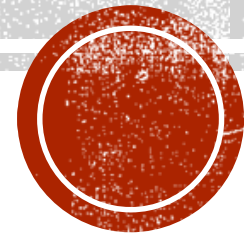
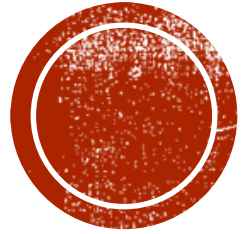


WORKING TOGETHER : A CULTURE OF INNOVATION AND AN ENTREPRENEUR'S JOURNEY



Faculty of Agricultural and Food Sciences-USEK



“Learning is an active process. We learn by doing.. Only knowledge that is used sticks in your mind.”

Dale Carnegie

OUTLINE

- Broader context of HE, internationally
- Purposes and Roles of HE in the Modern World
- Strategy for Education and Skills
- What does it take to innovate in teaching in HE?
- Knowledge and Innovation?
- When it comes to Agricultural Sciences
- Focus
- Building the Human Capacity Pyramid
- FAFS-USEK' Journey : Mission, Vision
- What was done at FAFS-USEK?
- Barriers to Entrepreneurship
- FAFS' Success Stories
- Conclusions



Broader context of HIGHER EDUCATION

- Nowadays, in a rapidly changing world, the major debate is placed under the forms of institutional transformation of HE
- Therefore, HE has to take its place in a changing and a challenging world
- The terms 'global' and 'globalization' appear in many of the responses
- The context of HE is worldwide both internally, in terms of its students, staff, the delivery of its programs and competition for its services, and externally, in terms both of the global character of economic competitiveness and of the destinations of the students



'Higher Education institutions MUST think in global terms'



Purposes and Roles of HE in the Modern World

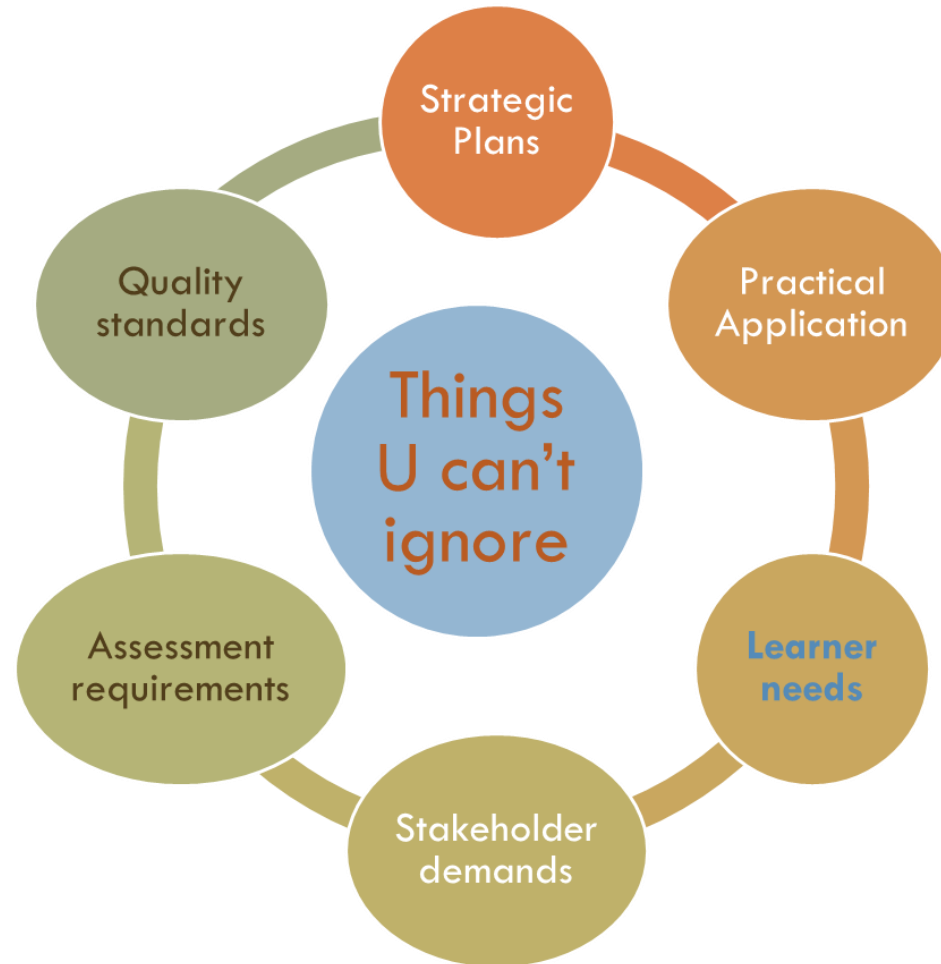
- It is a place where teaching and research can be accommodated in an organized fashion for the promotion of various types of knowledge, applied and non-applied
- It is a place where money and moral values compete and collaborate simultaneously, where the development of labor market skills and competences coexist with the identification and utilizations of people's skills and talents as well as the pursuit of employment, morality and citizenship



