

# Next FOOD

EDUCATING THE NEXT GENERATION  
OF PROFESSIONALS IN THE AGRIFOOD SYSTEM

## D6.9: Practice abstracts final

WP6



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## Executive summary

Deliverable 6.9 contains the last set of Practice Abstracts to feed into the website of the European Innovation Partnership Agricultural Productivity and Sustainability (EIP-AGRI) for broad dissemination to practitioners - farmers, farmers' groups, advisors, researchers and all other stakeholders of the agrifood and forestry systems in a concise and easily understandable way.

Practice Abstracts (PAs) follow a common dissemination format containing a short summary which describes the main information/recommendations/practice that can serve the end-users in their daily practice.

In total 106 Practice Abstracts have been collected and submitted during the duration of NextFood and feed into the EIP-AGRI website and part of deliverables D6.7, D6.8 and D6.9. All PAs have been numbered and will hereinafter be referred to as "PA".

All PAs contained in D6.9 were subject to a review process in which the reviewers (ISEKI-Food Association) were 1) holding individual online meetings with the authors to identify topic(s) and set a deadline; 2) authors write the abstracts; 3) reviewers review the abstracts and return to authors for verification; and 4) the practice abstracts are published on the [EIP-Agri website](#), on the [NextFood website](#); disseminated on NextFood's social media channels ([Facebook](#), [Instagram](#), [Twitter](#) and [LinkedIn](#)); and a selection is included both in the NextFood internal and external [newsletters](#); and also included in the [NextFood Toolbox](#). Furthermore, all PAs have been translated into Spanish and in some cases other languages of the partner countries and can be found on the [NextFood website](#).

A content-review analysis was carried out in NVIVO analysing all collected PAs to showcase the broad scope of coverage. This is presented in the introduction and covers the whole period of PA collection from May 2018 until April 2022.

# Introduction

Since the collection of PAs started after NextFOOD was initiated in May 2018 and until the project end in April 2022, a total of 106 PAs have been collected. These cover the most essential outcomes and experiences gained by the project partners through participation in the project.



The largest share of the PAs cover the **implementation of the NextFOOD Approach**. Some case leaders, in the early phase of the project, share the considerations they had before adopting the NextFOOD Approach: the barriers and drivers

identified considering the engagement of students, enabling stakeholder dialogue, designing solutions for farmers through engagement with them and other stakeholders, and the paradigm shift from linear to cyclical approach of learning (PA14, PA13). Some authors outline how it became necessary to adapt learning activities to the new reality caused by the pandemic (PA30, PA35, PA46, PA49, PA51). Several authors give practical examples of educational tools (such as serious games (PA42, the Oscar award (PA 43), web-cases (PA46), the interactive app (PA49), “Thee-before-asking-me” (PA54), and the educational journey (PA67)). Also examples of farm visits (PA69), lessons learned from designing an educational activity in line with the NextFOOD approach (PA 70, PA82), working with a diverse set of students from different cultural backgrounds (PA82), and the experience from the facilitation of action-learning through peer-learning (PA87) is covered. Additionally, some authors touch upon **pedagogical and didactical learnings** such as peer-learning (PA28), organising workshops (PA16), including gender as a teaching content (PA33), structuring learner reflection documents (PA34), and group work (PA41).

Action-learning and the cultivation of the **core competences** is covered in several PAs where case leaders outline how they trained/improved learners’ core competences:

- Dialogue: PA13, PA28, PA36, PA43, PA74
- Reflection : PA35, PA36, PA40, PA48, PA52, PA53, PA60, PA66
- Observation: PA36, PA40, PA43, PA45, PA53, PA66, PA75
- Visionary thinking: PA42, PA50, PA61, PA63, PA65
- Facilitation: PA43, PA52, PA62

Furthermore, recommendations for facilitating competence development (PA44) and students’ self-assessment of competences (PA65, PA66) provide evidence of teachers’ and students’ experiences alike. Furthermore, a few authors emphasise how communication, cooperation and a sense of interdisciplinary understanding and multidimensional thinking can improve learning (PA28, PA32), and integrating systems-thinking into the course (PA32). Additionally, a few authors focus on the

planning process, what to consider and who to engage at the planning workshop (PA7) as part of cyclical learning characterising the NextFOOD Approach.

Lessons learned from adopting a **multi-stakeholder approach** into the learning process cover experiences of forming diverse stakeholder groups (of farmers, students, academics, professionals) through development and cultivation of the core competences (PA10, PA13, PA76); engagement with local actors and creating linkages with local agrifood systems ensuring that locals become key informants and participants in the problem-solving and learning process (PA21); extended farm stays where students interact with farmers learning about practices, planning, etc. identifying challenges and testing solutions (PA22, PA69, PA8, PA102)); mutual benefits of didactic farm visits (PA23); farmers guiding students' learning and acting as facilitators (PA27, PA29, PA55, PA56); continuous learning between a multitude of stakeholders and understanding the needs of various stakeholders (PA44); including non-university actors in cyclical learning (PA71); and different methods of engagement (PA72) as well as learning from student experiences (PA85) and experiences as female farmers (PA103).

Some authors touch upon the importance of recognising the **role of teachers** in the implementation phase: teachers transforming to facilitators (PA12) providing recommendations for teachers applying action-learning (PA37, PA38, PA71, PA83, PA88, PA90).

Experiences from conducting **action-research** give evidence to research on the process and outcomes ensuring a synchronised and streamlined data collection (PA2); evidence from peer learning activities supporting partners on action-research and following the action-research protocol (PA89); evidence from students' self-assessment of competences, reflecting and using the reflection journal as an action-research tool (PA58).

The identified **future needed skills in sustainable food systems** indicate that a sustainable transition in the agrifood system is characterized by complexity and continuous change and that all involved actors need to have the skills to keep adapting to new challenges and possibilities, but also to push such development through skills in life-long learning, problem solving and innovation (PA25). This requires of educators that they ensure that the identified skills are catered for and that knowledge institutions support interdisciplinary collaborations and holistic systems perspectives (PA24, PA73). A skill gap analysis revealed that learning methodologies are mostly relying on traditional class lectures, while action and experiential learning tools are still lagging. To close the current gaps, a multi-stakeholder steady dialogue should be ensured and results should inform the design of educational programmes and research agendas to effectively respond to the sector's needs (PA39). Finally, the audit tool is outlined as a tool for reflection and assessment for educational actors (PA105) and the literature review of peer-reviewed articles addressing education for sustainable agrifood systems was performed (PA100)

**Strategies identified for improving the educational and training system in the Agriculture, Food and Forestry sector** outline implementation of policy instruments at pre-university level (PA78); at university level (PA79); at Life Long Learning (LLL) level ( PA77) and at Vocational Education and Training level (PA80).



**Evaluating impacts resulting from agrifood and forestry research:** the NextFOOD Sustainability Impact Framework designed to assess the effects of practice-oriented research in the agrifood and forestry sectors strengthening of links between research and education (P19, PA101 and PA106).



# 1 PA#62: Facilitation as core competency for Agroecologists

Nextfood Practice Abstract #62	Partner	Welthungerhilfe/University of Calcutta Mr. Anshuman Das, Dr. Ritam Bhattacharya, Prof. Parthib Basu
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Short title in English	Facilitation as core competency for Agroecologists
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>In NEXTFOOD, facilitators at the University of Calcutta – NextFood Case 9 Improving sustainability in farming and food systems by bringing in agroecological approach through action learning - focus on developing 'Agroecologists' rather than teaching agroecology. As facilitators, we want learners to come out as change makers who can analyse, develop and support agroecological models in farm, farm-clusters, villages and in a wide range of related situations. As the learners need to deal with multi-actor partnerships, facilitation plays a major role in their future.</p> <p>Facilitation by students in the course curriculum has been planned very carefully where it is engraved in many sessions as a subsidiary outcome. Various tools like group work, interaction with the stakeholders, surveys, debates, presentations etc were used to bring in the action-reflection based learning situations throughout the course. All these have helped the students to address various components of facilitation skills like active listening, asking questions, timekeeping, establishing a psychologically safe environment for sharing, creating focus amongst the group, unbiased objectivity and guiding the group decision process. However, communication has been given special importance where special sessions were organised for audio-visual communication and storytelling.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 2 PA#63: Visioning as core competency in Agroecological learning

Nextfood Practice Abstract #63	Partner	Welthungerhilfe/University of Calcutta Mr. Anshuman Das, Dr. Ritam Bhattacharya, Prof. Parthib Basu
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Short title in English	Visioning as core competency in Agroecological learning
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Visioning is a technique and a competency which helps us learn from the future. It is a process where the learner/stakeholders are assisted to appraise where they are now and where they can realistically expect to be in the future. This helps in setting up goals, identify current gaps and plan action points accordingly. It is an immensely helpful exercise which allows you to set a target and align the roadmap.</p> <p>To introduce the idea of visioning to the learner, facilitators at the University of Calcutta, India, from NexttFood Case 9 - Improving sustainability in farming and food systems by bringing in agroecological approach through action learning, conducted the following steps.</p> <ul style="list-style-type: none"> <li>- In small groups, ask the students to discuss from all perspectives what kind of community they want to live in.</li> <li>- Coming back to plenary, each group makes one declarative one-sentence statement in present tense about how that desired community will be in the future. Repeat the process until all ideas are exhausted. Note all these down – that is the shared vision of the future community.</li> <li>- Ask everyone to highlight some of the major differences between now and the future they have created. Figure out what are the actions we should initiate now to reach that desired community.</li> </ul> <p>The similar exercise was done with the participating farmer, where the learner helped the farmer to draw a diagram of a dream farm and track back what should s/he do now to achieve that dream.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

### 3 PA#64: Practical view on a phenomenon-based, action-learning course for policy makers

Nextfood Practice Abstract #64	Partner Norwegian University of Life Sciences, NMBU, Norway, Lutgart Lenaerts
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Short title in English	Practical view on a phenomenon-based, action-learning course for policy makers
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Today's sustainability challenges in agrifood and forestry systems require that education shifts its overall focus from theoretical knowledge alone to the competences needed for sustainable development. Therefore, we have developed the Nextfood approach for education in agrifood and forestry systems that promotes phenomenon-based, action-oriented learning.</p> <p><b>But what does it mean to run a phenomenon-based, action-learning course?</b> It means building <i>phronesis</i> into a course, a form of practical knowledge that is normative and directed towards action. Developing <i>phronesis</i> can help students to close the gap between knowledge and action, and to enable responsible action in the wider sustainability context.</p> <p><b>What does this mean in practice when (re)designing a course?</b> In practice, one should take experiences and actions in the world as the point of departure for the learning process in a course and facilitate learning through reflection on those experiences and actions.</p> <p>Doing <i>and</i> reflecting should be the essence of learning (Dewey, 1916). Thus, one needs to create an environment for students to act and experience, and then facilitate reflective activity as a follow-up (van Manen, 1990). More specifically, students must observe and participate in practices in agrifood and forestry systems and through reflection on their experiences generate knowledge about these systems.</p> <p>An overarching consequence for education is that an action orientation should not be an add-on issue, but rather be viewed at the core of the educational activities.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 4 PA#65: How to train the competence of visioning in UoK using the Nextfood approach

Nextfood Practice Abstract #65	Partner	University of Kerala, UoK, India, Dr. Manju S. Nair, Dr. Anupama Augustine
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Short title in English	How to train the competence of visioning in UoK using the Nextfood approach
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The University of Kerala hosts the one-month Certificate Course in Agroecology and Action Research which employs the Nextfood approach to enhance student competences. Students' assessment of their competences at the end of the course shows significant enhancement in the competence of visioning. Based on the experience of facilitators, major educational activities recommended to train students in visioning include,</p> <ol style="list-style-type: none"> <li>Audio/video/power point presentation on the competence of visioning</li> <li>Sharing vision of facilitators/ mentors with students</li> <li>Visioning sessions in classroom: During these sessions students are given time to meditate, calm down and then vision their <ol style="list-style-type: none"> <li>Personal life in 10 years</li> <li>Professional life in 10 years</li> </ol> </li> <li>Theme-based (guided) visioning sessions: Students are asked to vision around the following themes and a prepare rich picture of the same <ol style="list-style-type: none"> <li>Future of food production</li> <li>Being an agroecologist</li> <li>Features of an organic farm they intend to develop after five years</li> </ol> </li> <li>Students are asked to share their vision and present in plenary</li> <li>Joint visioning with farmers: Students along with farmers vision the future of their farm, the changes to be made to make it more sustainable. A vision document is prepared and shared with farmers</li> <li>Students are encouraged to write their experiences of practicing visioning in a daily log and reflective document.</li> </ol>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 5 PA#66: How to train the competence of observation in UoK using the Nextfood approach

Nextfood Practice Abstract #66	Partner	University of Kerala, UoK, India, Dr. Manju S. Nair, Dr. Anupama Augustine
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Short title in English	How to train the competence of observation in UoK using the Nextfood approach
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The University of Kerala hosts a one-month Certificate Course in Agroecology and Action Research in which the Nextfood approach is employed to enhance students' competences. The course aims to train students to become agroecologists, for which the action learning pedagogy is employed. Self-assessment of competences by students at the end of the course shows significant enhancement in the competence of observation. Based on teachers' experiences major educational activities recommended to train the competence of observation include,</p> <ul style="list-style-type: none"> <li>i) <b>Observation sessions (Transect walk):</b> During the first day of the course students are sent for a transect walk and they are allowed to observe 'the real world out there'.</li> <li>ii) <b>IGP (Individual Group Plenary) model discussions:</b> After the observation activity, facilitators make students explore features of good observation and how it is related to reflection and to present it in groups and plenary.</li> <li>iii) <b>Photo novella:</b> Reflective photography based on a given theme improves observation skill of students</li> <li>iv) <b>Practicing reflection sessions</b> can enhance students' ability to observe, since observation and reflection reinforce each other. A good observation leads to unbiased reflection and improving the reflection competence increases the quality of observation.</li> <li>v) <b>Observation sessions at field and rich picturing:</b> Students are instructed to observe the field and make a rich picture of the current situation of the farm.</li> <li>vi) <b>Writing case report:</b> Students write a case report of the chosen farm, based on observation.</li> </ul>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 6 PA#67: A story to live not to tell

