

MAJOR ACHIEVEMENTS IN THE TRANSFORMATION PROCESS

Newsletter #16 | April 2025



GENERAL PROGRESS OF EACH OF OUR PILOT UNIVERSITIES

The pilot universities of the Transforming Higher Education project have spent the last five years implementing the Five Elements of Success within their narrative and academic plan, striving for a structural change that benefits the university educational programs, students, graduates, and nearby rural communities.

The journey has been challenging. However, by envisioning a more dynamic educational environment focused on student learning, implementing strategic agendas, and action plans, changing institutional structures including establishing committees, maximizing resources, and despite facing a pandemic, dealing with adverse political situations, and addressing challenges to agriculture including sustainability and climate fluctuations, these institutions are enjoying the well-earned fruits of their efforts.

In this edition of the newsletter, we will review the main progress of the Technological Institute of Higher Education of Calkiní (ITESCAM); the American University of Beirut (AUB); Quisqueya University (UniQ); and the National Technological Institute of Mexico Campus Conkal (IT Conkal).

TOMATO HARVEST AT ITESCAM'S EXPERIMENTAL PLOT

In Mexico, ITESCAM has successfully achieved its first tomato harvest in its experimental plot. Sixth-semester students from the Sustainable Agricultural Innovation Engineering program carried out the collection of the hybrid Saladette tomato, Pony Express—a crop made possible through investments in sustainable infrastructure, such as a water pump and solar panels.

"These resources have enabled the recovery and utilization of a previously inaccessible area for agricultural production. Initiatives like this not only promote the responsible use of natural resources but also drive the development of agriculture as a foundation for food security and sustainable growth," stated Mario Ben-Hur Chuc Armendariz, facilitator of the project at ITESCAM.

Additionally, in the coming months of 2025, the Institute aims to further strengthen students' entrepreneurial spirit, which is also one of the Five Elements of Success.

"This joint effort with international partners will continue to pave a solid path toward higher education that is more connected to environmental needs and community well-being," concluded Chuc Armendariz.



CONGRATULATIONS TO AUB FOR INITIATING THE TRANSFORMATION PROCESS WITHIN THE FAFS

The American University of Beirut (AUB) stands out as a role model for excellence in education, research and outreach, with the ultimate vision of preparing ethical leaders who foster opportunities for its community members, specially the less fortunate, to play a transformative role in addressing challenges that exist locally and globally.

“Recognizing the limitations of traditional teaching methods, it was only logical for the Faculty of Agricultural and Food Sciences (FAFS-AUB) to join the Transforming Higher Education Project, to enhance and lead a transformative shift in agricultural education. This initiative highlights the importance of equipping students with the practical skills, entrepreneurial mindset, and ethical leadership necessary to navigate, lead, and safeguard today's complex agricultural landscape,” says Dr. Hadi Jaafar, Professor and Chairperson of the Department of Agriculture at FAFS-AUB.

For this, the University has begun working with the five elements of success and has set short- and long-term goals.



Short-term Objectives (2025):

- Beginning with the graduating class of 2025, agriculture students will take an Oath of Ethics to reinforce their commitment to integrity and responsible decision-making in the field.
- The faculty is working to develop courses incorporating AI and Python programming to ensure students develop technological competencies in line with industry requirements.
- The faculty is planning on launching community engagement internships in collaboration with FAFS' outreach arm, the Environment and Sustainable Development Unit (ESDU), to provide students with immersive, field-based learning experiences that address rural community challenges.

Long-Term Objectives:

- Implement these transformative changes across all agriculture and agribusiness courses.
- Cultivate graduates who are not only skilled professionals but also ethical change agents, equipped to lead sustainable agricultural development in Lebanon and beyond.

AUB has started working on the review and implementation of the Project at FAFS, and little by little, they are beginning to see positive results. A good example is the AGSC 203 - Plant Production and Protection course which has undergone a comprehensive redesign to integrate experiential learning.

New course elements include:

- Hands-on greenhouse activities, where students practice plant propagation techniques.
- Case studies focused on Lebanese farmers, offering insights into local agricultural challenges.
- Exposure to a hydroponic system, recently installed at the Department of Agriculture through a partnership with a local company specialized in vertical farming, exposing students to innovative, sustainable farming techniques.
- Field trips to local farms, providing a direct connection between coursework and real-world agricultural practices.

