

## NEXTFOOD

### Educating the next generation of professionals in the agrifood system

NEXTFOOD will contribute to a transition to more learner-centric, participatory, action-based and action-oriented education and learning in agrifood systems, which are becoming increasingly complex and require an increasing range of “hard” and “soft” skills. The objectives are to

- (O1) identify the skills needed for a transition to more sustainable farming and food systems,
- (O2) develop and test relevant curricula and training methods,
- (O3) assess existing policy instruments for the training and education sector,
- (O4) develop tools for evaluating quality of the training and education sector,
- (O5) develop a platform for knowledge sharing.

NEXTFOOD will employ case-based action research to

- (I) develop relevant and effective education and training programmes for a transition to more sustainable agrifood systems,
- (II) generate new knowledge needed for similar achievements beyond the specific case.

The *case development (I)* will rest on a cyclic, iterative, participatory process consisting of

- (1) observation and description of the current situation in each case,
- (2) visioning of a desired future state,
- (3) analysis to identify key issues, solutions, supporting and hindering forces etc.,
- (4) elaboration and discussion of action plans,
- (5) implementation of plans,
- (6) iteration of steps (1–5) in a cyclical manner throughout the course of the project.

Simultaneously, *research (II)* will be done on qualitative and quantitative data generated during the case development process and analysed to answer research questions that are relevant beyond the specific case. This will produce new knowledge needed to drive the transition to the learning strategies required to educate and train professionals that can meet the very complex future demands in the agrifood sector.

The main research questions of NEXTFOOD are:

1. How can participatory and action-oriented learning strategies focusing on competences required to foster more sustainable agrifood systems, be designed and implemented?
2. What are supporting and hindering forces for such alternatives to establish and develop successfully?

## Case name and name of contact person/leader

**Agriculture Vocation Training Centre [Agri-VTC] and  
Social Innovation and Entrepreneurship Centre [SIEC]**  
SEKEM Development Foundation

## *Brief description of the case*

SEKEM Development Foundation established in 1990 its Agriculture vocation training center with the aim to promote sustainable and biodynamic agriculture in Egypt. To achieve this vision, Agri-VTC works into 2 interlinked dimensions: [1] registering new farms all over Egypt to convert them to sustainable agriculture, providing all the required services, consultancy, farm management, documentation etc. to enable the organic and biodynamic farms to be inspected by international auditors, [2] holding training and field visits to exchange technical for agricultural experience, the different graduate students of universities and organizations, small farmers and agriculture engineers.

Aforementioned, the training programme at the Agri-VTC is further divided into: **A)** Training courses in biodynamic/organic agriculture for farmers, consumers, agronomists and government staff; **B)** Training courses for vocational students providing them with better job opportunities. Courses covers all aspects of sustainable agriculture chain (i.e. Fruits Bio-Control, Human Resource Development, Water Requirements, Fertilizers Requirements for crops and their comparison with Compost, Effect of planting date on production, Harmonizing business relation between company and its clients, Pre- and post-harvest for fruits and vegetables, Persistence between farmers and extension engineers, Principles of Biodynamic Agriculture, etc.) with the aim of improving their skills & capabilities. More than 380+ Participation in 15-20 training courses held annually with about 420 training hours.

On the other hand, in 2017, SEKEM, through its Social Innovation & Entrepreneurship Center (SIEC) and a newly funded EuropeAID project “InnoEgypt” are going to incubate 10 new Agro-food start-ups, providing them with a full package of services (seed funding, networking, consultancies, fab-labs, co-working spaces...). Achieving this, SEKEM team, in cooperation with leading Aro-food organizations in Egypt, did a market assessment and value chain analysis in order to define the potential Agro-food business opportunities and the needed skills for the young entrepreneurs.

Throughout NEXTFOOD project, SEKEM is going to engaged by its: Agri-VTC and the SIEC. For the Agri-VTC, the NEXTFOOD project will assist the VTC to: (i) advance education curricula and increase the application programs; (ii) train 40 students at the VTC; (iii) update the pattern of the study from the theoretical to more practical form and field trips; (iv) Focus on the new educational media to increase the concentration of students and access to information easier and more accurate through the use of (educational videos, laboratory experiments, field experiments, etc.). For the SIEC, the NEXT FOOD partners will assist in improving the skills of the 20 young entrepreneurs incubated at the SIEC. Besides technical skills, business development

and managerial skills are also integrated.