Nextfood Practice Abstract #67	Partner Heliopolis University, Adel Khaled, Alaa Elhawwary, Reham Fathey Ali, Karim El Mallawany
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Short title in English	A story to live not to tell
Short title in native language	قصة لعيشها لا لنرويها
Short summary for practitioners (English) on the final or expected outcomes	<p>In three connected cycles, SEKEM trains the core competences of visionary thinking, observation, participation, dialogue, and reflection as part of the NextFood Approach. Out of 68 applicants 20 successful participants complete the course and the educational journey starts from filtration of promising business ideas to be achievable and realistic.</p> <p>In cycle 1, participants were trained on agricultural modules in connection with their business ideas at the SEKEM farm in Belbis, Sharkia, Egypt. The training included introduction to organic agriculture, bio-fertilizers, compost production, Integrated Pest Management, introduction to horticulture, and livestock husbandry. Furthermore, participants were trained on marketing strategies, feasibility studies, and the business model canvas.</p> <p>In cycle 2, held at Heliopolis University, the selected participants from cycle 1 and convenient outside application that count for 20 participants with 15 start-up business projects out of 98 applications. The rhythm was more advanced to enhance participants' background in sales skills, business plans, leadership skills, and project management. After this condensed content, participants pitched their projects qualifying them to join the 3rd cycle in which an incubation period of three months will be designed to facilitate five start-ups projects to enter the local market. SEKEM foundation and Entrepreneurship Center for Social Impact will provide the start-up projects with technical support and market knowledge to foster their movement onto the large market in addition to regular follow-ups and consultation sessions with the other promising ideas.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>حول تقديم الكفاءات الرئيسية لمشروع SEKAM في ثلاث دورات متصلة، تم الاهتمام بحالة NextFood</p> <p>الرؤية، الملاحظة، المشاركة، الحوار، والتفكير. تبدأ الرحلة من تصفية أفكار الأعمال الواعدة لتكون أفكارًا واقعية وقابلة للتحقيق. ٢٠ مشاركًا ناجحًا من أصل ٦٨ المتقدمون يصلون إلى المستوى الناجح.</p> <p>خلال الدورة الأولى، تم تدريب المشاركين على وحدات زراعية ملائمة لأفكارهم والتي في بلبيس، الشرقية، مصر. تضمنت الدورة التدريبية الأولى SEKAM عقدت في مزرعة مقدمة عن الزراعة العضوية، والأسمدة الحيوية، وإنتاج السماد، والإدارة المتكاملة للآفات ومقدمة عن البستنة، وتربية الماشية. تم تقديم هذه المعرفة الفنية إلى جانب الأعمال التجارية، مثل استراتيجيات التسويق ودراسة الجدوى وقماش نموذج الأعمال.</p> <p>في الدورة الثانية التي عقدت في جامعة هليوبوليس، تم اختيار المشاركين من الدورة الأولى والتطبيق الخارجي المريح الذي يضم ٢٠ مشاركًا مع تقديم ١٥ مشروعًا تجاريًا مبتدئًا من أصل ٩٨ متقدم. كان الإيقاع أكثر سرعة و تقدمًا لتعزيز خلفية المشاركين في مهارات المبيعات وخطط العمل ومهارات القيادة وإدارة المشاريع. بعد هذا المحتوى المكثف، تم عقد</p>

	<p>يوم عرض تقديمي ، لعرض المشاريع التي تؤهلهم للانضمام إلى الدورة الثالثة التي سيتم فيها تصميم فترة حضانة مدتها ثلاثة أشهر لتسهيل خمسة مشاريع ناشئة لدخول السوق المحلي ومركز ريادة الأعمال للتأثير الاجتماعي الأفكار الناشئة بالدعم SEKAM ستزود مؤسسة الفني ومعرفة السوق التي تعزز حركتها في السوق الكبيرة .بالإضافة إلى المتابعة الدورية وجلسات التشاور مع الأفكار الواعدة الأخرى.</p>
Link	



## 7 PA#68: Back to nature with the organic mindset

Nextfood Practice Abstract #68	Partner	Heliopolis University, Adel Khaled, Alaa Elhawwary, Reham Fathey Ali, Karim El Mallawany
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Short title in English	Back to nature with the organic mindset
Short title in native language	العودة إلى الطبيعة بالعقلية العضوية.
Short summary for practitioners (English) on the final or expected outcomes	<p>At the Sekem farm in Belbis, Sharkia, Egypt, organic agriculture undergraduate students participate in the Biodynamic Training which is based on action-learning as part of the NEXTFOOD project. . The training is lasting for two weeks where students get connected with nature such as soil, compost, plant and animal, which provide marvellous, energetic, dynamic teaching methods. The training achieves cooperation between students, gender equality, and complex problem-solving. The training is carried out by Swiss experts and staff members of the Faculty of Organic Agriculture, Heliopolis University. The 1<sup>st</sup> Biodynamic Training programme took place from 28 November to 10 December 2020. The students from the 1<sup>st</sup> and 2<sup>nd</sup> grades were trained on soil fertility, principles of soil structure, compost preparation, farm as one unit, observation for the plantation, principles of livestock husbandry, their morphology and anatomy of the ruminant, in addition to the biological cycles of Nitrogen, phosphorus, and carbon in environment.</p> <p>The 2<sup>nd</sup> Biodynamic Training programme took place from 3 to 11 April 2021, during the pandemic with all its precautions. 1<sup>st</sup> grade students were trained on social entrepreneurship, cooperating business, associative economics, team development, price formation, and market economy. The 2<sup>nd</sup> grade students were trained on plant anatomy, plant evolution, living organism, creating farm individuality, and landscape organization. This programme was a great opportunity to ensure diversification of cultures and mindsets, improve students' vision about field life and get in touch with the dynamic ecological system.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>من الكفاءات NEXTFOOD في التعلم القائم على العمل لتحقيق هدف نهج الخمسة الرئيسية ، يعد التدريب الحيوي أحد التحضير الشامل لطلاب البكالوريوس في الزراعة العضوية في مزرعة سيكم في بلبيس ، الشرقية ، مصر. يستمر هذا التدريب لمدة أسبوعين حيث يتواصل الطلاب مع الطبيعة مثل التربة والسماد والنبات والحيوان ، والتي توفر طرق تدريس رائعة وحيوية وديناميكية. يحقق التدريب التعاون بين الطلاب والمساواة بين الجنسين وحل المشكلات المعقدة. قام بالتدريب خبراء سويسريون وأعضاء هيئة تدريس بكلية الزراعة العضوية بجامعة هليوبوليس. في العام الماضي ، تم تنفيذ تدريب حيوي الأول حيث بدأت من ٢٨ نوفمبر ٢٠٢٠ حتى ١٠ ديسمبر ٢٠٢٠. تم تدريب الطلاب من الصفين الأول والثاني على خصوبة التربة ، ومبادئ بنية التربة ، وإعداد السماد ، والمزرعة كوحدة واحدة ، ومراقبة المزرعة ،</p>

	<p>ومبادئ تربية الماشية ، ومورفولوجي حيوانات المزرعة وتشريح المجترات. بالإضافة إلى الدورات البيولوجية للنيتروجين والفوسفور والكربون في البيئة.</p> <p>البرنامج الحيوي الثاني تم تنفيذه في الفترة من ٣ إلى ١١ أبريل ٢٠٢١ ، حيث كانت وقت جائحة كورونا مع أخذ جميع الاحتياطات. تلقى طلاب الصف الأول تدريباً جيداً على ريادة الأعمال الاجتماعية ، والأعمال التجارية التعاونية ، والاقتصاد النقابي ، وتطوير الفريق ، وتشكيل الأسعار ، واقتصاد السوق. وتم تدريب طلاب الصف الثاني على تشريح النبات ، وتطور النبات ، والكائنات الحية ، وخلق شخصية المزرعة ، وتنظيم المناظر الطبيعية.</p> <p>كان هذا البرنامج فرصة رائعة لضمان تنوع الثقافات والعقليات ، وتحسين رؤية الطلاب حول الحياة الميدانية ، والتواصل مع النظام البيئي الديناميكي</p>
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## 8 PA#69: Build your own farm

Nextfood Practice Abstract #69	Partner Heliopolis University, Salma Nour El-Deen, Alaa Elhawwary, Reham Fathey Ali, Karim El Mallawany
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Short title in English	Build your own farm
Short title in native language	قم ببناء مزرعتك الخاصة
Short summary for practitioners (English) on the final or expected outcomes	<p>"Soil as natural capital of farming" is the main concept of the Biodynamic Training course for 61 fresh undergraduate students of Organic Agriculture, Heliopolis University during two weeks that took place from 17 to 28 October 2021 at the Sekem farm, Belbis, Sharkia, Egypt.</p> <p>The training focuses on understanding the principles of Organic Agriculture, concepts of Biodynamic and compost production. The students were introduced to multiple important topics such as soil profiles, soil structures, soil fertility and the effects of physical, chemical and biological factors on soil formation. The training included as well multiple visits i.e. to Quarry, El Adlya Farm, El-Mizan, Greenhouses of herbal and medicinal plants, domestic livestock farm, and Sekem factories such as ISIS, Naturetex, Lotus and were introduced to many agricultural products and inspecting their production process. The numerous experiences for students were effective for designing their own mini farms and observe the seed germination and growth of the seedlings through the two weeks of training.</p> <p>The training enhanced the students' participation, presentation skills and performance through different and effective activities to recognize many concepts of soil and organic agriculture principles. The students came close to nature and farm life achieving the goal of the NEXTFOOD approach training the five core competences.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>"التربة كرأس مال طبيعي للزراعة" هو المفهوم الرئيسي للدورة التدريبية الحيوية لعدد ٦١ طالبًا جامعيًا حديثًا في الزراعة العضوية بجامعة هليوبوليس خلال أسبوعين بدءًا من ١٧ إلى ٢٨ أكتوبر ٢٠٢١ في مزرعة سيكم ، بلبيس ، الشرقية ، مصر.</p> <p>يركز التدريب على فهم مبادئ الزراعة العضوية ومفاهيم الديناميكا الحيوية وإنتاج السماد. تم تعريف الطلاب على العديد من الموضوعات الهامة مثل ملامح التربة وخصوبة التربة وتأثير العوامل الفيزيائية والكيميائية والبيولوجية على تكوين التربة. وشمل التدريب كذلك زيارات متعددة مثل المحجر ، مزرعة العدلية ، الميزان ، ISIS ، صوبات نباتات عشبية وطبية ، مزرعة مواشي ، ومصانع سيكم مثل ، لوتس ، والتعريف بالعديد من المنتجات الزراعية وتفقد عملية Naturetex إنتاجها. لقد كانت تجربة رائعة للطلاب لتصميم مزارعهم الصغيرة ومراقبة إنبات البذور ونمو الشتلات خلال أسبوعين من التدريب.</p> <p>عزز التدريب مشاركة الطلاب ومهارات العرض والأداء من خلال أنشطة مختلفة وفعالة للتعرف على العديد من مفاهيم التربة والزراعة العضوية. أصبح الطلاب من NEXTFOOD قرييين من الطبيعة وحياة المزرعة ويحققون هدف نهج الكفاءات الأساسية الخمسة الرئيسية.</p>
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## 9 PA#70: How to organize an action-learning course for Master's students of different disciplines

Nextfood Practice Abstract #70	Partner University of Kerala, UoK, India, Dr. Manju S. Nair, Dr. Anupama Augustine
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Short title in English	How to organize an action-learning course for Master's students of different disciplines
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The Centre for Agroecology and Public health at the University of Kerala (UoK) runs a Certificate course on Agroecology: Action Research and Education for post graduate students from multi-disciplinary backgrounds. Major objective of the program is to familiarise students with action learning techniques and thereby enhance their skills and competences. Based on the experience of organising the course, the following recommendations were made:</p> <ul style="list-style-type: none"> <li>i) Make students write an <b>'expression of interest'</b> while applying for the course, so that attitude and expectations of the students can be considered while making admission decisions.</li> <li>ii) Make students answer the <b>'initial questions'</b> in the Nextfood model so that their current knowledge, skill set and background can be assessed while deciding the educational activities.</li> <li>iii) <b>Group division:</b> Divide students into groups in such a way that students from different disciplines make a group.</li> <li>iv) Introduce educational activities that are helpful for students to <b>realise peculiarities of their team members</b>, at the beginning of the course.</li> <li>v) Plan educational activities that make students appreciate <b>multi-dimensional thinking</b>.</li> <li>vi) <b>Keep a flexible curriculum</b> where students can suggest topics for lectures/ discussion or other educational activities</li> <li>vii) Arrange <b>peer learning sessions</b> where students from a particular academic background can share their experience to those who are alien to the subject.</li> <li>viii) <b>Adjust the timeline of educational activities</b> accordingly for individual students, since previous educational background may affect student performance.</li> <li>ix) <b>Convince University authorities</b> about the advantages of multi-disciplinary courses and ensure needed permissions.</li> </ul>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 10 PA#71: Use non-university actors as teachers in an action-learning Master course

Nextfood Practice Abstract #71	Partner	University of Kerala, UoK, India, Dr. Manju S. Nair, Dr. Anupama Augustine
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Short title in English	Use non-university actors as teachers in an action-learning Master course
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Certificate course on Agroecology: Action research and education make use of non-university actors as teachers (facilitators). Farmers, Local self-government leaders, Agriculture officers, social activists facilitate action learning during the course. Based on the experience of working with non-university actors and the feedback received from them, following are the recommendations:</p> <ol style="list-style-type: none"> <li>1. <b>Orienting non-university actors:</b> Giving orientation to non-university actors prior to the course is essential to make them understand their roles and responsibilities.</li> <li>2. Including non-university actors in the <b>planning workshop:</b> Inputs from these actors can help in refining curriculum to include 'real life contexts'.</li> <li>3. Make students aware of the <b>contributions/work/achievements</b> of non-university actors before assigning joint sessions with non-university actors.</li> <li>4. Highlight <b>mutually beneficial outcomes</b> of association, and clearly state nature of expected benefits enjoyed by the actors.</li> <li>5. Include <b>regional language as medium of instruction</b>, if the non-university actors are not familiar with English (medium of instruction at university) and translating relevant documents to regional language will be helpful.</li> <li>6. Develop <b>long term relationship with non-university actors</b> by entering into joint activities other than course, by which competence and attitude of the actors can be improved.</li> <li>7. <b>Honour/acknowledge contributions</b> of non-university actors.</li> </ol>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

# 11 PA#72: What it requires to interact with farmers and other non-university teachers in a field-based course

Nextfood Practice Abstract #72	Partner	University of Kerala, UoK, India, Dr. Manju S. Nair, Dr. Anupama Augustine
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Short title in English	What it requires to interact with farmers and other non-university teachers in a field-based course
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The Certificate course on Agroecology: Action Research and Education at Kerala University, India, provides opportunities for students to interact with farmers and other non-university actors. This includes interactive sessions, lecture sessions, competence training sessions and facilitating field work. A meaningful interaction with non-university actors necessitates preparation from the part of students. Major recommendations based on student experience are:</p> <ul style="list-style-type: none"> <li>i) <b>Stimulating an attitudinal change</b> in students, so that they are able to appreciate participatory learning techniques and co-creation of knowledge, by which conventional teacher-student roles are redefined.</li> <li>ii) Improved understanding of students regarding the <b>background of non-university actors</b> and significance of their contributions can enhance quality of interactions</li> <li>iii) <b>Ice-breaking session</b> to familiarise students with non-university actors at the beginning of the course.</li> <li>iv) <b>Improvement in non-sector specific</b> skills such as personal management skills, team working and interpersonal skills, and fundamental skills is essential to interact with non-university actors.</li> <li>v) <b>Practicing competences</b> such as observation, reflection, dialoguing and visioning can improve quality of sessions with non-university actors.</li> <li>vi) <b>Developing a clear vision of learning outcomes and preparations before sessions with</b> non-university actors in activities such as, <ul style="list-style-type: none"> <li>a) Participation at field and sharing the findings with non-university actors.</li> <li>b) Preparation of interview schedule</li> <li>c) Joint visioning sessions with non-university actors.</li> <li>d) Preparation of client document.</li> </ul> </li> </ul>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 12 PA#73: Development of inventory of skills and roadmap for the transition to more resilient agrifood and forestry systems

Nextfood Practice Abstract #73	Partner	RUC, Niels Heine Kristensen, Stine Rosenlund Hansen
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Short title in English	<b>Development of inventory of skills and roadmap for the transition to more resilient agrifood and forestry systems</b>
Short title in native language	Udvikling af systematiseret oversigt og køreplan for omstilling til et mere resilient landbrugs- og fødevarer system
Short summary for practitioners (English) on the final or expected outcomes	<p>A thorough assessment has been carried out through interviews, mapping and reviews of current science, education and training systems.</p> <p>The assessment generally pointed out that a sustainable transition in the agrifood system is characterized by complexity and continuous change. Therefore, all involved actors need to have the skills to keep adapting to new challenges and possibilities, but also to push such development through skills in life-long learning, problem-solving and innovation.</p> <p>It is also highlighted that the complexity requires that solutions are developed across current divisions, such as those between the scientific and practical, and divisions by sector, institution, culture, geography or generation leading to a need for skills on working collaboratively and on understanding the agrifood system as a larger whole.</p> <p>Thus, in order to support a sustainable transition, educators should ensure that the identified skills are catered for in relevant educational offers. This includes a more holistic and synchronized re-design of knowledge institutions to support interdisciplinary collaborations and holistic systems perspectives. Furthermore, practitioners within the area of agriculture or the associated bio-value chains, should maintain an open mind-set amongst themselves and their employees/colleagues, and seek lifelong learning.</p> <p>To support this the NextFood project has developed the NextFood Audit Tool, which is designed to generate awareness and reflection among educational actors.</p> <p>Furthermore a roadmap has been developed that may serve as a guide for sustainable agricultural and forestry education and training activities for educational programmes within the European Union and elsewhere.</p>



**Short summary for practitioners in native language on the final or expected outcomes**

Der er foretaget en grundig vurdering gennem interviews, kortlægning og analyse af nuværende forsknings- og uddannelsessystemer.

