

Annex 1: Building Organic Agriculture in Armenia; Improving the knowledge and skills of organic stakeholders through participatory curriculum development and outreach | BOAA

The “Building Organic Agriculture in Armenia” (BOAA) project was established in 2017 between the International Centre for Agribusiness Research and Education in Yerevan, Armenia, the Armenian National Agrarian University (ANAU), and the University of Natural Resources and Life Sciences, Vienna (BOKU) funded by APPEAR program.

Although this paper specifically focuses on the participatory curriculum development process of the project, it was only one element of the entire project. The project had three main phases:

- Empirical data collection on current challenges and needs of organic practitioners;
- Curriculum development, with the help of the stakeholder steering committee and understanding the Armenian context, training the teaching staff;
- Implementation and management of the Organic Agriculture Master’s program, project dissemination.

One of the main task of the project was to adopt a participatory approach to the curriculum development in higher education, which has been rarely applied in Armenia or in the most post-soviet higher education institutions. Considering the high potential of development and the lack of professionals in the field of organic agriculture, the focus was this relatively new field in Armenia. The existing gap between organic practitioners and science was targeted through the education and training of young professionals ready to enter the workforce. The demand for trained and skilled Armenian organic practitioners in the labour market is highlighted. To fill this gap the transdisciplinary project BOAA was established to develop and implement an Armenian Organic Agriculture Master’s Program at ANAU with a place-based curriculum.

Please see: (<https://appear.at/en/projects/current-projects/project-websites/project149-boaa/>) for more information.

Annex 2: The course list of “Organic Agriculture” Master’s Program by semesters and credits

1st Semester	
English Language with an organic and food systems focus	5
Introduction to Organic Agriculture Systems	6
Organic Certification and Standards	6
Soil Fertility and Plant Nutrition in Organic Agriculture	6
Total Credits 1st Semester	23
2nd Semester	
Sustainable Management of Natural Resources and Food Security	6
Animal Production in Organic Agriculture	6
Ethics in Organic Food and Farming	6
Organic Crop and Plant Production	7
Total Credits 2 nd Semester	25
Summer Internship	12
3rd Semester	
Systems Thinking and Scenario Development in Organic	6
Processing and food quality along the Organic agro-food chain	6
Organic Plant Protection	5
Research Methods in Natural and Social Sciences	6
Total Credits 3 rd Semester	23
4th Semester	
The Organic Market and Farm Economy	6
Conversion in organic agriculture	6
Master’s Thesis Defense	25
Total Credits 4 th Semester	37
Total credits for 2 years	120

Annex 3: Focus group discussion with students

**Focus Group Discussion/Workshop with Armenian National Agrarian University students
25th of July, 2018**

Participants

Carefully recruited 10-12 students—sampling has been done by two lecturers based on the students interest in the program and active participation in the classes; project coordinator and the assistant; two lecturers—for observing.

Environment

Comfortable, circle seating, tape recorded

Content Part

The main purpose of organizing this FG discussion is

- 1) to share the curriculum with students and get feedback from them,
- 2) Reflect the participatory process.

Questionnaire

Questions specific to curriculum:

1. How do the courses fit together?
2. Together do they reach the goal of the program?
3. Are there some unclarities as to why the courses are in the program?
4. Are there some courses that seem really interesting? Why?
5. Is there a subject that is really missing?
6. What kind of learning methods you'd enjoy more?
7. Are there any methods or stakeholder integration that you see could fit well in one or more of these courses?

Questions specific to the participation process:

8. What role should students play in the curriculum development process?
9. What methods of working should we use to continue to involve you (students) more in the process?
10. How many times should the group meet?
11. Do they think that other students would be more apt to taking a Master's Program that was co-designed with students' participation?
12. What did they like about the process today? How could it be improved?

Ending questions:

13. All things considered question: "Of all the things we discussed, what to you is the most important?"
14. Summary question: After the brief oral summary the question asked is: "Is this an adequate summary?"
15. Final question: After reviewing the purpose of the study and then asks the participants: "Have we missed anything?"

Annex 4: Example of a course-stakeholder pairing, after speed dating activity

Course Title: *Introduction to Organic agriculture*

Which three stakeholders fit your course best? (answered by the lecturer of the subject)

1.	<i>"Green Lane"</i>
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1.1. Why?