The revised course is currently being offered to 46 students. The course instructor noticed good improvement in student engagement, comprehension, and skills application following the course revisions. Ms. Hana Soboh, the course instructor, mentioned that ***"the initial brainstorming sessions encouraged the students to engage their thinking processes, facilitating quicker comprehension. Additionally, field visits and case studies provided opportunities for hands-on experience and fostered critical thinking"***.

Student testimonials include:



Nour Chekeir:

"Experiencing a hydroponic system in action for the first time at FAFS-AUB was invaluable, as it allowed me to gain hands-on experience in both setting up the system and understanding its operation."



Luna Al Hajj:

"During my first visit to a nursery, I observed various types of vegetable seedlings, witnessed the grafting of watermelons, and learned about the challenges of nurturing plants from seed to seedling."



Cristina Jureidini:

"In the greenhouse, we had the chance to apply air layering to a mulberry tree for the first time."



Mohamed Ali Al-Hariri:

"We were able to put everything we learned in the course into practice in the lab."

Contact us



Transforminghigher.education



transform.edu@aub.edu.lb

PROGRESS AT THE AGRICULTURAL TECHNO-PARK OF THE QUISQUEYA UNIVERSITY

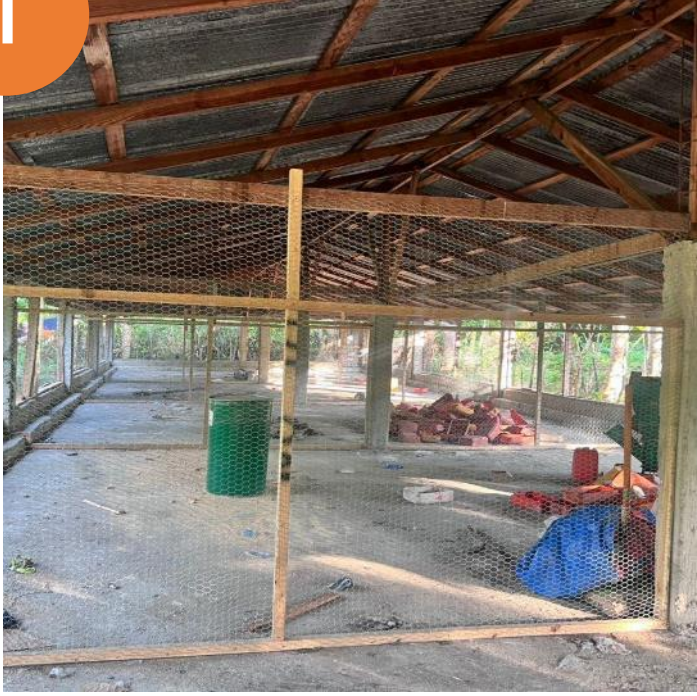
The pilot university of the project in Haiti, UniQ, presented its progress in the establishment of the Agricultural Techno-Park, marking a significant milestone in the training and innovation of the sector.

According to Michel Chancy, the UniQ campus project facilitator, the main features of this facility are to:

- 1. Offer an experiential learning environment where students develop skills in agricultural production and livestock management.
- 2. Facilitate the experimentation and implementation of new agricultural techniques.
- 3. Play a key role in connecting the university with farmers in a two-way exchange of ideas, learning and providing access to sustainable innovations.

In Mirebalais, the Techno-Park has initiated the production of black soldier fly larvae, which processes organic waste by recycling nutrients into high-value insect protein that can be marketed as animal feed, while also generating usable organic waste as soil conditioners¹. The production process required the following steps:

1



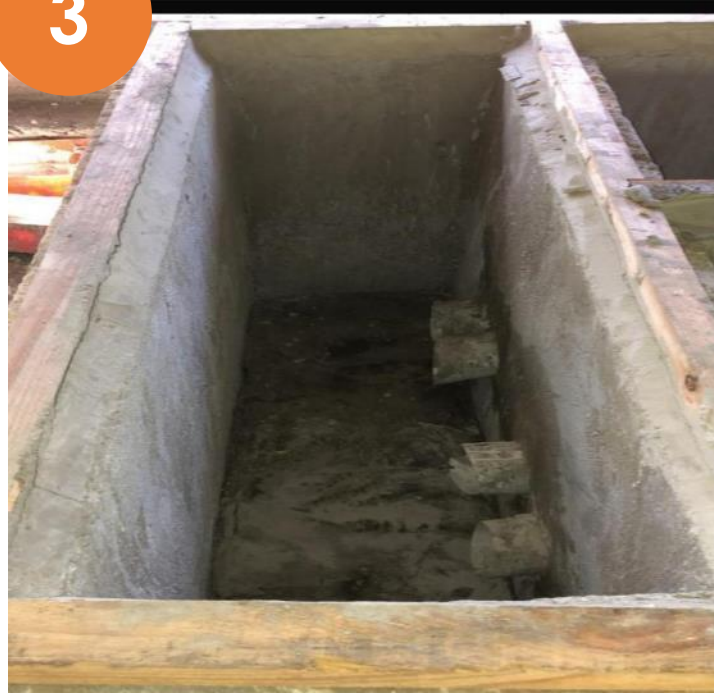
First, the university restored the hangar where the Techno-Park is located, closed the area, and installed a fence.