Undersøgelsen peger generelt på, at en bæredygtig omstilling i landbrugssystemet er præget af kompleksitet og kontinuerlige ændringer. Derfor skal alle involverede aktører have færdighederne til at blive ved med at tilpasse sig nye udfordringer og muligheder, også gennem livslang læring, problemløsning og innovation.

Det fremhæves også, at kompleksiteten kræver, at der udvikles løsninger på tværs af nuværende opdelinger, f.eks. mellem det videnskabelige og praktiske, mellem opdelinger efter sektor, institution, kultur, geografi eller generation. Der er behov for færdigheder i at samarbejde og til at forstå landbrugs- og fødevarer systemet som en større helhed.

For at understøtte en bæredygtig omstilling bør undervisningsinstitutioner sikre, at de identificerede færdigheder findes i relevante uddannelses tilbud. Denne undervisning bør omfatte et mere holistisk og synkroniseret re-design af vidensinstitutionerne for at understøtte tværfaglige samarbejder og systemperspektiver. Desuden bør praktiserende undervisere inden for landbrug og de tilhørende værdikæder opretholde et åbent sind mellem sig selv og deres medarbejdere/kolleger blandt andet gennem målrettet efteruddannelse (livslang læring). For at understøtte dette har NextFood-projektet udviklet NextFood Audit Tool, som er designet til at skabe refleksion blandt uddannelsesaktører.

Desuden er der udviklet en roadmap/køreplan, der kan tjene som vejledning for bæredygtige landbrugs- og skovbrugsuddannelser og uddannelsesaktiviteter for uddannelsesprogrammer i EU og andre steder.

**Link**

## 13 PA#74: Development of sustainable farming systems I+II – dialogue

Nextfood Practice Abstract #74	Partner University of South Bohemia in České Budějovice, Jan Moudrý
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<b>Short title in English</b>	<b>Development of sustainable farming systems I+II – dialogue</b>
<b>Short title in native language</b>	Projektování udržitelných systémů hospodaření I+II – dialog
<b>Short summary for practitioners (English) on the final or expected outcomes</b>	<p>Communication skills, including dialogue, were assessed as one of the areas with the biggest need for development at the University of South Bohemia (CZ). As part of the teaching and learning activities, in which teachers often give monologue lectures and students participate passively, we focused on improving communication with all involved actors. For educators, farmers and practitioners, this meant giving more space to students, change in the way they express themselves (less dominant attitude, listening, presenting topics without expressing their own attitude), moderating the discussion and moving it carefully to relevant topics. Students were motivated to intensify communication through the introduction and presentation of their own topics, expressing their opinions, and creating discussion blocks where of student groups seeking and presenting arguments from different perspectives. Communication with external experts, moderated by the teacher, played an important role, during which the students presented and defended their procedures applied in student projects and developed and improved them in cooperation with farmers and practitioners. Compared to the beginning of the course, there has been a significant shift in students' communication skills and their active involvement has significantly improved which was also perceived by the students themselves and seen in their competence self-assessment.. and It is necessary to constantly motivate students to communicate, in a non-aggressive and unobtrusive manner and to overcome the initial stage, when students do not react for a relatively long time (do not enter into dialogue or present their own opinions) and gradually motivate, even the more passive ones, to dialogue.</p>
<b>Short summary for practitioners in native language on the final or expected outcomes</b>	<p>Komunikační schopnosti, včetně dialogu, byly v rámci vzdělávacích aktivit vyhodnoceny jako jedna z oblastí s největší potřebou rozvoje i na Jihočeské univerzitě v Českých Budějovicích . V rámci výuky a vzdělávacích aktivit, které jsou často vedeny formou monologu pedagoga a pasivní účasti posluchačů, jsme se zaměřili na zlepšování komunikace všemi zapojenými aktéry. Pro pedagogy, zemědělce a experty z praxe to znamenalo poskytnutí více prostoru studentům, změny ve způsobu vyjadřování (méně dominantní postoj, naslouchání, předkládání témat bez vyjádření vlastního postoje hned v počátku), moderování diskuse a její nenásilné posouvání k relevantním tématům. Studenti byli motivováni k intenzivnější komunikaci kladením důrazu na přinášení a představování</p>

	<p>vlastních témat, vyjadřování názoru k dílčím otázkám, vytvářením diskusních bloků, během kterých byli rozděleni na skupiny vyhledávající a předkládající argumenty z různých úhlů pohledu. Významnou roli hrála komunikace s externími experty, moderovaná pedagogem, během které student předkládali a obhajovali své postupy uplatněné v rámci studentských projektů a rozvíjeli a vylepšovali je ve spolupráci se zemědělci a experty z praxe.</p> <p>Ve srovnání se začátkem kurzu došlo k výraznému posunu v komunikačních schopnostech student a výrazně se zlepšilo jejich aktivní zapojení. Tento posun zaznamenali studenti v rámci sebehodnocení jako nejvýraznější. Nezbytná je soustavná motivace studentů ke komunikaci, probíhající neagresivně a nenápadně. Je potřeba překonat počáteční stadium, kdy studenti poměrně dlouhou dobu nereagují (nevstupují do dialogu, neprezentují vlastní názory) a postupně motivovat k dialogu i ty pasivnější.</p>
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## 14 PA#75: Development of sustainable farming systems I+II – observation

Nextfood Practice Abstract #75	Partner University of South Bohemia in České Budějovice, Jan Moudrý
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Short title in English	Development of sustainable farming systems I+II – observation
Short title in native language	Projektování udržitelných systémů hospodaření I+II – pozorování
Short summary for practitioners (English) on the final or expected outcomes	Essentially observation as a competence is the independent examination and mapping of the situation in the surrounding world. Within the course at the University of South Bohemia (CZ), observation was carried out on two levels - directly in the field and on the basis of digital maps and other visual materials. In the first part of students' projects, as part of observation, students firstly evaluate the selected area on the basis of maps and photographs (use of Land Parcel Identification System (LPIS)) and then the observation takes place directly in the field. Students identify potentially risky places with the help of LPIS and search for and monitor them directly in the field. In the next part of the project, students propose measures to improve environmental stability and consult with farmers and other external experts. During the course, students' insight into practice improved in terms of orientation in map materials, which can identify environmental problems in the agricultural landscape, and especially in terms of thinking in designing measures that should fulfill environmental and agricultural functions. It is appropriate to spread the independent work of students over a longer period of time to make it possible to evaluate the development of students' abilities in the long term and especially to incorporate gradually their practical skills consecutively. If climatic conditions or other factors (annual weather conditions, vegetation) require it, it is possible to reverse the observation procedure and first make observations in the field and then in a digital environment. Before the actual observation, it is good to acquaint students with the theory, but not to draw attention to specific cases in the area of interest.
Short summary for practitioners in native language on the final or expected outcomes	Podstatou pozorování je nezájaté zkoumání a mapování situace v okolním světě, resp. zájmové oblasti. V rámci kurzu bylo pozorování realizováno na dvou úrovních – přímo v terénu a na základě mapových a dalších vizuálních podkladů. V rámci pozorování je vybrané území nejprve hodnoceno na základě mapových podkladů a fotografií (využití LPIS) a následně probíhá pozorování přímo v terénu. Studenti identifikují potenciálně riziková místa nejprve s pomocí LPIS a následně je vyhledávají a monitorují přímo v terénu. V další části projektu jsou navrhována opatření zlepšující environmentální opatření, která jsou konzultována se zemědělci a dalšími externími odborníky. V průběhu kurzu se zlepšil vhled studentů do praxe, pokud jde o orientaci v mapových podkladech, z nichž lze identifikovat environmentální problémy v zemědělské krajině, a především

	<p>pokud jde o způsob myšlení při navrhování opatření, jež by měla plnit environmentální i hospodářské funkce. Je vhodné rozprostřít samostatné práce studentů do delšího časového úseku, aby bylo možné vývoj schopností studentů vyhodnocovat dlouhodobě a hlavně aby se jejich praktické dovednosti postupně budovaly ve vzájemně navazujících krocích. Vyžadují-li to klimatické podmínky či jiné faktory (počasí v průběhu roku, průběh vegetační sezóny), je možné postup při pozorování obrátit a nejprve provést pozorování v terénu a až následně v digitálním prostředí. Před samotným pozorováním je dobré seznámit studenty s teorií, avšak neupozorňovat na konkrétní případy v zájmovém území.</p>
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# 15 PA#76: Development of sustainable farming systems I+II – multi-actor approach

Nextfood Practice Abstract #76	Partner University of South Bohemia in České Budějovice, Jan Moudrý
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Short title in English	Development of sustainable farming systems I+II – multi-actor approach
Short title in native language	Projektování udržitelných systémů hospodaření I+II – zapojení externích aktérů
Short summary for practitioners (English) on the final or expected outcomes	To strengthen the connection between education and direct agricultural practice, the course at the University of South Bohemia (CZ), involves other external actors in the teaching process directly representing agricultural practice and. Student projects cover the three pillars of agroecology - agricultural, environmental and socio-economic. External actors are involved in teaching: in addition to farmers there are environmental experts from organizations dealing with environmental protection and agroecology and who work mainly in the environmental part of the project; and social experts dealing with social work, care, and social agriculture. In addition to cooperation on the socio-economic part of student projects, some organizations also provide space for the implementation of these projects. The agricultural part of the projects involves mainly farmers, but also consultants and representatives of control and certification organizations for organic farming. Each of the groups of external actors is involved in discussions with students and evaluation of student projects, as well as in mutual discussions with each other, with the active participation of students. The choice of suitable external actors (especially in terms of communication skills and willingness to devote time to cooperation) and the thorough preparation before the start of the course, when external experts are acquainted with the overall structure of the course and their own role, proves to be crucial. It is necessary to emphasize the mutually balanced position of course participants and that teachers, researchers, and external partners are not superior to students or each other but at the partnership level.
Short summary for practitioners in native language on the final or expected outcomes	Pro posílení propojení vzdělávání s přímou zemědělskou praxí jsou v rámci kurzu do procesu výuky na Jihočeské univerzitě v Českých Budějovicích zapojováni další aktéři, reprezentující přímo zemědělskou praxi. Studentské projekty pokrývající tři pilíře agroekologie – zemědělský, environmentální a socio-ekonomický. Do vlastní výuky jsou zapojováni externí odborníci z každé ze zmiňovaných oblastí. Vedle zemědělců, jde o environmentální experty z organizací zabývajících se ochranou životního prostředí a agroekologií, kteří spolupracují zejména v environmentální části projektu a odborníky ze sociální sféry, zabývajících se sociální prací, péčí, sociálním zemědělstvím a dalšími relevantními problematikami. Vedle spolupráce na socio-

	<p>ekonomické části studentských projektů jsou některé organizace také poskytovatelem prostoru pro realizaci těchto projektů. Do zemědělské části projektů jsou zapojeni zejména zemědělci, ale i poradci a zástupci kontrolních a certifikačních organizací pro ekologické zemědělství. Každá ze skupin externích aktérů je zapojena do diskusí se studenty a hodnocení studentských projektů, ale i ke vzájemným diskusím mezi sebou, za aktivní účasti studentů. Jako klíčová se ukazuje volba vhodných externích expertů (zejména z pohledu komunikačních schopností a ochoty věnovat čas spolupráci) a důsledné přípravě před samotným zahájením kurzu, kdy jsou externí odborníci seznámeni s celkovou strukturou kurzu a vlastní rolí. Je potřeba zdůrazňovat vzájemně rovnovážné postavení účastníků kurzu (pedagogové, výzkumníci, ani externí partneři nejsou nadřazeni studentům ani sobě navzájem) jedná se na úrovni partnerství.</p>
Link	



## 16 PA#77: New instruments for design and implementation options at Lifelong Learning (LLL) Level

Nextfood Practice Abstract #77	Partner University of Bologna, Davide Viaggi, Yaprak Kurtal, Giacomo Rinaldi, Federica Savini
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Short title in English	New instruments for design and implementation options at Lifelong Learning (LLL) Level
Short title in native language	Individuazione di nuovi strumenti e opzioni di implementazione nell'ambito della formazione continua
Short summary for practitioners (English) on the final or expected outcomes	<p>LLL is an ongoing process of learning and adapting throughout life. The European Skills Agenda appraises LLL as fundamental to build a resilient system while the European Education Area considers LLL to be critical. Fostering LLL is among the priorities of the EU rural development policy. However, the results of a survey conducted within NextFOOD (NF) suggests that several gaps exist in this educational area, including limited coordination between LLL and education in the Agri-Food and Forestry sectors (AFF). Hence, within NF <i>policy tools</i> responding to specific <i>policy objectives</i> were proposed to guide <b>policymakers</b> and key actors <b>involved in LLL</b> to overcome these gaps. A <i>policy objective</i> that needs urgent action is designing LLL courses that meet the needs of the sector and are accessible and inclusive for all. The <i>policy tools</i> proposed were: i) prioritising (and introducing new) LLL courses at educational institutions, ii) designing a LLL approach that is <b>flexible, short, digital</b> and <b>affordable</b> (or free); iii) establishing multi-actor instruments to enhance LLL.</p> <p>Another <i>policy objective</i> was to enable training of educators by designing LLL modules that keep teachers' and educators' skills continuously up-to-date; and by supporting education of agricultural advisors, designing policies to establish a platform of advisors, and tailor-made implementation solutions on the national/local levels. Finally, supporting the continuous education of workers/farmers in the AFF sectors was another critical policy objective. The proposed policy tools were to design programmes which allow for continuous education of AFF professionals throughout their career (regardless of age and gender); and to enhance and systemize peer-to-peer learning.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>La <b>formazione continua (FC)</b> è un processo di apprendimento e adattamento che avviene durante tutta la vita. Per l'European Skills Agenda essa è fondamentale per costruire un sistema resiliente, mentre la European Education Area lo considera nevralgico. La promozione della FC è tra le priorità della politica di sviluppo rurale UE, tuttavia, ad oggi in quest'area esistono diverse lacune, tra cui il coordinamento limitato tra la FC e l'educazione nel settore AFF (<i>Agri-Food e Forestry</i>). Il Progetto NextFOOD ha proposto alcuni strumenti politici per specifici obiettivi, pensati per i <b>policymakers</b> e gli <b>attori chiave</b> coinvolti nella FC.</p>