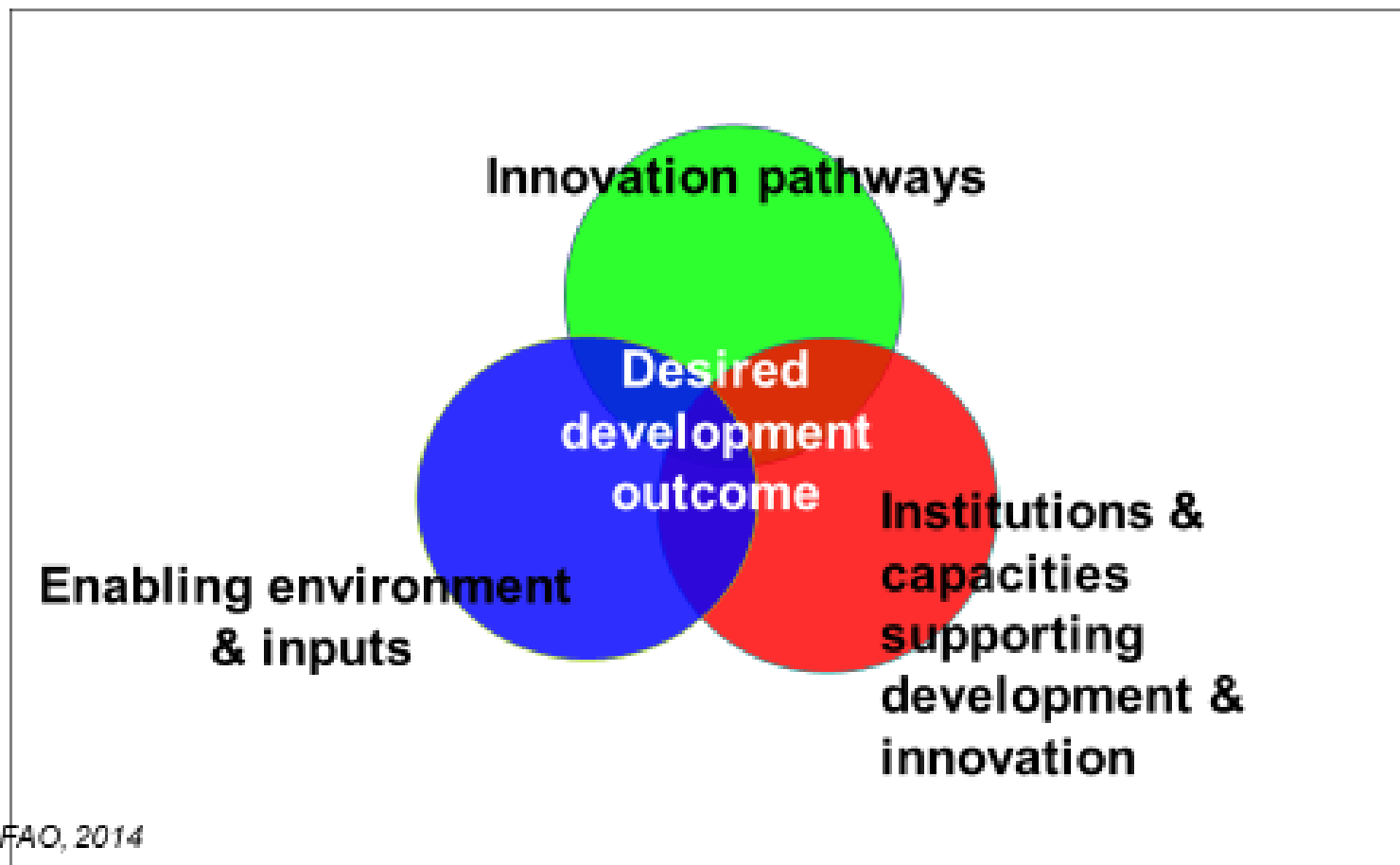
Strategy for Education & Skills



What does it take to innovate in Teaching in HE?



Knowledge & Innovation are essential but are not themselves sufficient for development



When it comes to Agricultural Sciences

- In view of globalization and development of new technologies, it becomes imperative to make HE in agriculture relevant to address present needs of the society
- Similarly, regional issues also need be addressed. Agricultural graduates should be equipped with sound technical knowledge and entrepreneurial skills in a flexible manner to undertake profitable farming and become effective contributors : **Job creators** for sustainability in agriculture rather than job seekers.



To meet these objectives focus should be on

- 1.** Restructuring and adapting curricula to needs of stakeholders; integrating or closely collaborating with research and extension in professional environment and making adequate use of resources from the private sector
- 2.** Organizing, as far as possible, an integrated modular structure of teaching, which:
 - Sub-contracts some important basic subjects to the Basic Sciences and General Education
 - Enables the students to choose from a large range of courses according to their interest