In conclusion, there will be two groups consist of:

1. 40 students at the SEKEM agriculture vocation training center to be trained via theoretical and action-learning approach. Throughout NEXTFOOD, the project will help in improving the education programme (curricula development, education tools, etc.)
2. 20 young entrepreneurs at the SEKEM Social Innovation & Entrepreneurship to be trained on how to build their successful business and start-ups. Throughout NEXTFOOD, the project will assist incubated start-ups teams to be more professional and to survive.

***How will the case contribute to achievement of the NEXTFOOD objectives by action research as the main strategy?***

- (O1) The skills needed of the two pre-mentioned groups will be identified based on local labour market demands;
- (O2) throughout the project, advancing and modernising the training programmes and training methods,
- (O4) with massive co-operation of the NEXTFOOD EU partners as well as participation of the final beneficiaries (students, entrepreneurs), SEKEM centres will be able to monitor, evaluate the quality of the delivered training in order to further enhancements.
- (O5) Development of Agro-Food knowledge sharing platform will help fresh Agro-food start-ups to access finance, knowledge, and networks and to explore more to external.

***How will the case study provide evidence to answer the NEXTFOOD research questions?***

The planned training modules for the two-target groups will consider the participation of: the main stakeholders (i.e. for SIEC: Agro-food big enterprises, public authorities, chambers of commerce, business angels) in order to guarantee not only the professionalism of the designed programme, but also to get these stakeholders and beneficiaries (i.e. young entrepreneurs) engaged together. Such highlighting of the co-ownership will have another added value, the sustainability of the training programme beyond the NEXT FOOD lifetime.

On the other hand, practical experience is really needed for such training courses. While SEKEM succeeded to build reliable local networks, i.e. with farmers' cooperatives, and European and international (DEMETER, IFOAM, FAIRTRADE, ECOS, etc.) partnerships, it is still need to engage food companies in the learning process (throughout curricula development round-tables, and interviews with key role models inside and outside Egypt in the Agro-food sector); as well as to share knowledge, expertise and best practices (throughout the platform.)

- Supporting Factors (enablers):

- SEKEM track record in performing similar training;

- Existence of the specialized training centres: Agri-VTC and SIEC;
- Existence of well-educated trainers, reliable communication and networking with beneficiaries;
- Presence of other running projects, i.e. EU-InnoEgypt, with extra financial and technical support;

**- Hindering factors (challenges):**

- Missing the modernist education and training tools (ICT, case-studies, videos, blended, etc.);
- Missing proper quality assurance methodology and evidenced-qualitative analysis of the programmes outcomes and how to assess the skills enhancements (i.e. job competence profiling);
- Limited training capacity;

Missing the knowledge sharing platform for exchanging good practices with EU and regional partners;

***When do you plan to run the first cycle (starting and ending dates) of the educational activities (courses, seminars etc.)?***

Start /End dates of the VTC educational activities: anytime, preferable (June-September) every year

Start/End Dates of the Entrepreneurship educational activities: October 2018 – June 2019

***What is the planned (expected) number of learners (students, farmers, etc.)?***

VTC: number of enrolled students: 40 students

Social Innovation and entrepreneurship Centre: 10 Agro-food start-ups, 3-5 members (young entrepreneurs) per start-ups.

***What is the level of the course(s)? (BSc, MSc, other)***

For VTC Students: summer courses, life-long training, certified diploma

For Social Innovation & Entrep. Centre: advanced courses

### ***Who will be the teachers/learning facilitators?***

For VTC: the SEKEM VTC teachers and staff

For Social Innovation & Entrep. Centre: external mentors and consultants in Agro-food.

### ***A description of the 'learning arenas':***

***Where will the activities take place, what will be the processes to enable co-learning between teachers, learners (students, farmers, etc.) and research persons in society (farmers and others)?***

#### **Location of the Training:**

- VTC: Sharquia Governorate in Delta, Egypt
- Social Innovation & Entrep.: Greater Cairo, and Upper Egypt (Minya Governorate)

#### **Co Learning approach:**

Regarding to the VTC, students will have direct practical training (on field) with the farmers and sites visits. It should be highlighted as well that students, as part of their certified training, will deal with small farmers' challenges (i.e. handling agriculture wastes) and finding/recommendation solutions for them.

With respect to the Social Innovation & Entrepreneurship centre, the Agryprenures will be linked with their clients and market segments. For instance, agyprenures working in juice manufacturing will be in touch with big enterprises and businessmen working in this field to get their feedback and recommendations about the market needs. On the other hand, farmers, esp. small ones, those with less than 5 feddan, will serve as the main suppliers to the centre students. Direct communication will be established between the centre students and small farmers.