	<p>Un obiettivo ritenuto critico è quello inerente la progettazione di corsi di FC che soddisfino le esigenze del settore e siano accessibili e inclusivi. A tal fine sono stati proposti i seguenti policy tools: i) dare priorità a corsi di FC presso le istituzioni educative, e/o introdurre di nuovi, ii) progettare un approccio <b>flessibile, breve, digitale ed economico</b> (o gratis); iii) istituire strumenti multi-attore per migliorare la FC.</p> <p>Un altro obiettivo è quello di favorire la formazione degli insegnanti, che deve essere attuato con i) la progettazione di moduli FC che aiutino ad aggiornare le loro competenze; e ii) il supporto alla formazione dei consulenti agricoli e la progettazione di politiche per stabilire un piattaforma di consulenti e soluzioni di implementazione su misura a livello nazionale/locale.</p> <p>Infine, il sostegno alla FC dei lavoratori/agricoltori nei settori AFF. È stato proposto di i) progettare programmi che consentano la FC dei professionisti AFF durante tutta la loro carriera (indipendentemente da età e sesso); e ii) migliorare e mettere a sistema l'apprendimento da pari a pari.</p>
Link	

## 17 PA#78: New instruments design and implementation options at Pre-University Education Level

Nextfood Practice Abstract #78	Partner University of Bologna, Davide Viaggi, Yaprak Kurtal, Giacomo Rinaldi, Federica Savini
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Short title in English	New instruments design and implementation options at Pre-University Education Level
Short title in native language	Individuazione di nuovi strumenti e opzioni di implementazione nell'ambito dell'istruzione pre-universitaria
Short summary for practitioners (English) on the final or expected outcomes	<p>Pre-University education is of critical importance for equipping students with skills and basic knowledge, especially on issues fundamental to face today's challenges of sustainability and gender. According to a NextFOOD (NF) survey on key stakeholders informed about education in the Agri-Food and Forestry (AFF) sectors, Pre-University received the lowest score for being "effective to improve learners' skills and knowledge". To address these gaps, policy objectives were identified to be targeted at Pre-University, namely: a) increasing financial support and investments; b) enhancing hard and soft skills; and c) updating the curricula to meet the needs of the sector. To achieve these, policy tools were proposed to guide <b>policymakers</b> and <b>other key stakeholders</b> involved in policy making in education. The policy tools suggested to enhance competencies and skills included: i) integrating soft skills into the curricula starting from early ages; and ii) enabling continuous learning of trainees. The tools identified to update the curricula focused on: i) establishing a connection between education and real life; ii) adopting new learning approaches; and iii) integrating sustainability and related good practices into the curricula.</p> <p>In order to increase financial support, i) investments in new technologies and instruments in schools; and ii) investments to improve education in ICT by means of skilled educators, were proposed.</p> <p>Finally, an overall suggestion was to improve coordination and dialogue among different levels of education (i.e. Pre-University, University, VET, LLL), not only regarding dialogue between actors, but also among policies and policy-making processes (e.g. reducing bureaucratic burden).</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>La formazione pre-universitaria è fondamentale per dotare gli studenti di competenze e conoscenze di base, soprattutto su temi come la sostenibilità e il genere, fondamentali per affrontare le sfide odierne. Secondo l'indagine condotta tra i principali stakeholder dell'istruzione AFF (<i>Agri-Food and Forestry</i>) all'interno del progetto NextFOOD (NF), questo settore ha ricevuto il punteggio più basso per quello che riguarda l'efficacia nel migliorare le competenze e le conoscenze degli studenti. Per raggiungere questi obiettivi, sono stati proposti strumenti politici per supportare i responsabili politici e altre parti chiave coinvolte</p>

	<p>nella definizione delle politiche in materia (ad es. educational managers).</p> <p>Questi strumenti sono: i) integrare le soft skills nei curricula a partire dalla prima infanzia; e ii) consentire l'apprendimento continuo dei tirocinanti.</p> <p>Per aggiornare i curricula: i) stabilire una connessione tra istruzione e vita reale; ii) adottare nuovi approcci all'apprendimento; e iii) integrare la nozione di sostenibilità e le relative buone pratiche nei curricula. Al fine di aumentare il sostegno finanziario sono stati suggeriti: i) investimenti in nuove tecnologie e strumenti nelle scuole; e ii) investimenti per migliorare l'istruzione ICT (<i>Information and Communications Technology</i>) attraverso educatori qualificati. Infine, un suggerimento generale è stato quello di migliorare il coordinamento e il dialogo tra i diversi livelli di istruzione (cioè pre-universitario, universitario, istruzione e formazione professionale, formazione continua), non solo per quanto riguarda il dialogo tra gli attori, ma anche tra le politiche e i processi decisionali (ad es. riduzione degli oneri burocratici).</p>
<b>Link</b>	

## 18 PA#79: New instrument design and implementation options at University Education Level

Nextfood Practice Abstract #79	Partner University of Bologna, Davide Viaggi, Yaprak Kurtal, Giacomo Rinaldi, Federica Savini
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Short title in English	New instrument design and implementation options at University Education Level
Short title in native language	Individuazione di nuovi strumenti e opzioni di implementazione nell'ambito dell'istruzione universitaria
Short summary for practitioners (English) on the final or expected outcomes	<p>University education takes a pivotal role in combatting the challenges faced by the Agri-Food and Forestry (AFF) sectors. In this vein, within NextFOOD, some <b>policy objectives</b> and <b>policy tools</b> have been proposed to guide <b>EU member states</b>, <b>policymakers</b>, and <b>other key stakeholders</b> involved in policy making in <b>education</b>.</p> <p>One of the key <i>policy objectives</i> identified was to enhance <b>students' and teachers' skills</b>. To do so, policy tools suggested were: i) introducing and improving courses on soft skills and digital skills, and, for teachers, courses on new education techniques; ii) increasing experience-sharing with other educational levels; iii) establishing closer collaboration between faculties and education experts. More in detail, to enhance <b>digitalization</b>: i) increasing the use of digital technologies; ii) mobilising funding to provide technological instruments.</p> <p>Moreover, the critical importance <b>to update curricula</b> was stressed, by: i) incorporating <i>formal, non-formal</i> and <i>informal</i> education; ii) integrating the notion of sustainability into education; iii) establishing an integrated qualification framework; and iv) providing internships and field trips utilising the NextFOOD approach.</p> <p>Furthermore, these processes need to be accompanied by <b>international cooperation</b>, achievable through: i) financing international exchanges; and ii) incentivizing joint classes with different countries.</p> <p>Finally, the importance of <b>collaborative policy-making</b> was underlined, to be achieved via: i) enhancing Public-Private Partnerships, ii) reducing the administrative burden, and creating tax incentives; and iii) enhancing multi-stakeholder approaches by establishing a permanent platform with diverse representatives.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>L'istruzione universitaria è fondamentale per le sfide future dei settori AFF (<i>Agri-Food e Forestry</i>). Perciò, all'interno del Progetto NextFOOD (NF), sono stati proposti alcuni obiettivi e strumenti politici per guidare gli Stati UE, responsabili politici e altri attori-chiave coinvolti nella definizione delle politiche in materia.</p> <p>Uno degli obiettivi individuati è stato quello di migliorare <b>le competenze di studenti e insegnanti</b>. Gli strumenti suggeriti sono stati: i) l'introduzione o il miglioramento di corsi su <i>soft skills</i></p>

	<p>e <i>digital skills</i> e, per i docenti, corsi sulle nuove tecniche educative; ii) aumentare la condivisione di esperienze educative con altri livelli di istruzione; iii) stabilire maggiori collaborazioni tra le università ed esperti dell'educazione.</p> <p>Più in dettaglio, per potenziare la <b>digitalizzazione</b>: i) maggiore uso di tecnologie digitali; e ii) finanziamenti per la fornitura di strumentazioni.</p> <p>Importante è l'<b>aggiornamento dei curricula</b>, da perseguire: i) incorporando l'istruzione formale, non formale e informale; ii) integrando la nozione di sostenibilità; iii) stabilendo un quadro integrato delle qualifiche; e iv) fornendo stage e formazione sul campo con l'approccio NextFOOD.</p> <p>Altro elemento è la <b>cooperazione internazionale</b>, realizzabile con: i) il finanziamento di scambi internazionali; ii) incentivazione di <i>joint classes</i> di paesi diversi.</p> <p>Infine, è stata sottolineata l'importanza di un <b>processo decisionale collaborativo</b>, da raggiungere: i) con il rafforzamento dei partenariati pubblico-privato, ii) con la riduzione degli oneri amministrativi e la creazione di incentivi fiscali; e iii) rafforzando gli approcci multi-attore con un tavolo permanente di rappresentanza.</p>
Link	

## 19 PA#80: New instrument design and implementation options at Vocational Education and Training (VET) Level

Nextfood Practice Abstract #80	Partner University of Bologna, Davide Viaggi, Yaprak Kurtosal, Giacomo Rinaldi, Federica Savini
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Short title in English	New instrument design and implementation options at Vocational Education and Training (VET) Level
Short title in native language	Individuazione di nuovi strumenti e opzioni di implementazione nell'ambito dell'istruzione e formazione professionale (IFP)
Short summary for practitioners (English) on the final or expected outcomes	<p>VET addresses all people of working age and can be complementary to University education. This alternativitvity makes VET a strategical element to include citizens, especially young people that are not in education, employment or training (NEETs) in the countries' development. However, several structural and specific gaps exist. In the scope of NextFOOD, policy tools were identified responding to specific <i>policy objectives</i> and suggested to <b>EU/national/local policymakers</b>, as well as to <b>education managers</b> and all <b>stakeholders involved in VET</b>.</p> <p>A policy objective, perceived as urgent, is to enable recognition of diplomas, which can be achieved through a <b>unified certification scheme</b> valid throughout the EU.</p> <p>Another important objective is to integrate new learning approaches and introduce new programs in VET stimulating integration of <b>new approaches of education</b> (e.g. action learning) and <b>new contents in programs</b> (e.g. multidisciplinary). However, to date, there is a general lack of skills of teachers and trainers, putting limits to the impact of the previous policy tool. Hence, it is important to set a <b>mandatory</b> European Credit Transfer and Accumulation System (ECTS) <b>for VET teachers</b> (or trainers).</p> <p>Meanwhile, all the above-mentioned objectives require the <b>ensuring of financial support</b> to VET, even when the demand is low (moving from market-driven to policy-driven). Besides, increasing financial support and technological equipment specifically <b>for young professionals</b> can represent a way to achieve strategic objectives. Finally, member States are encouraged to improve <b>coordination and harmonization of policies</b> about VET in the Agri-Food and Forestry sectors, allowing a better integration of human resources throughout Europe.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>I corsi di IFP sono progettati per coloro in età lavorativa e possono essere alternativi all'università. Questa alternatività rende gli IFP strategici per l'inclusione dei cittadini nello sviluppo dei paesi, soprattutto per i giovani che non studiano, non hanno un lavoro e non sono impegnati in percorsi formativi (NEET).</p> <p>Tuttavia, questo settore mostra lacune. All'interno del Progetto NextFOOD, sono stati identificati alcuni strumenti politici che</p>



	<p>rispondono a specifici obiettivi, pensati per i <b>decisori politici UE/nazionali/locali</b>, i <b>responsabili dell'istruzione</b> e tutte le <b>parti coinvolte</b> nell'IFP.</p> <p>Un obiettivo, percepito urgente, è quello di consentire il <b>riconoscimento dei diplomi</b>, raggiungibile attraverso un sistema di certificazione unificato per tutta l'UE.</p> <p>Un altro obiettivo è quello di <b>integrare nuovi approcci educativi e introdurre nuovi programmi</b> nell'IFP: una strada può essere quella di integrare nuovi approcci come l'<i>action learning</i> e nuovi contenuti nei programmi (es. multidisciplinarietà).</p> <p>Tuttavia, la generale carenza di competenze degli insegnanti pone dei limiti all'attuazione di questi strumenti.</p> <p>Perciò, è importante impostare un sistema di <b>conseguimento obbligatorio di CFP</b> (Crediti Formativi Professionali) per i formatori professionali.</p> <p>Inoltre, tutti questi obiettivi richiedono la <b>garanzia di un sostegno finanziario</b>, anche quando la domanda è bassa, così da passare dal <b>"market driven" al "policy driven"</b>.</p> <p>Finanziamenti anche per <b>l'acquisto di attrezzature tecnologiche</b>, soprattutto per i giovani.</p> <p>Infine, gli Stati UE sono incoraggiati a migliorare il <b>coordinamento e l'armonizzazione</b> delle politiche sull'IFP nell'AFF, consentendo una migliore integrazione delle risorse umane in Europa.</p>
Link	

## 20 PA#81: Agrifood and forestry education in Europe – an informatics approach

Nextfood Practice Abstract #81	Partner	Lund University, Sweden, Stephen Burleigh, Håkan Jönsson
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Short title in English	Agrifood and forestry education in Europe – an informatics approach
Short title in native language	Livsmedels- och lantbruksutbildning i Europa – en informatik ansats
Short summary for practitioners (English) on the final or expected outcomes	The purpose of the study carried out at Lund University, Sweden, was to identify potential gaps in education in European Masters' programs concerning the 'Inventory of Skills' needed by the next generation of agrifood students to address the global challenges of the future. The 'Inventory of Skills' was developed in the course of the NextFOOD project. For the study, we used an informatics website analysis approach, whereby we looked for specific keywords associated with the skills in agrifood Masters' program websites. We found that food-related programs are strongly associated with the theme Innovation; agriculture programs with the theme Sustainability; and forestry programs with the theme Strategic Management. Potential gaps in education include agriculture and network-building, forestry and Life-Long Learning. Our study can serve as a practical decision-support tool for education managers when developing programs in agrifood education at Masters level. Teachers can see if their programs and individual courses use the vocabulary and concepts from the 'Inventory of Skills', especially educational activities associated the gaps identified here, and adjust their curricula if needed.
Short summary for practitioners in native language on the final or expected outcomes	Syftet med studien, som utfördes av Lunds universitet, Sverige, var att identifiera potentiella luckor i utbildningen i europeiska masterprogram angående de färdigheter som behövs av nästa generations jordbruks och livsmedelsstudenter för att möta framtidens globala utmaningar. Studien bygger vidare på den färdighetsinventering som tidigare utförts inom projektet NextFOOD. För studien använde vi oss av en webbanalysmetod, där vi letade efter specifika nyckelord förknippade med kompetensen för masterprogram för agrifood. Vi fann att livsmedelsrelaterade program är starkt förknippade med temat Innovation, lantbruksprogram med temat Hållbarhet och skogsbruksprogram med temat Strategiskt ledarskap. Bland potentiella luckor i utbildningarna fanns nätverksbyggande inom jordbruksutbildningar och livslångt lärande inom skogsbruksutbildningar. Vår studie kan fungera som ett praktiskt beslutsstödsverktyg för utbildningsansvariga vid utveckling av masterprogram inom jordbruks- och livsmedelsutbildning såväl som andra utbildningsaktiviteter och. Lärare kan se om deras program och individuella kurser använder sig av identifierade viktiga begrepp och de luckor som identifierats, och kan vid behov justera sina läroplaner.
Link	