 - Opens some modules to continuing education program emphasizing on lifelong learning
- 3.** Establishing contractual links between faculties and universities and industry for networking that can link institutions both within and between developed and developing countries. Research and Training Centers in Agricultural Pedagogy should also be involved in these networks
- 4.** Incorporating in the curricula key management principles such as decision-making skills, planning techniques and the use of suitable technologies by the students



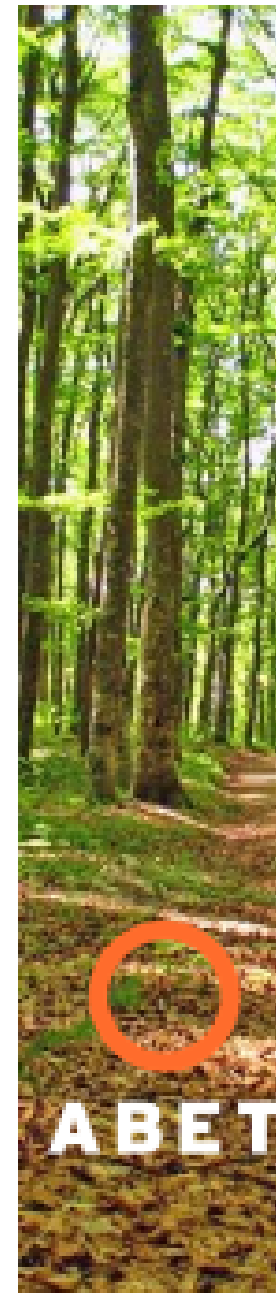
Building the Human Capacity Pyramid



FAFS-USEK Journey

Agricultural Engineering Diploma

- Faculty established in 1988
- 3 undergraduate programs
- 4 graduate programs
- Agricultural Engineering program:
 - Curriculum transformation: 2006, 2012, 2015
 - 3 internships modules during year 1, year 2, year 3
 - 6 Field courses (1 field / semester in year 1, year 2 and year 3)
 - Increase the number of agriculture electives to 14 credits including management, entrepreneurship courses
 - Modeling and Design courses
 - **Achieved ABET accreditation in 2015: FIRST in the MENA region**
 - FYPs replaced traditional thesis
 - Project proposal → year 4
 - Project processing → year 5

