

Healthy Earth, Healthy Food, Healthy People

مركز تعزيز الابحاث للتاهيل المجتمعي



Advancing Research, Enabling Communities (AREC)

M. Haidar, AREC Director

September 6, 2019

AREC

Established in 1953

Multi-functional and inter-disciplinary center devoted to:

- Teaching
- Research
- Training
- Outreach



AREC

- **Unique Location.**
- Offers a unique real-life model for disseminating knowledge and innovation in agriculture.



AREC

Providing opportunities for agriculture students to obtain practical experience (**Hands-on experience**) in all activities and practices pertaining to the agricultural operation at AREC.



AREC

Providing facilities for faculty members & graduate students to conduct field **research** and **out reach** activities



Existing Facilities

Facilities for Students and Professors

- Lecture hall, 2 classrooms & labs.
- Cafeteria & dormitories
- 2 guest houses and a villa
- 3 annexes



Existing Facilities

Facilities for Students and Professors

- Recreation & sport facilities
- Library and gymnasium
- Cafeteria
- Clinic



Existing Facilities

Facilities for Research

- 70 ha of research plots
- 8 greenhouses (2 large, 4 small)
- Phytotron
- 2 controlled environmental poultry houses
- Fully renewable energy poultry house (Solar and Biodigester)



Existing Facilities

Facilities for Research

- Aquaculture unit
- Verti-culture unit
- Mushroom unit
- Tissue culture lab
- Animal feed lab
- Weather station-digital data
- Creamery



Existing Facilities

Facilities for Research

- 4ha No-Till plots-demo/research
- Seed bank
- Workshop and 42 tractors and implements
- Cattle, goat and sheep barns



Major Activities at AREC

Teaching, training, research and outreach activities



Teaching

- Agricultural students take classes, live and work at the center-Participate in all Agr. operations on daily basis.
- An opportunity for experiential learning, training and research for agricultural students from Lebanon and the region.



Research

One of AREC's main objectives is to facilitate innovative and applied research.

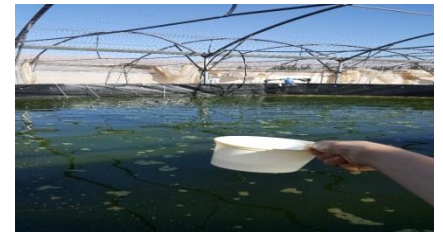
- Smart irrigation.
- Aquaculture-Integrating aquaculture with agriculture to use water better
- The use of natural enemies against pests in netted houses- **Field Day tomorrow**
- Sustainable weed management
- Fate of antibiotics in soil and crops
- Poultry nutrition



Training

AREC provides training in:

- Saffron- A Field Day for farmers was Held on August 18 at AREC
- Hydroponic
- Verti-Culture
- Aquaculture (*Tilapia* fish).
- Mushroom production
- Conservation agriculture
- Layer and broiler production
- Oil extraction, seed drills, etc.



Outreach activities

- All types of workshops, seminars, field days were held at AREC in the last many years.
- Various NGOs and others such as YMCA, Caritas, LO, Mercy Corps, ESCWA, etc. use AREC for their outreach activities.





- Building Resilience in Water-Energy-Food-Health Systems in an Arid and Semi-Arid Region
- Around 70 people stayed at AREC between June 8-14, 2019.



Faculty of Agricultural and Food Sciences



In partnership with the Faculty of Agricultural and Food Sciences at the American University of Beirut, UNICEF, the Swiss Embassy and Injaz,

WATERLUTION

would like to invite you to participate in

WATER INNOVATION LAB (WIL) LEBANON

JUNE 8–14, 2019

for the first time in Lebanon and the Arab World

Application deadline:
April 30, 2019

Apply now online: <https://bit.ly/2tCbUW8>



THEME

Building resilience in Water-Energy-Food-Health Systems in an Arid and Semi-Arid Region

WHO CAN JOIN?

Community leaders, students, and young professionals between the ages of 18 and 30, who are interested in solving urban, rural, and industrial water challenges in Lebanon.

The workshop will feature experts in the fields of:

1. Climate Change and human demographic impacts on water, energy, food and health
2. Rural water challenges: designing frugal water solutions for low-income and high-risk communities; reviving indigenous knowledge
3. Urban water challenges: growth and planning
4. Industrial water challenges: the circular economy
5. High-tech solutions – AI, Internet of Things, Data Science

PROGRAM

June 8–10, 2019:
Field Tours from Beirut to Bekaa Valley

June 10–14, 2019:
Intensive Training in Leadership, Systems-Thinking, and Developing Co-Innovation Projects

LANGUAGE

WIL Lebanon will be offered in Arabic

LOCATION

Advancing Research Enabling Communities Center (AREC) – Bekaa Valley

For questions contact:
wil.lebanon@waterlution.org



Services to the local community

- AREC provides all types of agricultural operations at a feasible cost.
- Lease land to the farmers at a feasible cost.
- Invite them to workshops and field days.
- Purchase most of our supplies from the surrounding area.



Visitors

- Various school students from the surrounding area and AUB community visit AREC every year.
- AREC Day, Sweet Corn Day and Harvest Day attract around 2000 visitors from AUB every year.



Partnership with ICARDA

- ICARDA's activities at AREC include the use of various lands (23ha) and facilities such as:
 - Genetic conservation facilities,
 - Rooms for seed preparation and storage,
 - Land for trails and seed multiplication,
 - Office space,
 - Classes for workshops and accommodation.



Partnership with UNIFERT for over 24 years

- Carry on trials at AREC on over 20 vegetable crops sliced into over 400 varieties every year.
- UNIFERT provided endless financial/technical support to our students.



Services to Syrian Refugees

Over **3000 Syrian refugees** work at AREC annually as daily workers.

- 1000 for saffron production
- 600 for various farm operations
- Over 1400 by ICARDA



Services to Syrian Refugees

- AREC provided two Digital Skill Training workshops for over 200 Syrian refugees and Lebanese young adults at AREC in the last 3 years.
- Trained on basic digital literacy, internet literacy, MS Office Programs, MS Excel, Photoshop, and English.



Services to Syrian Refugees

Donation of surplus food items to the Syrian refugee families.

- AREC donated food items from AREC production to the Syrian refugees families in the Bekaa region in 2016.
- Food and blankets-More than **250 families** (~ 1000 people) benefit from this initiative in 4 camps in the Beqaa plain.



AREC Tomorrow

- Climate and Sustainability Center
- Learning, Innovation and Engagement Center for Renewable Resources and Health at AUB.



To achieve this vision, five major goals have been set

- Regional hub for water-energy-food-health (WEFH) nexus:

Regional Center for Zoonotic Diseases.

Center for Food Safety (*launched since 2019*).

- Hub for participatory student learning experience.

Transforming Higher Education Project (Community building, enriched academic experience, engage students and faculty, community services..)

- Regional community engagement center.

Establishing a Center for Vocational Training to Neighboring Communities.



To achieve this vision, five major goals have been set to transform *AREC Tomorrow* into a:

- Center of excellence for emergency environments.

Increase awareness and practices for improved water management.

Establish information and business support hubs.

Promote healthier diets and lifestyles within communities.

- Value creation and entrepreneurship hub.

Commercial Activities at AREC (essential oils, fertilizers, wine, perfumery, etc.).



Conclusion

AREC remains one of the region's leading academic centers catering to the needs of students, faculty, researchers and communities and addressing some of the most pressing issues of our time, including **water, energy, food and health** and the sustainability of rural development.





Thank you