2



Construction of the concrete base for the container.

3



Space for the larva collection container.

4



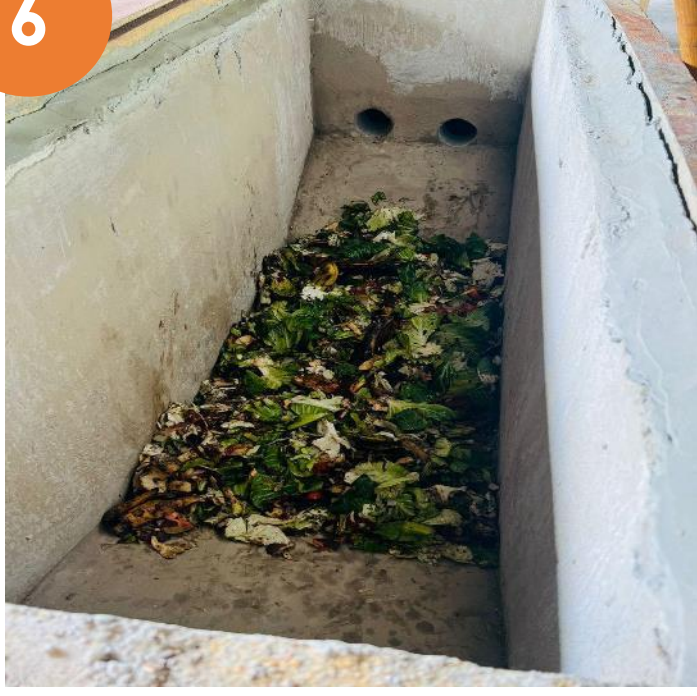
Engorgement container with a slope.

5



Installed collection container.

6



Installed engorgement container.

7



Aviary.

8



Modular stackable engorgement containers in Port-au-Prince.

These advances represent a key step in the transformation of agricultural education in Haiti, providing local students and farmers with new opportunities to improve sustainable production.

1: Studdt-Solano, N. M. (2010). Use of Black Soldier Fly (*Hermetia illucens*) Larvae for the Management of Municipal Organic Waste on the EARTH University Campus, Costa Rica. Graduation Project, Bachelor's Degree in Biotechnology Engineering, Costa Rica Institute of Technology. Retrieved from <https://repositorio.tec.ac.cr/handle/2238/695>

COMMUNITY BRIGADE SERVING CONKAL

At the Instituto Tecnológico de Conkal, the work of the Transforming Higher Education Project is led by technical committees, one for each of the Five Elements of Success. Previously, we [shared](#) the story about how the institution's community engagement brigade, led by students and supported by faculty, developed a program in which 92 Indigenous children from the Children's House in Maxcanu were trained in techniques for cultivating vegetable species such as radish, cilantro, and beetroot for their daily consumption.

In 2025, the brigade will launch a new project to identify the specific needs of the community, for which students will be trained in conducting surveys and censuses.

“A pilot test was conducted in the municipality of Conkal, divided into quadrants, where a survey was carried out in the community to gather agronomic-related data. The idea is to go into the community to determine its specific needs in terms of technical knowledge. This allows us to identify areas of opportunity and assess how we, as a university, can contribute,” says Jorge Gamboa, project facilitator at IT Conkal.

Once the data collection and impact assessment are completed, the Institute aims to gather sufficient information so that students, professors, and the communities themselves can effectively learn to sort information, make informed decisions, and dedicate time and effort to addressing the specific challenges faced by the residents of Conkal and Chicxulub in the Yucatán province.