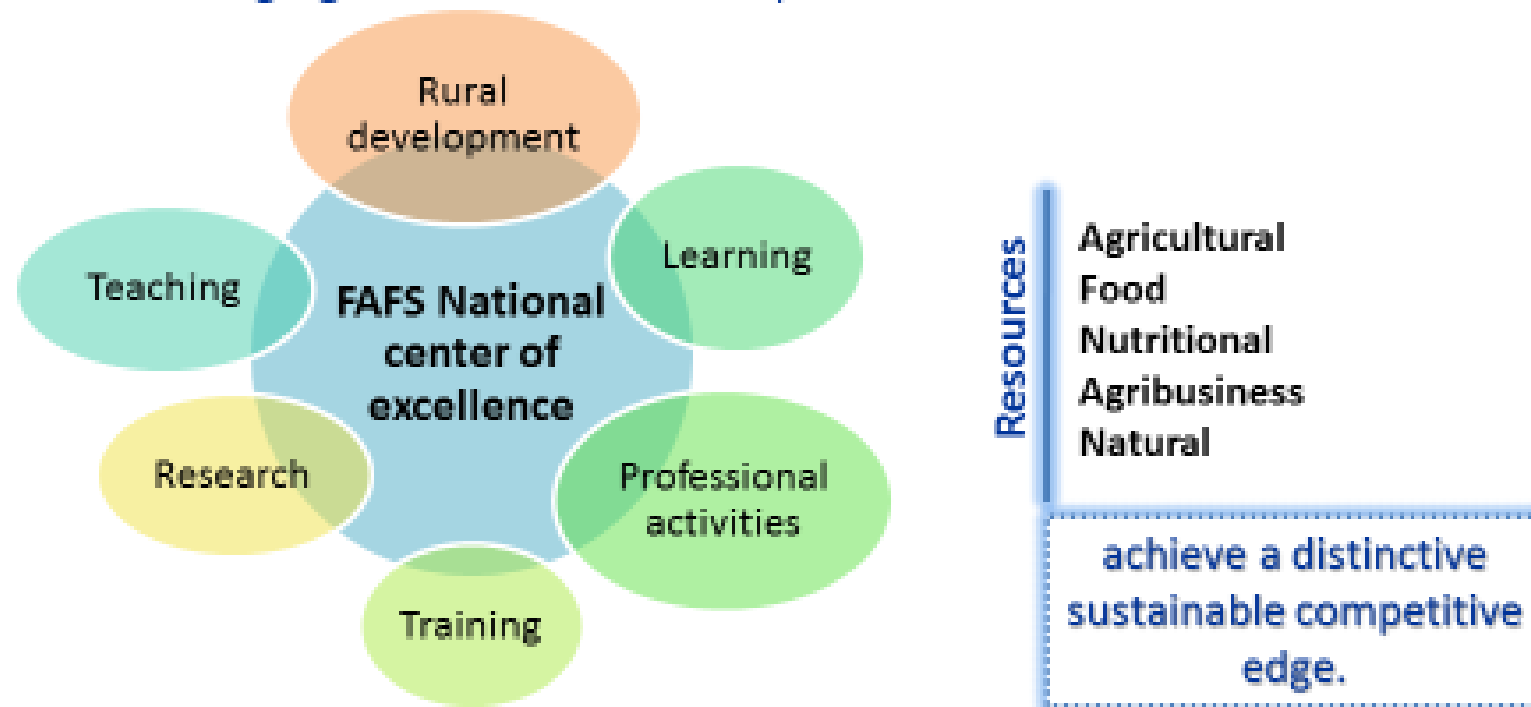


Mission statement



Vision statement

- ❖ The **FAFS** strives to be a pioneer in:
 - Stimulating rich academic programs
 - Providing significant educational experiences for its students