## 21 PA#82: Incorporating cultural differences in an action learning environment

Nextfood Practice Abstract #82	Partner	ISEKI-Food Association, Austria, Katherine Flynn
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Short title in English	Incorporating cultural differences in an action learning environment
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Working with a diverse group of people can be both a challenge and an advantage. In our online action learning course, FoodFactory-4-Us, student teams worldwide volunteer for a competition to solve a food sustainability issue. Since 2019, we have worked in an online only environment with students from universities in 17 countries. Students attend six online sessions where they share their personal, and very diverse, experiences in food sustainability as they prepare their competition project.</p> <p>The challenges we faced from working online with such a diverse group were both technical (e.g., scheduling to accommodate varied time zones, differences in internet reliability) and cultural (e.g., differences in mastery of English, comfort interacting with instructors). We found several ways to use these challenges to improve our course for all students. These methods are:</p> <ul style="list-style-type: none"> <li>• Recording all online sessions so students could rewatch to ensure their understanding or find a more suitable time or a time/place with a better internet connection.</li> <li>• Scheduling a time in every session for open questions where we encouraged any question on any aspect of the course.</li> <li>• Using random breakout groups in almost all sessions in which students worked with other students from the diverse group to answer a specific question.</li> <li>• Varying day of the week and time of the day for each online session.</li> <li>• Simplifying our online requirements i.e., instead of using a tool needing a good connection like Miro we reorganized our sessions to use only a video (or audio) tool like Zoom.</li> </ul> <p>With these basic changes to our online competition course, we aimed to have all students feel that they were equally valuable and contributing members of the learning community.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 22 PA#83: Considering the skills and training needs of facilitators in action-based learning

Nextfood Practice Abstract #83	Partner	AFS, Greece, Elisavet Papadopoulou, Georgia Zafeiriou, Anna-Maria Krooupa
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Short title in English	Considering the skills and training needs of facilitators in action-based learning
Short title in native language	Υπολογίζοντας τις δεξιότητες και τις εκπαιδευτικές ανάγκες των εκπαιδευτών ενεργούς μάθησης
Short summary for practitioners (English) on the final or expected outcomes	<p>Depending on the context of action-based learning practices, it is possible that facilitators will have considerable training needs in supporting action-based learning at large.</p> <p>From our experience in Greek Higher-Education Institutions, we found a wide range of skills to be highly relevant to this approach. These were:</p> <ul style="list-style-type: none"> <li>• time-management,</li> <li>• classroom management,</li> <li>• presentation skills,</li> <li>• confection of more suitable assessment methods,</li> <li>• networking,</li> <li>• “translating” educational activities into developing and promoting skills,</li> <li>• developing/redesigning curricula,</li> <li>• organizational skills,</li> <li>• interpersonal skills (developing trusting relationships and non-judgmental learning environments),</li> <li>• communication with students and other actors,</li> <li>• adaptability and</li> <li>• flexibility.</li> </ul> <p>Furthermore, the facilitator’s level of competence in all of the NextFood sustainability core competences (reflection, visionary thinking, dialogue, participation, transformative learning) is crucial if they are to convey them to students effectively.</p> <p>In our case we spend a lot of time with our facilitators, in order to make them mindful of these skills and to engage them in a co-creative process of the curriculum design. However, it becomes more and more evident that there is high need for a more formal and standardized training process that will enable and empower facilitators in their role. This would enhance the impact of their teaching and the impact of the NextFood approach at large. It could also create a more permanent culture of action-learning for sustainability in Agricultural Higher Education.</p>

**Short summary for practitioners in native language on the final or expected outcomes**

Ανάλογα με το πλαίσιο που διεξάγεται η ενεργός μάθηση είναι πολύ πιθανό να υπάρχουν κενά κι ανάγκες ως προς τις δεξιότητες που χρειάζονται οι εκπαιδευτές για να ανταπεξέλθουν.

Η εμπειρία μας στην τριτοβάθμια εκπαίδευση αγροδιατροφής στην Ελλάδα έδειξε ότι υπάρχουν κάποιες δεξιότητες που σχετίζονται άμεσα με τη παροχή ενεργούς εκπαίδευσης. Τέτοιες είναι:

- η διαχείριση χρόνου,
- η διαχείριση τάξης,
- δεξιότητες παρουσίασης,
- επινόηση μεθόδων αξιολόγησης,
- επινόηση μεθόδων δικτύωσης,
- μεταφοράς του περιεχομένου εκπαίδευσης με όρους δεξιοτήτων,
- σχεδιασμός προγραμμάτων σπουδών,
- η ανάπτυξη σχέσεων και συνθηκών εμπιστοσύνης,
- επικοινωνία με σπουδαστές και άλλους φορείς,
- προσαρμοστικότητα και
- ευελιξία.

Επιπλέον, το επίπεδο δεξιότητας των ίδιων των καθηγητών σε όλες τις κύριες δεξιότητες της προσέγγισης του NEXTFOOD είναι κρίσιμο ώστε να καταφέρουν να μεταδώσουν αυτές τις δεξιότητες με επαρκή τρόπο.

Στην περίπτωση μας, αφιερώσαμε πολύ χρόνο με τους συνεργαζόμενους καθηγητές ώστε να αποκτήσουν συνειδητότητα αυτών των δεξιοτήτων και μπήκαμε σε μια διαδικασία ενεργούς συν-δημιουργίας κι εξέλιξης των προγραμμάτων σπουδών. Παρόλα αυτά είναι όλο και πιο φανερό ότι υπάρχει ανάγκη για πιο επίσημη και δομημένη εκπαίδευση εκπαιδευτών η οποία θα ενδυνάμωση και θα διευκολύνει τους καθηγητές στο ρόλο τους. Αυτό θα δυνάμωνε την επίδραση και τον αντίκτυπο της προσέγγισης του NEXTFOOD. Θα μπορούσε επίσης να δημιουργήσει μια γενικότερη κουλτούρα ενεργούς μάθησης στην τριτοβάθμια εκπαίδευση και τη βιώσιμη αγροδιατροφή.

**Link**

## 23 PA#84: How to achieve skills in Core Competences while dealing with complex questions – in a limited time

Nextfood Practice Abstract #84	Partner	Skogforsk, Tomas Johannesson, Lotta Woxblom
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Short title in English	How to achieve skills in Core Competences while dealing with complex questions – in a limited time.
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Sharing experiences and knowledge is crucial to reach insights and broader perspectives among different stakeholders. Using the NEXTFOOD model and working strategically with the core competences turned out to be fruitful in a course on forest management and nature conservation with a group of private forest owners in Sweden. One expected outcome is that the learners become aware of and start using the competences to share and receive knowledge.</p> <p>Facilitators identified the following success factors:</p> <ul style="list-style-type: none"> <li>- Be honest and admit that there may be several answers to complex questions.</li> <li>- Make sure learners have a mutual interest in the topic and that everyone wants to learn and contribute with their knowledge and experiences. Use the topic as a platform and focus on possibilities and challenges remembering that there are rarely any simple solutions.</li> <li>- Create trust in the group and ensure that everyone is appreciated for her/his contribution e.g., questions, knowledge, experience and try to meet different needs.</li> <li>- Make learners aware that they use different core competences daily, perhaps without knowing it. Use examples of e.g., a hobby to illustrate when and where everybody is observing and reflecting.</li> <li>- Find familiar examples to explain the difference between debate, discussion, and dialogue. Dialogue is one of the core competences which we strive to practice and use in different situations at work as well as in our private lives.</li> <li>- Use a learning arena and a language that is familiar to everybody.</li> <li>- Find exercises where learners can train and develop core competences individually and in small groups.</li> </ul> <p>Set aside time for individual structured reflections on 2 or 3 predefined questions that reconnect something we trained or talked about during the day.</p>

Short summary for practitioners in native language on the final or expected outcomes

Link

## 24 PA#85: A food scientist's experience from participating in a multi-actor group working on a joint project

Nextfood Practice Abstract #85	Partner	International Hellenic University (IHU), Greece, Marinopoulou Anna
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Short title in English	<b>A food scientist's experience from participating in a multi-actor group working on a joint project</b>
Short title in native language	Η εμπειρία ενός επιστήμονα τροφίμων από τη συμμετοχή σε μια διεπαγγελματική, πολυσυμμετοχική ομάδα που εργάζεται σε ένα κοινό έργο
Short summary for practitioners (English) on the final or expected outcomes	<p>As part of the NextFOOD project, myself (a food scientist), an academic professor, an agricultural advisor and two food technology students worked jointly on a project investigating the effects of fortification of protein cannabis on dough properties, quality characteristics and the overall acceptability of wheat flour breads.</p> <p>For the experimental part of the project, different levels (5, 10 and 15%) of protein cannabis were added to a wheat bread formulation. The incorporation of protein cannabis to wheat flour influenced significantly the moisture, content and the color of crumb. Results revealed that the incorporation of protein cannabis to wheat flour, improved the texture properties of the bread crumb and increased its overall acceptability.</p> <p>As laboratory supervisor, I was responsible for overseeing the teamwork and the progress of the project. In terms of collaborating with other professionals and students on the project, there was an effective communication, a mutual understanding and a very good collaboration among team members. I strongly believe that my participation in this group contributed to the improvement of my personal development skills. Thus, I would suggest to other professionals to participate in multi-actor groups or, even better, to organise similar groups in order to work jointly with professionals of different expertise and students toward a common goal.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Ως μέρος του έργου NextFOOD, ένας επιστήμονας τροφίμων, ένας ακαδημαϊκός, ένας γεωργικός σύμβουλος και δύο φοιτητές τεχνολογίας τροφίμων, δουλέψαμε από κοινού σε ένα έργο που διερευνά τις επιπτώσεις της ενίσχυσης της πρωτεΐνης κάνναβης στις ιδιότητες της ζύμης, στα ποιοτικά χαρακτηριστικά και στη συνολική αποδοχή των ψωμιών από αλεύρι σίτου.</p> <p>Για το πειραματικό μέρος του έργου, διαφορετικά επίπεδα (5, 10 και 10%) πρωτεϊνικής κάνναβης προστέθηκαν κατά την παρασκευή ψωμιού σίτου. Η ενσωμάτωση πρωτεΐνης κάνναβης στο αλεύρι σίτου επηρέασε σημαντικά την υγρασία, την</p>



	<p>περιεκτικότητα και το χρώμα της ψίχας. Τα αποτελέσματα κατέδειξαν ότι η ενσωμάτωση πρωτεΐνης κάνναβης στο αλεύρι σίτου, βελτίωσε τις ιδιότητες υφής του της ψίχας του ψωμιού και αύξησε τη συνολική αποδοχή του.</p> <p>Ως επόπτης εργαστηρίου, ήμουν υπεύθυνη για την επίβλεψη της ομαδικής εργασίας και της προόδου του έργου. Όσον αφορά τη συνεργασία μεταξύ των μελών της ομάδας, υπήρξε αποτελεσματική επικοινωνία, αμοιβαία κατανόηση και πολύ καλή συνεργασία. Πιστεύω ακράδαντα ότι η συμμετοχή μου σε αυτή την ομάδα συνέβαλε στη βελτίωση των προσωπικών μου δεξιοτήτων. Έτσι, θα πρότεινα και σε άλλους επαγγελματίες να συμμετάσχουν σε διεπαγγελματικές, πολυσυμμετοχικές ομάδες ή, ακόμη καλύτερα, να οργανώσουν παρόμοιες ομάδες προκειμένου να εργαστούν μαζί με επαγγελματίες διαφορετικών ειδικοτήτων και φοιτητές για την επίτευξη ενός κοινού στόχου.</p>
Link	

## 25 PA#86: How to improve the competence of participation and help farmers in their work

Nextfood Practice Abstract #86	Partner	University of Gastronomic Sciences, Natalia Rastorgueva, Paola Migliorini, Charlotte Prelorenzoz
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Short title in English	How to improve the competence of participation and help farmers in their work
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>In summer 2021, students of the new Master in Agroecology and Food Sovereignty at UNISG took part of an experiential part of the program. They moved to agroecological communities and farms in order to combine their action research with contribution to the farm activities. The students' contribution included different types of work depending on the communities' activities.</p> <p>On the one hand, the students took part of daily hands-on farm and research activities. On the other hand, the activities allowed the students to engage in personal dialogues with farmers to better understand the communities' life, their management and principles of work. In addition to this, students were asked to realise a participatory sharing circle with their community.</p> <p>While students practised the competence of participation, they continued to improve their reflection competences by writing reflection journals. The university tutors and professors supervised them in their research.</p> <p>As a result of the experiential activities, the students carried out their research projects focused on different themes such as soil, seeds, terraces, wine, fermentation, community supported agriculture, gender issues, education and raw milk. All these themes were discussed as subjects for expanding agroecology and improving food sovereignty.</p> <p>The farmers highly appreciated the students' participation, knowledge and active contribution to the community life. At the end of the experiential part, some students received job offers from the communities.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	<a href="https://www.unisg.it/assets/20211115_MAFS_booklet.pdf">https://www.unisg.it/assets/20211115_MAFS_booklet.pdf</a>

## 26 PA#87: Peer learning between the Nextfood cases

Nextfood Practice Abstract #87	Partner Norwegian University of Life Sciences, NMBU, Norway, Kristiane Brudevoll
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Short title in English	Peer learning between the Nextfood cases
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The Nextfood (NF) project applies action research in 12 educational cases to implement the NF approach. During the facilitation of the action research and case development processes, the cases expressed a need for more communication and sharing of experiences among them. As a response, NextFood partner NMBU encouraged and organized online peer-learning groups amongst the cases and formed four peer-learning groups that held meetings in the fall of 2020 and spring of 2021. The topics of the groups were analysis of competence development; qualitative data analysis; the multi-actor approach; and reflection.</p> <p>The groups held between 4-6 meetings each and decided on their own meeting frequency and sub-topics for each meeting. The meetings were hosted by case representatives sharing their experiences about the chosen sub-topic.</p> <p>In the fall of 2021, the NMBU team organized three peer-learning meetings. The topics for the meetings were chosen based on suggestions that the cases voted for in an online platform. In the first meeting the cases shared thoughts on the NF deliverable D3.5, which is a cross-case analysis of the last cycle of case development and action research. The second meeting was focused on how to give advice to a colleague about implementing the NF approach. For the final meeting we shared experiences of how to shift from being a lecturer to being a learning facilitator.</p> <p>Based on our experiences, we can highly recommend hosting peer-learning groups as part of any action research project with multiple cases. The groups acted as a support network and a shared learning space for the cases during the project, and several cases have expressed this as essential for their case development.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 27 PA#88: The importance of facilitators' (teaching practitioners') training and knowing the Nextfood competences first hand

