



Local Seed Bank in Palestine

Introduction

In the world of agriculture, all too often we stop cultivating a vegetable or raising an animal breed simply because they are not profitable enough. The economic market is oriented to maximizing yields at all costs, concentrating on a small selection of the most “productive” species. Though it may warrant less media attention, extinction is not limited to species in the wild, but also to the plants and animals that have been raised through ten thousand years of selective breeding.



Figure 1. The national seed bank season summer 2012 seeds

This wealth of biodiversity, which we ourselves have created, is what the Union of Agricultural Work Committees (UAWC), the largest agricultural development institution in Palestine seeks to value and conserve. UAWC was established in 1986 in response to the vulnerable socio-political circumstance faced by Palestinian farmers. Since its establishment, UAWC has steadily gained the confidence of international supporters through four main programs, which annually benefit more than 30,000 small-scale farmers. All located within the vulnerable and conflict affected regions of the West Bank and Gaza Strip, UAWC's projects vary from

agricultural land development, implementation of water supplies, capacity building, and development of rural women's livelihoods, legal awareness, emergency response, and other agricultural development projects. One of UAWC's pioneering initiative is a Local Seed Bank located in Hebron governorate but serving Palestinian farmers in all Palestinian governorates. The local seed bank is the first of its kind in Palestine that is working to save, protect, preserve, storage and reproduce local Palestinian seeds. It is considered a main solution to address climate change and an effective way to help Palestinian farmers to reach their right of food sovereignty.

Description of the Agroecology system

Despite its unique agricultural advantage due to the diversity of ecosystems, Palestine's agricultural sector is continuously deteriorating, and in need of focused efforts to revive it. The exceptionally challenging economic, political, and environmental situations in the Palestinian territories are affecting the agricultural sector in Palestine and livelihoods of the Palestinians. Moreover, 62% of the West Bank's lands was put under the Israeli full control under Oslo Accords in 1993 that it can be swept away any moment. This context has deteriorated the agricultural sector in general and makes local seeds under threat of extinction.

Therefore, UAWC established its important pioneering projects in 2003, the local seeds bank. UAWC's seeds bank is so far the first and only one of its kind in Palestine, with the aim to protect local crops from loss and extinction and to preserve and document them. It currently comprises of 37 different kinds of crops. Before the establishment of UAWC's seeds bank, local seeds in Palestine had not been preserved and were therefore subject to danger of extinction. Beside technical support documenting the seeds' performance in the field, such as germination percentage, seedling growth, flowering, fruit set and fruit maturity, the local seed bank provides Palestinian farmers with improved local seeds for



two seasons annually (summer and winter). In essence, UAWC supports any eco-friendly practices in addition the organic production in general; the local seed bank uses classical breeding programs to preserve and improve local seeds.

Moreover, UAWC's seed bank has a long-term strategic plan to assure stable food security for small-scale farmers of Palestine. The main beneficiaries of the seed bank are for the farmers whose lands are located in contested areas that face the threat of being confiscated if not farmed for three year. As a result, this seed bank ascertains that the best way for Palestinians to avoid expulsion from their lands and retain their homes is through providing them with the seeds needed to cultivate and farm their land. In essence, these seeds work as a tool to protect the land from being confiscated. Thus, a stable access to land and the main source of income and food security have been assured.



Figure 2. The national local seed bank local serpent cucumber crop

Furthermore, the way the seed bank adopted in the distribution of the seeds assures further food security stability, through the "Three-parts tool". UAWC agrees with the farmers once they received their seeds to divide the produced seeds into three-parts, the first parts for their needs in the current season, the second, to be stored to be planted again for the upcoming season, the third will be returned to the local bank in order to benefit other farmers. This tool increases the local Seed bank ability to reach more and more people, thus assuring more food security for the overall community. Finally, the core of the Seed Bank's work is providing the rural people with a sustainable source of income, since the loss of local seed production is undermining small-scale agriculture and the food security. As well as climate change, natural disasters and corporate interests have conspired in recent years to dramatically reduce the number of small farmers who reproduce their own seed. Thus, this seed bank will keep the region food supply safe and stable.

Local seeds are the seeds that have been planted in a certain area for centuries and that can be thrive under local environment conditions. Therefore, it considers a best technique for increasing farmers' ability to adapt with climate change and it has a great contribution in increasing farmers' food security.

Morover, UAWC's local seed bank was established to protect these seeds from any threats of extinction. Farmers are continually replacing local seeds with genetically-modified and improved



seeds and this can boost the extinction of these. In some cases, improved seeds prevent the utilization of the seeds produced by the offspring. This prevention is protected by Intellectual Property Rights and can generate a dependence for farmers who will have to buy new seeds every season. In an instable environment as this one solutions that promote farmers autonomy and independence should be prioritize. In comparison, local seeds can be produced, stored, improved, and utilized by farmers as a seed stock for the upcoming agricultural season. These seeds are already acclimated to the environmental surroundings and immune to local viruses and diseases.

In addition to the Seed Bank's roles in protecting seeds, this seed bank serves as research and study centre. This bank is the base for all seeds that were planted in West Bank areas, characterized by its unique drought and salinity tolerance, which makes these seeds a good resource for researchers and scientists in plant breeding and improvement programs. As result, many tests related to the seed bank and seed storage are done UAWC's seed Bank, and many organizations and interested farmers and researchers can test their seeds in this lab for their germination percentage, viability percentage, dry matter percentage and purity percentage.



Figure 3. The national local seed bank cooperative work

Outcomes of the practices

The UAWC local Seed Bank was able to preserve 37 vegetation and field crop species of which their hereditary sources are being preserved in the seed bank in accordance with the suitable preservation methods. The seed bank stores the seeds in different temperatures according to the length of the storage period and the purpose of storage. Therefore, since its establishment, UAWC's local Seed Bank has protected and distributed local seeds among Palestinian farmers for free. In that regard, it was able to create a social bank that saves 70% of the food basket for the benefit of 1200 vulnerable, small-scale farmers annually. In addition this seed bank served as a main source of income for those farmers.

Moreover, UAWC's Seed Bank has a great contribution in preserving lands from confiscations. Therefore, UAWC's provision of local seeds for farmers, in essence, enables these farmers to plant their own lands and protect them from confiscations.

In addition, the local seed preservation is considered a technique to help farmers to adapt to climate change impacts, since these varieties are adapted to the drought, salinity and conditions of the area. Therefore, the Seed Bank has a significant achievement in decreasing Palestinian farmers' vulnerability to climate change.



Figure 4. The national local seed bank storage unite



From an economic point of view local vegetables, such as local cucumber, squash and many other vegetables that can be used in traditional local diet, have more value to consumers than other subsidized products, because of their rarity and desirability to local consumers. Therefore, by enabling farmers to produce local seeds, we increase their revenues, thus their income.

Message from farmer to farmers

“By saving our local seeds, we in essence save our lands, our history, our present and our future. By planting local seeds, we in essence rooted our Palestinian issue”

— Message from Hussein Ayidah, from UAWC