What was done at FAFS-USEK

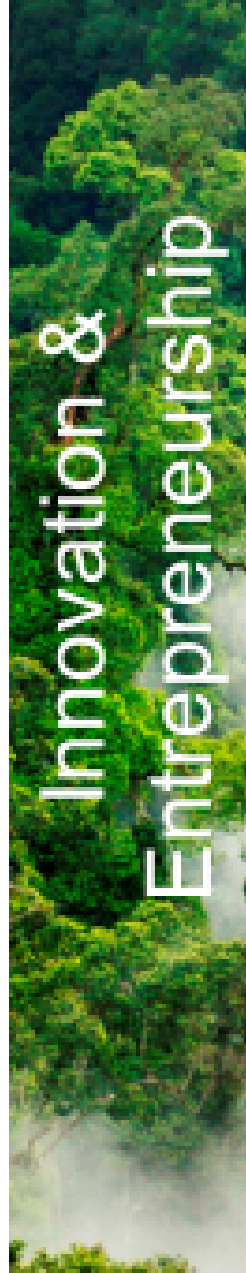
- **Experiential Learning:** provide FAFS students opportunities to practice agricultural production
- **Community Experience:** building strong, mutually beneficial relations with the rural communities and farmers
- **Entrepreneurial Programs:** students develop and run their own start-ups with a support from the University – ASHER Center for Innovation and Entrepreneurship



Barriers to Entrepreneurship

1. Much attention to the degree among students and weak attention to learning practical skills
2. Lack of fitness of educational content with the job market needs
3. Traditional teaching methods that incompatible with the interests of students
4. Less attention to learning practical skills
5. Lack of facilities, equipment and land for practical work
6. Less use of advanced educational technology
7. Lack of attention to methods based on creativity and problem solving
8. Poor evaluation of educational programs, or neglect their results
9. Students lack interest in agricultural courses





Asher Center for Innovation and Entrepreneurship ACIE

Mission

- To foster innovative and entrepreneurial mindset among USEK community through events, workshops, competitions and education
- To serve as a go-to center in transferring business ideas into successful startups through providing proof-of-concept, mentorship, acceleration, funding, and incubation
- To assist SMEs within USEK community through providing business development and consulting services and capital to scale and expand

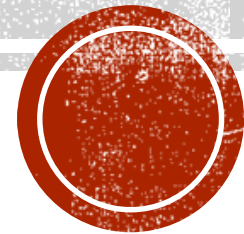
Vision

- To serve innovators, aspiring and existing entrepreneurs within USEK community in order to contribute to the growth of the Lebanese economy and creation of jobs.
- To aspire to support Startups and existing SMEs through a mix of targeted initiatives



SUCCESS STORIES

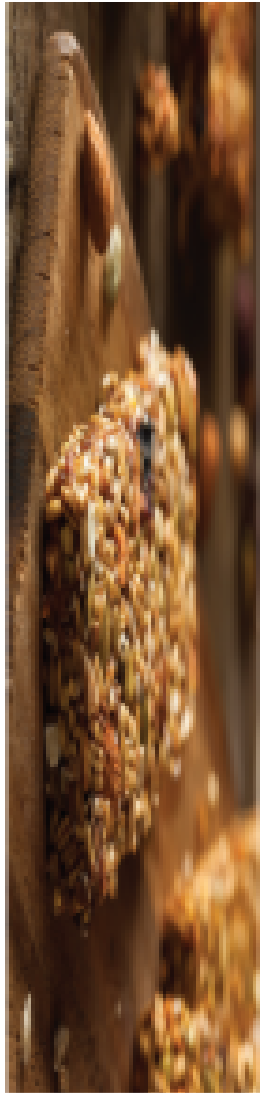
Start-ups



CASE STUDY

Freekeh bites





Freekeh bites

A successful example of FYP in Food engineering

Freekeh bites is a local brand of healthy snacks based on Freekeh superfood.