Nextfood Practice Abstract #88	Partner	Norwegian University of Life Sciences, NMBU, Norway, Marie Henriksen Bogstad
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Short title in English	The importance of facilitators' (teaching practitioners') training and knowing the Nextfood competences first hand
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The participatory and action-oriented Nextfood (NF) educational approach is focused on cultivating six core competences. For learners to become future sustainability professionals, the facilitator (i.e. teaching practitioner) should enable them to build the core competences of observation, participation, reflection, visionary thinking, dialogue, and facilitation.</p> <p>Throughout the duration of the NF project, the 12 diverse educational cases have tried and tested the NF educational approach and experienced what it requires from both learners and facilitators. They have found that it is integral for the successful implementation of the approach that the facilitators themselves know and master the core competences. Only then will they be able to facilitate the build-up of these in their learners. In the NF project, regular peer learning groups have been held to share case experiences, and several workshops on the different competences have been arranged, in order to build up competence mastery in the different case institutions. Also, the cases have practiced facilitating competence building in other members of faculty by asking them to participate in their NF course. Some cases have found the NF Toolbox to be very useful in this regard, and use the resources found there to communicate to their colleagues about the approach and the core competences.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 28 PA#89: Facilitation of action research in educational cases

Nextfood Practice Abstract #89	Partner Norwegian University of Life Sciences, NMBU, Norway, Lutgart Lenaerts
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Short title in English	Facilitation of action research in educational cases
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>“Action research is a philosophy and methodology of research generally applied in the social sciences. It seeks transformative change through the simultaneous process of taking action and doing research, which are linked together by critical reflection” (Wikipedia). In WP2 of the Nextfood project, we facilitated action research in 12 educational cases with the aims of (1) inducing transformative change in each individual case, (2) researching that process in each individual case, and (3) comparing that process across different cases. The facilitation started with (1) competence building in the core aspects of the transformative approach in all cases, (2) development of an action research protocol with a stepwise description of data collection and analysis, and (3) training in the methods of the protocol for all case researchers to streamline data collection and analysis across all cases. Next, further facilitation throughout the project consisted of: Individual follow-up to address cases’ questions and challenges while assuring that they followed the research protocol; workshops for all cases to further build their competences regarding the approach and research methods; and peer-learning and experience-sharing sessions on topics related to the approach and methods upon the cases’ requests. Towards the end of the project, we facilitated workshops for two cases at a time, to reflect over their transformative change and research over the entire project period.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 29 PA#90: Importance of training the facilitators and introducing them to the competences first-hand

Nextfood Practice Abstract #90	Partner	Heliopolis University, Adel Khaled, Alaa Elhawwary, Reham Fathey Ali, Karim El Mallawany
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Short title in English	Importance of training the facilitators and introducing them to the competences first-hand
Short title in native language	أهمية تدريب المتدربين ومعرفة الكفاءات بشكل مباشر
Short summary for practitioners (English) on the final or expected outcomes	<p>NextFood Case 10, organised by SEKEM, is working to accomplish the five core competences in all trainings belonging to the NextFood project.</p> <p>The two sub-cases, Biodynamic and Entrepreneurs' training, built on the knowledge gain from the surveys that had been conducted on the Nextfood core competences. Moreover, as part of the action-research process, in the two sub-cases our team is analysing the data provided by trainees which enables us to design convenient training that matches trainees' critical way of thinking.</p> <p>Careful selection of qualified facilitators is important to be able to deliver this knowledge in the right way to trainees. It proved to be a hard task finding flexible facilitators eager to learn and with the intention to make changes by spreading awareness of the core competences among students and entrepreneurs.</p> <p>It is necessary to set up a unique, talented, well-educated team of facilitators to accomplish this task in a professional way.</p> <p>In the SEKEM case, we were careful to select good facilitators with the ability to work on multiple tasks, with multiple cultures and respect for different cultures, and the experience of dealing with students or start-ups.</p> <p>Before implementing future trainings, it is important to train the facilitators on "giving and receiving feedbacks", "emotion intelligence", and "handling the critical issues". These points are essential for trainings that absolutely reflect on learning approaches. Last but not least, working on the facilitators will guarantee quality and enhance the intended learning outcomes of the trainees.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>تعمل الحالة رقم ١٠ من مشروع نيكست فود ، و التي نظمتها سيكم ، على تحقيق الكفاءات الأساسية الخمس في جميع التدريبات التي تنتمي إلى مشروع نيكست فود.</p> <p>تم إجراء الحالتين الفرعيتين ، تدريب البيوديناميك وتدريب رواد الأعمال ، و المبني على اكتساب المعرفة من الدراسات الاستقصائية وفيما يتعلق بنهج و معارف مشروع نيكست فود.</p> <p>علاوة على ذلك ، كجزء من عملية البحث العملي ، يقوم فريقنا في الحالتين الفرعيتين بتحليل البيانات المقدمة من قبل المتدربين والتي تمكننا من تصميم تدريب ملائم يتناسب مع طريقة التفكير النقدي للمتدربين.</p>

	<p>يعد الاختيار الدقيق للمدربين المؤهلين أمرًا مهمًا ليكون قادرًا على تقديم هذه المعرفة بالطريقة الصحيحة للمتدربين. لقد ثبت أنه من الصعب العثور على مدربين مرنين حريصين على التعلم وبقصد إجراء تغييرات من خلال نشر الوعي بالكفاءات الأساسية بين الطلاب ورواد الأعمال.</p> <p>من الضروري تكوين فريق فريد من نوعه ، موهوب ، مثقف جيدًا من المدربين لإنجاز هذه المهمة بطريقة احترافية.</p> <p>في حالة سيكم ، كنا حريصين على اختيار مدربين جيدين لديهم القدرة على العمل في مهام متعددة ، مع ثقافات متعددة مع احترام الثقافات المختلفة ، وتجربة التعامل مع الطلاب أو الشركات الناشئة.</p> <p>قبل تنفيذ التدريبات المستقبلية ، من المهم تدريب المدربين على "إعطاء الملاحظات وتلقيها" و "الذكاء العاطفي" و "التعامل مع القضايا الحرجة"</p> <p>هذه النقاط ضرورية للتدريبات التي تعكس تمامًا مناهج التعلم.</p> <p>أخيرًا وليس آخرًا ، سيضمن العمل على المدربين الجودة ويعزز نتائج التعلم المرجوة للمدربين.</p>
Link	

## 30 PA#91: Consider All Factors (CAF)

Nextfood Practice Abstract #91	Partner University of Oradea, Anamaria Supuran, Adrian Timar
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Short title in English	Consider All Factors (CAF)
Short title in native language	De luat in considerare toti factorii
Short summary for practitioners (English) on the final or expected outcomes	<p>Participation was a competence practiced extensively during the Romanian case: <b>“Students and farmers taking food innovations from idea to market”</b> using different methods and instruments.</p> <p>One of the strategies was to design different support materials for students and consider methodologies that encourage students to think about <i>all</i> relevant factors when making a decision or considering an idea. Thus, students were asked to consider different factors when deciding on the type of product they would like to develop (i.e. a sweet/sour/salty product; solid/liquid product; a vegan/functional/ animal origin product). For this reason, a template named <b>Consider All Factors (CAF)</b> was <b>designed</b> to make students contribute and participate in the decision-making process.</p> <p>The steps of this strategy are:</p> <ol style="list-style-type: none"> <li>1. The teacher discusses with students the importance of considering all factors in decision-making and planning. For example, if an important factor is forgotten, a route of action which may seem right at the time may ultimately turn out to be wrong.</li> <li>2. In groups, students fill out the <b>CAF</b> sheet.</li> <li>3. Once the <b>CAF</b> sheets are completed, students rotate in groups and view the factors which other groups have noted.</li> <li>4. Students may modify or add to their original factors based on what other groups have written.</li> <li>5. A <b>debrief</b> to bring together all factors across groups.</li> </ol> <p>The real benefit of this method is that by working in groups, students are part of a “comfort zone” from the very beginning and they feel free to contribute without the fear of being wrong. Moreover, they have access to the viewpoints of the members belonging to other groups, a fact that gives them multiple perspectives on their future product.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Participarea a fost o competență practică pe scară largă în cazul românesc: “Studenti si fermieri impreuna in crearea de noi produse alimentare de la idee pana la punerea lor pe piata” folosind diferite metode și instrumente. Una dintre strategii a fost proiectarea diferitelor materialelor support pentru studenti și luarea în considerare a metodologiilor care îi încurajează pe elevi să se gândească la toți factorii relevanți atunci când iau o decizie sau iau în considerare o idee. Astfel, studentii au fost rugați să ia în considerare diferiți factori atunci când decid tipul de produs pe care ar dori să-l dezvolte. Din acest motiv, a fost conceput un șablon numit “Luați în considerare toți factorii” pentru a determina</p>



	<p>studentii să contribuie și să participe la procesul de luare a deciziilor cu privire la produsul alimentar pe care și-ar dori să-l dezvolte.</p> <p>Etapele acestei strategii sunt: 1. Profesorul discută cu elevii importanța luării în considerare a tuturor factorilor în etapa planificarea; 2. Studentii completează fișa CAF în cadrul unui grup; 3. Odată ce fișele CAF sunt completate, studentii se rotesc în grupuri și văd factorii pe care alte grupuri i-au notat; 4. Studentii ar putea avea timp să modifice sau să adauge la factorii inițiali alte idei, pe baza a ceea ce alte grupuri au scris pe foile lor; 5. La final se recomandă un debriefing pentru a reuni toți factorii menționați pe fișe.</p> <p>Beneficiul real al acestei metode este că lucrând în grup, studentii se simt în „zona de confort” încă de la început și se simt liberi să contribuie fără teama de a greși. Mai mult decât atât, au acces la punctele de vedere ale membrilor care aparțin altor grupuri, fapt care îi face să aibă perspective multiple asupra viitorului lor produs.</p>
Link	

## 31 PA#92: Facilitators creating scope for building higher-order thinking skills to enhance action- and reflection- based learning

Nextfood Practice Abstract #92	Partner	Welthungerhilfe/University of Calcutta, Anshuman Das, Parthiba Basu, Ritam Bhattacharya
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Short title in English	Facilitators creating scope for building higher-order thinking skills to enhance action- and reflection- based learning
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>“Thinking” has occupied a major portion of contemporary pedagogic through practices involving critical thinking, logical thinking, reasoning, inferring, problem solving, creative thinking and, more recently design thinking - despite the fact that teachers often feel the urge to <i>tell</i> the answer rather than allowing students to ponder on critical questions.</p> <p>In the NextFood course organised by Welthungerhilfe in collaboration with the University of Calcutta, facilitators tried to practice reversing this situation in the following ways:</p> <ul style="list-style-type: none"> <li>- Not providing theories first, but starting with a phenomena/challenge and letting students find many different solutions themselves.</li> <li>• Recognising that students are actively involved and in charge of their learning, where knowledge is constructed by them and through joyful, meaningful, engaging activities – not through monologues by teachers.</li> <li>• Giving room for group work as an important space where students can exchange ideas, form opinions and construct knowledge in absence of a teacher.</li> </ul> <p>Creating scope for identifying challenges, gathering information, generating ideas, providing solutions and testing its efficacy, taking one farm as a phenomena.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 32 PA#93: Designing learning spaces that accommodate facilitation-friendly and learner-centric education

Nextfood Practice Abstract #93	Partner	Welthungerhilfe/University of Calcutta, Anshuman Das, Parthiba Basu, Ritam Bhattacharya
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Short title in English	Designing learning spaces that accommodate facilitation-friendly and learner-centric education
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>Most of the time, classrooms are designed to make the entire class literally look up to the teacher, who is on a raised platform, without any scope for interaction. The teacher has very little space to move around and students moving around is considered to be undisciplined. There is no interaction space where students can sit in bunches and discuss in groups.</p> <p>In NextFood, we tried to break that stereotype and make the learning space more facilitation-friendly and learner-centric in the following ways:</p> <ul style="list-style-type: none"> <li>• Students and teachers are always able to face each other, sitting in a circle, allowing free interaction and moving around.</li> <li>• Chairs/tables are not fixed so that facilitator/students can gather in groups and when required to facilitate group discussions, group activities and peer learning.</li> <li>• Space for showcasing students' work – rather than only having a board where the teacher will write, such a space creates scope for peer learning.</li> <li>• Learning often happens outside the classroom –inclusion of learners in practitioners' spaces (for example farmers in their respective farm, chef in the restaurant) is important. A summary of learning can be done through group exercises following such sessions.</li> </ul>
Short summary for practitioners in native language on the final or expected outcomes	
Link	

## 33 PA#94: Development of sustainable farming systems I+II – dialogue 2

Nextfood Practice Abstract #94	Partner	University of South Bohemia in České Budějovice, Jan Moudrý
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Short title in English	Development of sustainable farming systems I+II – dialogue 2
Short title in native language	Projektování udržitelných systémů hospodaření I+II – dialog 2
Short summary for practitioners (English) on the final or expected outcomes	<p>The development of communication skills as a competence is one of the priority areas at the University of South Bohemia in České Budějovice. In addition to deepening communication between all actors and expanding discussion activities, there is primarily a single focus on selected individuals. Although overall discussions with the involvement of several actors is successful, we often experience that dominant persons usually profile themselves among the discussants, while individuals, for whom the development of communication skills should be more encouraged, withdraw to the background and communicate less. Therefore, we use several procedures to strengthen the communication skills of individuals: in addition to presenting and defending the outputs of projects to other students and other involved actors, we found that creating subgroups for discussion and dialogue proved useful. Students are divided into groups according to their level of communication skills and each group is encouraged to dialogue with varying degrees of intensity. The approach of the discussion facilitator is important, as the facilitator has to choose sensitive forms of motivation, especially for groups with the weakest communication skills, so that this does not slow down the communication with an overly intensive approach, but at the same time maintaining it. This can be achieved, for example, by emphasizing the introduction of one's own topics and by the presentation one's own work.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Rozvíjení komunikačních schopností je jednou z prioritních oblastí i na Jihočeské univerzitě v Českých Budějovicích. Proto je tato kompetence dále rozvíjena v návaznosti na aktivitu popsane v předchozím období. Vedle prohlubování komunikace mezi všemi aktéry a rozšiřování diskusních aktivit, jde především o individuální zaměření na vybrané jednotlivce. I když se daří rozvoj celkových diskusí se zapojováním více aktérů, zpravidla se mezi diskutujícími vyprofiluje několik dominantnějších osob, zatímco jednotlivci, u nichž by rozvíjení komunikačních schopností mělo být více podpořeno se stahují do pozadí a komunikují méně. K posílení komunikačních schopností jednotlivců bylo využito několik postupů, vedle prezentace a obhajoby výstupů studentských projektů směrem k ostatním studentům a dalším zapojeným aktérům, šlo především o vytvoření podskupin pro vedení diskusí a dialog. Studenti jsou rozděleni do skupin podle úrovně svých komunikačních dovedností a každá skupina je motivována k dialogu různou mírou intenzity. Důležitý je přístup</p>