The Green Lane organization is one of the pioneers of organic agriculture in Armenia, with preferable conditions and staff, which can motivate students. The organization also has some educational experience and geographically closer to Yerevan.

1.2. Please, describe how you will collaborate with the stakeholder. How the stakeholder will be involved in the class?

With the stakeholder, I suppose periodical contact, schedule of visits will be developed in advance and, if necessary, a working plan, as well. Planning of this work is possible with direct participation of stakeholder, taking into account:

- a) the duration of the learning cycle, as well as the possibility of the internship;
- b) Seasonal nature of agricultural work.

The Green Lane organization has an organic farming experience that will give an opportunity to students to get the idea of their peculiarities. Students will get acquainted with a number of organic farming practices, in particular the peculiarities of organic cultivation of various crops. If possible, they will be involved in some work.

1.3. How the stakeholder will benefit from this cooperation?

During the collaboration, the stakeholder will have the opportunity to get acquainted with future specialists in the field, to make suggestions, which will serve as a basis for further cooperation. By learning about stakeholder's working opportunities, students can be a stimulus to creating new contacts. Finally, students' even minor participation in the organization, especially in the case of manufacturing practices, can be a profitable workforce for the stakeholder.

2.	<i>Ecoglobe organization</i>
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1.1. Why?

Ecoglobe is in the roots of organic agriculture development in Armenia and there is a need to be in communication and cooperation with this organization constantly, which can be useful for both sides.

1.2. Please, describe how you will collaborate with the stakeholder. How the stakeholder will be involved in the class?

If possible, the stakeholder will be invited to meet with the students, present the organization's mission, as well as get acquainted with the organization's current activities.

1.3. How students will benefit from this cooperation?

Ecoglobe has enough information on organic agriculture where students can get answers to many of their questions. In the framework of this subject our cooperation with this organization will relate to the peculiarities of organic food certification.

1.4. How stakeholder will benefit from this cooperation?

I think for Ecoglobe it can also be useful to keep in touch with the professors and students of the field.

3.	Organic Association
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1.1. Why?

The Organic Association as a new organization implies a common platform for the diverse aspects of organic agriculture, it is a new concept in our reality to meet the diverse stakeholders of the same industry on one single platform.

1.2. Please, describe how you will collaborate with the stakeholder. How the stakeholder will be involved in the class?

The Association also incorporates the participation education, which we consider possible as part of this subject, participating in the meetings and events organized.

1.3. How students will benefit from this cooperation?

Given the high qualified staff of this organization and the development of the industry in all areas, students will be able to get acquainted with the implementation of System Thinking, the Holistic approach and the Sustainable Development. With this example, students will also find that such platforms are required for solving any major problem and overcoming challenges, where the implementation of System Thinking, the Holistic approach and Sustainable Development are useful.

1.4. How stakeholder will benefit from this cooperation?

The Association will also be able to provide the educational block in its work.

Annex 5: Workshop with Stakeholder Committee members, feedback and evaluation papers

Topic: "University and the Agricultural sector cooperation"
5th of September, 2018Participants

Stakeholder committee 10 members

The goal: to discuss the most effective ways of University and the agricultural sector cooperation and to get the participants ideas of best collaboration for the following three courses:

"Certification"

"Organic farm business planning"

"Organic plant processing"

Questionnaire

Before brainstorming

Has anyone experienced the collaboration with university and if yes, how did you collaborate?

Brainstorming

The main rule is: everything is allowed to be expressed and no critique or arguing over ideas. This has to be done later in the rational discussion phase.

Purpose: To quickly generate a whole host of possible ideas around a common theme, some of which may be useful.

Description: In Brainstorming I will ask for a totally free association of ideas with no censorship. This free association, however crazy, leads to a whole host of ideas. One or two co-facilitators write the ideas on cards, and pin them on boards as fast as possible.

"What is the best way of cooperation between the University and industry/farmer/experts of the field?"

Discussion of the results of the brainstorming

Feedback on the event

1. What didn't work well or how can we improve this process?	
2. What did you enjoy best about this process?	

Evaluation

	Evaluation				
	1 (very bad)	2 (bad)	3 (satisfactory)	4 (good)	5 (very good)
The meeting in general					
Timing					
Efficiency					
Facilitation					
Atmosphere					
Participation					
Place					
Coffee					
Anything else? please add					