After noticing the popularity of the grain worldwide due to its incomparable benefits, we decided to take that local grain a step forward and transform it into a grab n' go snack that will make it more accessible and appealing to our lifestyle and generation.

The snacks are basically cereal bars with no additives, that comes in many toppings (Chocolate, honey, nuts, dried fruits...).

Our main goal is to promote our local products by adding an appealing twist.

Owners Name: Maria Al Achkar Nicole Achkar Tracy Sakr



Freekeh bites

The brand is now registered under: SuperFoodie Co. SAL

Prizes:

New venture Challenge for Innovation and entrepreneurship by Asher Center

SoUK.Ib Social Enterprises

Finalist in Future Agro challenge --- *Berytech*

iSME by Kafalat

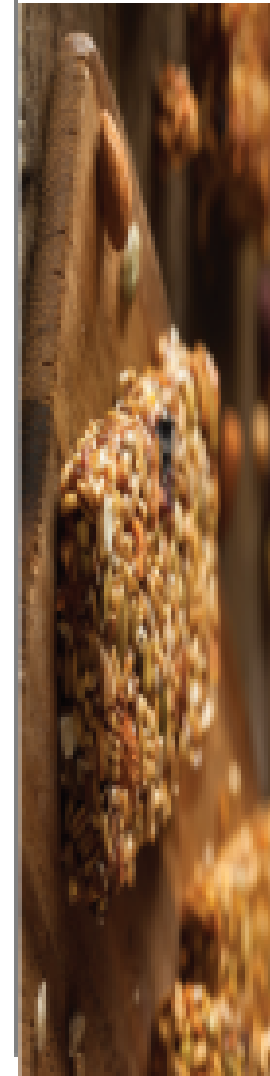
Current Status:

Accessing the market through main exhibitions (Salon du Chocolat, Farmers Market, Outdoor yoga and wellness events)

Reaching the global market through local initiatives like Koullouna Box

Available in different gym clubs and diet centers in Beirut area

Optimizing the capacity of production and machinery





Mushtic

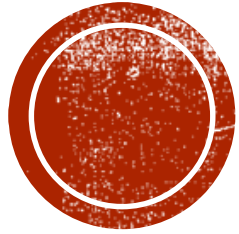
Mushtic is a natural binding process that grows layers of mycelium (mushroom roots) over any agricultural waste to create natural packaging material which replaces petroleum-based products as Styrofoam.



FYP startup: Charbel Sayah Rayanne Beayno Lama Antonios



Prizes that Mushtic won



- Agrytech Accelerator Program by Berytech - Lebanon
- First Prize - "Innovate Green Competition" of the UN Environment West Asia, Bahrain
- Top 6 Finalists - Hult Prize regional Summit - Oslo, Norway
- First Prize - Semi-Final Hult Prize Regional Summit - Lebanon
- First Place - Hult Prize On-Campus - Holy Spirit University of Kaslik (USEK-Kaslik) - Lebanon



Multifunnel traps

A successful example of FYP in insect trapping

- Traps are formed

Our main goal is to protect the pine forests in Lebanon by promoting the use of plastic recyclable material into efficient and less costly traps

Owners Name: Antoine Khalil, Elias Saad Rasha chehab

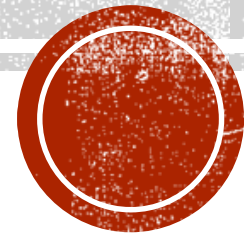


CONCLUSIONS

- Not just **projecting** what the world may become but deciding **what kind of world** we would like to see in the future
- **What innovations we need to get to desired scenarios?**
- **Curricula should be dynamic and changed according to the needs**
- **FYPs serve at projecting students perception of the reality**



**“DOING WHAT IS WRIGHT TODAY
MEANS
NO REGRET TOMORROW”**



President Fadlo Khoury