	<p>moderátora diskuse, který musí zejména u skupin s nejslabšími komunikačními schopnostmi volit citlivé formy motivace tak, aby příliš intenzivním přístupem komunikaci nebrzdil, ale zároveň aby ji dokázal udržet. Toho lze dosáhnout např. důrazem na přinášení vlastních témat, prezentaci vlastní práce, atp.</p>
Link	

## 34 PA#95: Challenges with talent acquisition expressed by farmers

Nextfood Practice Abstract #95	Partner	Swedish University of Agricultural Sciences, Vera Sadovska
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Short title in English	Challenges with talent acquisition expressed by farmers
Short title in native language	Utmaningar med kompetensförsörjning ur böndernas perspektiv
Short summary for practitioners (English) on the final or expected outcomes	<p>The NextFood approach implies stakeholder engagement in education. Among the forms of such engagement are internships, practice or thesis projects performed by students at farms. Farmers are motivated to participate in such engagement because of the chance to acquire talented students as new employees.</p> <p>In the course of several interviews conducted with farmers in Greece, a number of concerns about such engagement was expressed by farmers:</p> <ul style="list-style-type: none"> <li>• The level of practical knowledge is generally low for students doing internships (approx. 6 month duration). According to one farmer, they have to be taught everything.</li> <li>• Low salaries at farms makes it difficult to compete with other industries and thereby attract the best students from the group. This leads to students selecting jobs in other sectors.</li> <li>• In cases where students do choose farm internship, the most talented leave to work for larger agricultural companies due to financial and employment reasons, which takes small and medium farms out of the job market competition.</li> </ul> <p>Such systemic problems are present at different levels. Universities should invest into equipping their students with better practical knowledge, while corresponding national authorities should make the agricultural sector more attractive for the young workforce.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>NextFood-metoden innebär att intressenter engageras i utbildning. Exempel på former för sådant engagemang är praktik eller examensarbete som studenter utför i lantbruksföretaget. Möjligheten att nyanställa lovande studenter är en motivation för lantbrukaren att delta i ett sådant engagemang.</p> <p>Under flera intervjuer som genomfördes med bönder i Grekland uttrycktes ett antal farhågor med ett sådant engagemang:</p> <ul style="list-style-type: none"> <li>• Nivån på praktiska kunskaper är generellt låg hos studenter som gör praktik (ca 6 månader). En av bönderna menade att man måste förklara allting.</li> <li>• Låga löner på gården gör det svårt att konkurrera med andra branscher och därmed attrahera de bästa studenterna från en grupp. Detta leder till att studenter väljer jobb inom andra sektorer.</li> </ul>

	<ul style="list-style-type: none"> <li>• I de fall när studenter väljer gårdspraktik, hoppar de mest begåvade av och söker sig till större lantbruksföretag på grund av ekonomiska och andra anställningsmässiga fördelar, vilket utesluter små och medelstora företag från att konkurrera på arbetsmarknaden.</li> </ul> <p>Sådana systemproblem finns på olika nivåer. Universiteten bör investera i att utrusta sina studenter med bättre praktiska kunskaper, samtidigt som motsvarande nationella myndigheter bör göra lantbrukssektorn mer attraktiv för den unga arbetskraften.</p>
Link	

## 35 PA#96: Fungal diseases in oregano plants – reflections from a multi-actor educational setting

Nextfood Practice Abstract #96	Partner International Hellenic University (IHU), Emmanouil Navrozidis, Georgios Petropoulos
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Short title in English	Fungal diseases in oregano plants – reflections from a multi-actor educational setting.
Short title in native language	Μυκητολογικά προβλήματα ρίγανης
Short summary for practitioners (English) on the final or expected outcomes	<p>The Greek oregano (<i>Origanum vulgare</i>) is a perennial and herbaceous medicinal plant. It is highly tolerant and grows well even in very poor, dry, and stony soils.</p> <p>All oregano types are susceptible to a variety of fungal diseases and especially <i>Alternaria</i> (<i>Alternaria alternata</i>) whose symptoms are manifested in plants with spots and tears in stems, shoots, and leaves. This fungus typically creates a slight yellowing of the surface around the stain and can cause withered and infected leaves and flowers to fall.</p> <p>During 2021, an oregano producer participating in the NextFOOD project observed a decrease in plant growth and production of oregano essential oils. The reduction of production amounted to 50%, a result threatening the farmer's economic viability.</p> <p>Following a number of field visits and observations of the plants, fungal infestations of the genus <i>Alternaria</i> sp. were identified as determined by the phytopathology laboratory of the International Hellenic University (IHU).</p> <p>For treating the fungal disease, the use of resistant oregano varieties, and uninfected seeds or seeds coated with suitable fungicides were recommended to the producer. Where susceptible to infection varieties were cultivated, it was also recommended to remove and burn the infected plant residues as well as weeds of possible hosts. Where there was a need for chemical control, copper preparations such as copper oxychloride, organic copper preparations and two mixtures of fungicides a) triazole and amidoxime (Cidely Top) and b) fenamidone and propamocarb hydrochloride (Consento 450SC) were proposed.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Η Ελληνική ρίγανη (<i>Origanum vulgare</i>) είναι αυτοφυές φαρμακευτικό φυτό, πολυετές και ποώδες. Αναπτύσσεται καλά ακόμα και σε πολύ φτωχά, ξερικά και πετρώδη εδάφη.</p> <p>Όλα τα είδη ρίγανης εμφανίζουν ευαισθησία σε ποικιλία μυκητολογικών ασθενειών και κυρίως της Αλτερναρίωσης (<i>Alternaria alternata</i>) της οποίας τα συμπτώματα εκδηλώνονται στα φυτά με κηλιδώσεις και σχισίματα σε στελέχη, βλαστούς και φύλλα. Σε μεγάλο αριθμό φύλλων δημιουργείτε ελαφρύ κιτρίνισμα της επιφάνειας γύρω από την κηλίδωση καθώς και πτώση μαραμένων και προσβεβλημένων φύλλων αλλά και ανθέων.</p>



	<p>Το έτος 2021, καλλιεργητής ρίγανης και συμμετέχων του προγράμματος NextFOOD παρατήρησε μείωση στην ανάπτυξη φυτών και την παραγωγή αιθέριων ελαίων. Η μείωση της παραγωγής ανήλθε σε ποσοστό 50%, αποτέλεσμα επίφοβο για την οικονομική εξέλιξη της καλλιέργειας. Έπειτα από επισκέψεις και παρατηρήσεις των φυτών, εντοπίστηκαν στα φυτά προσβολές από μύκητα του γένους <i>Alternaria</i> sp. όπως προσδιορίστηκε στο εργαστήριο Φυτοπαθολογίας του Διεθνούς Πανεπιστημίου της Ελλάδος (ΔΙ.ΠΑ.Ε.).</p> <p>Για την αντιμετώπιση της ασθένειας συστάθηκε η χρήση ανθεκτικών ποικιλιών, χρήση μη προσβεβλημένων σπόρων ή σπόρων που έχουν επικαλυφθεί με κατάλληλα μυκητοκτόνα σκευάσματα. Ακόμη συνίσταται η απομάκρυνση και η καύση των μολυσμένων φυτικών υπολειμμάτων καθώς και ζιζανίων πιθανών ξενιστών σε περίπτωση φύτευσης και καλλιέργειας ευάλωτων ποικιλιών. Για την χημική καταπολέμηση παθογόνων του γένους, προτείνονται χαλκούχα σκευάσματα όπως cooper oxychloride, οργανικά χαλκούχα σκευάσματα και δύο μείγματα μυκητοκτόνων α) τριαζόλη και amidoxime (Cidely Top) και β) fenamidone και propamocarb hydrochloride (Consento 450SC).</p>
Link	

## 36 PA#97: Student experiences from participating in Learning Sets studying the effect(s) of cannabis protein on the quality characteristics of bread

Nextfood Practice Abstract #97	Partner	International Hellenic University, AFS, Farmouzi Kiki, Sevastopoulou Nikoleta
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Short title in English	Student experiences from participating in Learning Sets studying the effect(s) of cannabis protein on the quality characteristics of bread.
Short title in native language	Η επίδραση της πρωτεΐνης κάνναβης στα ποιοτικά χαρακτηριστικά του άρτου.
Short summary for practitioners (English) on the final or expected outcomes	<p>For our research thesis (Food Science and Technology department of the International Hellenic University) we studied <b>the effects of cannabis protein on quality characteristics of bread</b>. To this end, we produced a number of breads that contained varied percentages of cannabis protein (0%, 5%, 10%, 15%). The samples were stored for 1, 4 and 6 days respectively in order to study the effects of <b>staling</b> in each case. We looked at the <b>weight, volume, color and texture</b> of the bread samples. We also performed an organoleptic evaluation of the bread with eleven experienced taste-testers. The results of the evaluation showed that the bread was <b>well accepted</b> by most.</p> <p>Through the whole process of the research project and the Learning Sets -based on action-learning principles - we developed personal skills needed for <b>cooperation</b> and <b>working in a team</b>. The people we worked with had different professional backgrounds and shared with us their professional knowledge and experience and so contributed to our skills development. Furthermore, the process of participating in the Learning Sets helped us <b>organize our thoughts</b> and solve problems more efficiently.</p> <p>Generally, the use of Cannabis Protein in bread products has not been explored extensively and this is why we believe it is <b>innovative</b>. As such, we believe that our research project could be the basis for further research. Another proposal could include other cannabis protein fortified wheat products like cakes or biscuits.</p>
Short summary for practitioners in native language on the final or expected outcomes	Στο πλαίσιο της διπλωματικής μας εργασίας μελετήσαμε την <b>επίδραση της πρωτεΐνης κάνναβης στα ποιοτικά χαρακτηριστικά του άρτου</b> . Για το σκοπό αυτό, παρασκευάσαμε διάφορα είδη ψωμιών, τα οποία

	<p>περιείχαν πρωτεΐνη κάνναβης σε ποσοστά 5%, 10% και 15%, καθώς και ψωμί το οποίο δεν περιείχε καθόλου πρωτεΐνη. Αυτά τα δείγματα συντηρήθηκαν για 1, 4 και 6 μέρες έτσι ώστε να μελετήσουμε την επίδραση που έχει το μπαγιάτεμα σε αυτά. Στα ψωμιά μελετήσαμε <b>το βάρος, τον όγκο, το χρώμα και την υφή της ψίχας</b>. Επίσης, πραγματοποιήσαμε <b>οργανοληπτικό έλεγχο</b> στον οποίο εξετάστηκαν διάφοροι παράγοντες από <b>έντεκα έμπειρους δοκιμαστές</b>. Τα αποτελέσματα των δοκιμαστών έδειξαν ότι το ψωμί γίνεται αποδεκτό από τους περισσότερους.</p> <p>Μέσα από όλη τη διαδικασία αναπτύξαμε <b>προσωπικές δεξιότητες</b> όπως η <b>συνεργασία και η ομαδικότητα</b>. Στην ανάπτυξη αυτών των δεξιοτήτων συνέβαλαν όλοι οι συμμετέχοντες οι οποίοι είχαν διαφορετική επαγγελματική κατάρτιση και μοιράστηκαν μαζί μας διαφορετικές εμπειρίες και γνώσεις. Επιπλέον, η όλη διαδικασία μας βοήθησε στην σωστή οργάνωση των σκέψεων μας και στη διαχείριση προβλημάτων.</p> <p>Γενικότερα, το θέμα αφορά την πρωτεΐνη κάνναβης σε προϊόντα αρτοποιίας, κάτι που δεν έχει μελετηθεί αρκετά γι' αυτό το θεωρούμε ως κάτι <b>καινοτόμο</b>. Έτσι, τα αποτελέσματα της δικής μας μελέτης ίσως να αποτελέσουν βάση κάποιας άλλης έρευνας. Κάποιες πιθανές <b>προτάσεις για περαιτέρω έρευνα</b> είναι η παρασκευή άλλων προϊόντων άρτου με χρήση πρωτεΐνης κάνναβης, όπως κέικ ή μπισκότα.</p>
<b>Link</b>	

## 37 PA#98: Working with stakeholders from agroecology: a way to inspire and promote students' participation and engagement in their learning experience.

Nextfood Practice Abstract #98	Partner	University of Chile, Claudia Rojas, Francisco Nájera, Ricardo Pertuzé, Andrés Muñoz-Sáez, Gabriela Lankin, Osvaldo Salazar
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Short title in English	<b>Working with stakeholders from agroecology: a way to inspire and promote students' participation and engagement in their learning experience.</b>
Short title in native language	Trabajando con actores sociales de la agroecología: una forma para inspirar y promover la participación y compromiso de los estudiantes en su experiencia de aprendizaje.
Short summary for practitioners (English) on the final or expected outcomes	<p>One of the main learning outcomes of the UCH course "Linking agroecology with society" was to develop a diagnosis and proposal for improvements in an agroecological system through participatory research in two different case studies. The faculty team invited stakeholders from agroecological farms willing to participate in the case studies.</p> <p>Students and stakeholders met and built a relationship based on respect and horizontality that allowed the engagement and compromise of the learners with the course project. They demonstrated their commitment in the assignment through active participation, group meetings, and integration of the challenges of the case studies from their own voices. The real-life case studies motivated the students to do their best in order to help the stakeholders. The last demonstrated their social responsibility and professionalism.</p> <p>The interactions with the stakeholders inspired the students, which motivated them to participate actively during the case study. The <i>"farmer's ability to deliver their knowledge, with the best disposition to teach from humility"</i> and <i>"agroecology is difficult but possible, as a way of life"</i> were the quotes that stayed in their minds over the whole process.</p> <p>So, working with stakeholders can teach us:</p> <ul style="list-style-type: none"> <li>a) Engagement can be encouraged by inspiration given by stakeholders;</li> <li>b) Inviting stakeholders into traditional courses gives dynamic to the learning experience, and it can lead to learning outcomes like social engagement;</li> <li>c) It is vital to count on the continuous support of the stakeholders during the development of the learning experience.</li> </ul>
Short summary for practitioners in native	Uno de los principales objetivos de aprendizaje del curso "Vinculación de la agroecología con la sociedad" de la UCH, fue

**language on the final or expected outcomes**

desarrollar un diagnóstico y propuesta de mejoras en un sistema agroecológico a través de una investigación participativa.

El equipo docente invitó a actores sociales vinculados a la agroecología con la voluntad de participar como casos de estudio.

Los estudiantes y actores sociales se encontraron y desde el principio construyeron una relación basada en el respeto y la horizontalidad que permitió involucrar y comprometer a los estudiantes con el proyecto del curso. Los estudiantes demostraron su compromiso través de una participación activa entre ellos, reuniones grupales e integración de los desafíos de cada actor social desde sus propias voces. Trabajar con casos de la vida real, motivó a los estudiantes a hacer todo lo posible para ayudar a los actores involucrados, demostrando su responsabilidad social y profesionalismo.

