AJ-57 variety were purchased from a specialty farm in Koura – Lebanon. Fertilized eggs were incubated on April 18, 2020 and hatched on May 9, 2021. The one-day old chicks were vaccinated and raised to age 35 days at the Koura location, and received all recommended vaccinations up to that age.

A poultry farm was rented in the village Ebba (Qaza Nabatiyeh) and 1,225 birds that are 35 days old chicks were delivered from Koura to the Ebba farm on June 15, 2021. Male and Female chicks of the flock were kept together for two weeks, then separated by gender into broilers (males) and layers (female).

A grain sprouting unit was established, to eventually produce 90 kgs of green feed daily; from wheat, barley, vetch, and sunflower seeds. Currently, male broilers receive 40% of their diet from green feed, while layers receive over 50% of their diet from green feed.

The mealworm colony was started with 1000 mealworms, which over 2 months, after the interim 2-3 weeks pupa stage, evolved into a colony of 800-900 darkling beetles. The beetles are expected to produce thousands of mealworm larvae every week. Most of the mealworms will be fed to the chicken, while a 20% portion will be kept to undergo the life cycle changes into thousands of beetles to further propagate the colony and perpetuate mealworm production.

Over the next two months (August and September 2021) the following will take place:

1. Male broilers will be sold for poultry meat about their 3-month age / 2.2 kg weight. Meat quality was tested last week and proved to be superior in purity, flavor, and tenderness.
2. Thirty best looking males will be saved to be mated with 250 of the better-looking females. This flock will be used for breeding generations of new chicks over the next 15 months. The new chicks will be used to initiate model programs in villages.
3. The remaining 300+ females will be maintained as layers for the egg production segment of the experimental operation.

The experience was extremely educational and fruitful in establishing a successful model so far, for farmer-based backyard poultry raising operation for high quality meat and egg production; that uses natural green feed and mealworms, as a substitute for over 50% of the poultry nutrition, while maintaining clean sanitary environment and sound public health practices.

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**Dual purpose hybrid**



**Free range environment**



**Sprouting grains & legumes – green feed**



**Mealworm culture - rich protein**



**Natural top quality broiler meat**  
(Egg production phase forthcoming in 2-3 months)