La interacción con los actores sociales inspiró a los estudiantes, motivándolos a participar activamente. “La capacidad del agricultor para entregar sus conocimientos, con la mejor disposición para enseñar desde la humildad” y “la agroecología es difícil pero posible, como forma de vida” fueron las frases que quedaron grabadas en sus mentes durante todo el proceso.

Entonces, trabajar con actores sociales puede enseñarnos:

a) La participación puede ser fomentada por la inspiración de los actores sociales; b) Invitar a otros actores a los cursos tradicionales da dinamismo a la experiencia de aprendizaje y puede conducir a resultados de aprendizaje como el compromiso social; c) Es vital contar con el apoyo continuo de los actores sociales durante el desarrollo de la experiencia de aprendizaje.

**Link**

## 38 PA#99: How can a cooking video teach about observation and holistic understanding of agroecological systems?

Nextfood Practice Abstract #99	Partner	University of Chile, Claudia Rojas, Gabriela Lankin, Francisco Nájera, Andrés Muñoz-Sáez, Ricardo Pertuzé, Osvaldo Salazar
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Short title in English	How can a cooking video teach about observation and holistic understanding of agroecological systems?
Short title in native language	¿Cómo un video de cocina puede enseñar sobre observación y sobre la comprensión holística de sistemas agroecológicos?
Short summary for practitioners (English) on the final or expected outcomes	<p>During the UCH course “Linking agroecology with society,” there was a session about holistic understanding of agroecological systems. The primary aim of the session was to co-create guidelines between learners and facilitators about what to observe and ask in the agroecosystem. The session was centered on the core competence of OBSERVATION: How a motivational activity can be adapted to online sessions? The “Observation walk” exercise of the NextFOOD Toolbox was an excellent starting point, so it was adapted for a virtual lecture. Facilitators showed the students a <u>video</u> where the famous chef Jamie Oliver cooked a <i>Healthy South American Brunch</i>. After watching the video, facilitators asked some quick questions such as “<i>how many botanical families were in the recipe?</i>” or “<i>What colour was the kitchen bench?</i>” Then, facilitators asked: <i>what captured most of your attention and why?</i> The responses were diverse and each participant focused on different aspects or parts of the video, understanding that OBSERVATION involves different senses and different perspectives. When the conversation turned into what to observe and ask in the field, participants highlighted the importance of sharing their observations with the others to understand complex systems. Each participant’s disciplinary background influenced the chosen measurement and observation instruments and the questions to be asked in the field. Therefore, participants concluded that it is key to build interdisciplinary working teams. The video was an excellent introductory exercise to understand that OBSERVATION needs time, focus, and no judgments, OBSERVATION need to be shared, in order to gather different visions for a robust and integrative diagnosis of reality.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>En el curso UCH "Vinculación de la agroecología con la sociedad", se hizo una sesión sobre la comprensión holística de los sistemas agroecológicos. El objetivo era co-crear una guía entre estudiantes y facilitadores, sobre lo que hay que observar y preguntar en un agroecosistema. La sesión se centró en la competencia de la OBSERVACIÓN: ¿Cómo hacer una actividad motivadora online? El ejercicio "Observation Walk" de la "Tool Box" fue un excelente punto de partida, por lo que se adaptó para</p>

	<p>una clase virtual. Los docentes mostraron a los estudiantes un video del famoso chef Jamie Oliver quien cocinaba un <i>Brunch sudamericano</i>. Después de ver el video, se hicieron preguntas rápidas, como "¿cuántas familias botánicas había en la receta?" o "¿de qué color era la superficie de la cocina? A continuación se preguntó: ¿qué es lo que más te ha llamado la atención y por qué? Las respuestas fueron diversas y cada participante se centró en diferentes aspectos o partes del video, entendiendo que la OBSERVACIÓN involucra distintos sentidos y tiene diferentes perspectivas. Cuando la conversación giró en torno a qué observar y preguntar en el campo, los participantes destacaron la importancia de compartir sus observaciones con los demás para comprender sistemas complejos. Las disciplinas de cada participante influyeron en los instrumentos de medición y observación a elegir y en las preguntas a formular en el campo. Por ello, se concluyó que es fundamental crear equipos de trabajo interdisciplinarios. El video fue un excelente ejercicio introductorio para comprender que la OBSERVACIÓN necesita tiempo, concentración y es sin juicios. Las OBSERVACIONES deben ser compartidas, con el fin de reunir diferentes visiones para un diagnóstico sólido e integrador de la realidad.</p>
Link	

## 39PA#100: Education for sustainable agrifood systems –a literature review of existing experiences. Preliminary outcomes.

Nextfood Practice Abstract #100	Partner	Claudia Rojas (University of Chile) Stine Rosenlund Hansen (RUC), Katherine Flynn and Line Lindner (ISEKI-Food Association)
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Short title in English	Education for sustainable agrifood systems –a literature review of existing experiences. Preliminary outcomes.
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>A systematic literature review of peer-reviewed articles addressing education for sustainable agrifood systems was performed. The purpose of this review is to identify the primary discussions around guidelines for education in sustainable agrifood systems. Including education for sustainability in other fields.</p> <p>For a solid literature search, the methodology consisted in 4 phases: 1) Formulating research keywords; 2) Test search, inclusion and exclusion criteria; 3) Identification of search blocks; 4) Data extraction. The searching process ended with 40 relevant peer reviewed articles (2010-2022) to be systematized. The authors in parallel to this process, suggested a list of merged codes contained in 5 overall categories. This is a preliminary approach towards an educational guideline for sustainable agrifood systems:</p> <p><b>BARRIERS AND DRIVERS:</b> management and role of institutions, students, teachers, societal actors, political framework, and measured evidence.</p> <p><b>PAEDAGOGY AND LEARNING APPROACHES:</b> experiential learning, stakeholders' participation, participatory learning environment, assessment of learning outcomes, and specific learning methods.</p> <p><b>STUDENTS LEARNING AND OUTCOMES:</b> systems thinking, navigate complexity and uncertainty, teamwork collaboration and group organization, community outreach, communication, critical thinking and reflection, interdisciplinary learning, among others.</p> <p><b>VALUES AND HIDDEN CURRICULUM:</b> community/social engagement, decision criteria, fostering sense of belonging, moral dimension, societal demands, acting in opposition, non-hierarchical co-learning, among others.</p> <p><b>QUALITY STANDARDS AND ASSURANCE:</b> assessing values and data for the approach implementation.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	



## 40 PA#101: Practice abstract evaluation framework – Czech pilot

Nextfood Practice Abstract #101	Partner University of South Bohemia in České Budějovice, Jan Moudrý
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<b>Short title in English</b>	<b>Practice abstract evaluation framework – Czech pilot</b>
<b>Short title in native language</b>	Hodnotící rámec pro practice abstracts – Český pilotní test
<b>Short summary for practitioners (English) on the final or expected outcomes</b>	An important part of the framework for the evaluation of applied research is also the evaluation of practice abstracts (PAs). An evaluation framework for PAs was created as part of the Czech pilot test. During the creation of the evaluation framework, testing of PAs by selected target groups took place on the basis of a structured questionnaire with areas covering selected groups of indicators (relevance, effectiveness, significance, innovation, sustainability). PAs were tested in individual meetings or focus groups with selected target groups of stakeholders (farmers, advisors, policy makers, employees of control organizations, experts in agricultural practice, etc.). Before the testing itself, the respondents were asked to choose the most professionally relevant PA for them, which they first verbally evaluated. Their feedback was recorded and subsequently the PA respondents evaluated with the help of a prepared questionnaire. The obtained data were used for further adjustments of the PA evaluation framework, especially for the adjustment of evaluation indicators and the formulation of questions, subsequently also for the adjustment of the evaluation scale for selected questions. The language barrier appears to be an important factor in the evaluation of PAs, both in terms of language skills (if the PA is not available in the respondent's native language) and in terms of text structure and terminology used (some PAs are assessed as incomprehensible by selected target groups, or difficult to understand). The choice of a wide range of respondents also proved to be an important factor in setting the evaluation framework, e.g. from the point of view of their expertise or time of work in the field.
<b>Short summary for practitioners in native language on the final or expected outcomes</b>	Významnou součástí rámce pro hodnocení aplikovaného výzkumu je i hodnocení practice abstracts (PAs). V rámci českého pilotního testu byl vytvořen hodnotící rámec pro PAs. V průběhu tvorby hodnotícího rámce proběhlo testování PAs vybranými cílovými skupinami na základě strukturovaného dotazníku s okruhy postihujícími vybrané skupiny indikátorů (relevance, efektivnost, významnost, inovativnost, udržitelnost). PAs byly testovány v rámci individuálních setkání nebo focus groups s vybranými cílovými skupinami stakeholderů (farmáři, poradci, tvůrci politik, zaměstnanci kontrolních organizací, experti ze zemědělské praxe, atd.) . Před samotným testováním byly respondenti vyzváni, aby si vybrali z odborného hlediska pro ně nejrelevantnější PA, který nejprve slovně zhodnotili. Jejich zpětná

	<p>vazba byla zaznamenána a následně respondenti PA vyhodnocovali s pomocí připraveného dotazníku. Získaná data byla použita pro další úpravy hodnotícího rámce PA, zejména k úpravě hodnotících indikátorů a formulaci otázek, následně také k úpravě hodnotící škály u vybraných otázek. Jako významný factor při vyhodnocování PAs se jeví jazyková bariéra, a to jak ve smyslu znalosti jazyků (v případě, že PA není dostupný v rodném jazyce respondenta), tak z pohledu struktury textu apoužité terminologie (některé PA jsou vybranými cílovými skupinami hodnoceny jako nesrozumitelné, či obtížně srozumitelné). Významným faktorem pro nastavení hodnotícího rámce se ukázala i volba širokého spektra respondentů, např. z pohledu jejich odbornosti, či doby působení v oboru.</p>
Link	

# 41 PA#102: Using precision livestock farming (PLF) systems to detect mastitis in sheep

Nextfood Practice Abstract #102	Partner	International Hellenic University (IHU)-American Farm School, Eva Petkana
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Short title in English	Using precision livestock farming (PLF) systems to detect mastitis in sheep
Short title in native language	Χρήση συστημάτων κτηνοτροφίας ακριβείας (PLF) για την ανίχνευση μαστίτιδας στα πρόβατα
Short summary for practitioners (English) on the final or expected outcomes	<p>My dissertation project, which was undertaken as part of the NextFOOD programme, involved conducting an experiment to explore how precision livestock farming (PLF) affects the health and welfare of small ruminants. The experiment took place in a farm with lacaune sheep in Kastoria, Greece. Specifically, I used the California Mastitis Test (CMT), which is considered to be the “gold standard” method for detecting mastitis, and the Electrical Conductivity (EC), which is a PLF system, to see how reliable the second one (EC) is compared to the first one (CMT). Mastitis is one of the most common health problems in small ruminants and has a considerable impact on animal performance and productivity, and farm profitability. Therefore, the early detection and treatment of mastitis is of paramount importance.</p> <p>The results of the experiment showed that EC was equally valid to CMT. This means that the end user can use the EC to detect mastitis in sheep reliably and in half the time compared to the CMT. The EC is easy to use and interpret, and less time consuming than any other detection mastitis method. The cost to purchase the equipment is reasonable for an automatic tool that operates well. As a result, considering the results that I got from my experiment in combination with other related studies, I strongly recommend the use of EC as a reliable and user-friendly method to detect mastitis in sheep.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Η διατριβή μου, η οποία έλαβε χώρα ως μέρος του προγράμματος NextFOOD, περιελάμβανε τη διεξαγωγή ενός πειράματος με στόχο τη διερευνήση των επιπτώσεων της κτηνοτροφίας ακριβείας (PLF) στην υγεία και την ευημερία των μικρών μηρυκαστικών. Το πείραμα πραγματοποιήθηκε σε φάρμα με πρόβατα lacaune στην Καστοριά, Ελλάδα. Συγκεκριμένα, χρησιμοποίησα το τεστ μαστίτιδας Καλιφόρνια (CMT), το οποίο θεωρείται ως η πιο αξιόπιστη μέθοδος για την ανίχνευση της μαστίτιδας, και το τεστ ηλεκτρικής αγωγιμότητας (EC), το οποίο</p>

	<p>ανήκει στις τεχνολογίες κτηνοτροφίας ακριβείας , για να ελέγξω πόσο αξιόπιστο είναι το δεύτερο (EC) σε σχέση με το πρώτο (CMT). Η μαστίτιδα είναι ένα από τα πιο κοινά προβλήματα υγείας στα μικρά μηρυκαστικά και έχει σημαντικό αντίκτυπο στην απόδοση και την παραγωγικότητα των ζώων, καθώς και στην κερδοφορία των παραγωγικών μονάδων. Ως εκ τούτου, η έγκαιρη διάγνωση και θεραπεία της μαστίτιδας είναι ιδιαίτερα σημαντική.</p> <p>Τα αποτελέσματα του πειράματος έδειξαν ότι η μέθοδος EC ήταν εξίσου έγκυρη με το τεστ CMT. Αυτό σημαίνει ότι ο τελικός χρήστης μπορεί να χρησιμοποιήσει την EC για την ανίχνευση μαστίτιδας στα πρόβατα αξιόπιστα και στο μισό χρόνο σε σύγκριση με το τεστ CMT. Η μέθοδος EC είναι εύκολη στη χρήση και λιγότερο χρονοβόρα από οποιαδήποτε άλλη μέθοδο ανίχνευσης μαστίτιδας. Το κόστος αγοράς του εξοπλισμού είναι λογικό για ένα αυτόματο εργαλείο που λειτουργεί αξιόπιστα. Ως αποτέλεσμα, λαμβάνοντας υπόψη τα αποτελέσματα που έλαβα από το πείραμά μου σε συνδυασμό με άλλες σχετικές μελέτες, συνιστώ ανεπιφύλακτα τη χρήση της μεθόδου EC ως αξιόπιστης και φιλικής προς το χρήστη τεχνολογίας για την ανίχνευση μαστίτιδας στα πρόβατα.</p>
Link	

## 42 PA#103: On being a female farmer in Greece

Nextfood Practice Abstract #103	Partner Petkanas Sheep Farm – American Farm School, Efi Nitsa
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Short title in English	On being a female farmer in Greece
Short title in native language	Οι πολλαπλοί ρόλοι των γυναικών κτηνοτρόφων στην Ελλάδα
Short summary for practitioners (English) on the final or expected outcomes	<p>I am a 46-year-old female farmer working in a family-run sheep farm in Greece. Being a woman in the farming sector is very challenging as you have to juggle between multiple roles. As a wife and a mother, you have to take care of a household and children. As a professional, you have to contribute to the farm in many ways; from helping out with the sheep, cleaning up, doing the accounting and keeping the farm log.</p> <p>The amount of work and responsibilities that I have can be overwhelming, but it's also satisfying to know that women can play a very important role in such a difficult profession which is largely male dominated. Nevertheless, sheep farming over the years has become less physically demanding with all the new technologies being used for feeding and milking, amongst others. Thus, giving women the opportunity to be able to run a farm with sheep, cows, or any other livestock, more efficiently.</p> <p>Moreover, given that women nowadays are better educated on farming matters and practices, they can provide more input on new methods and on how to run farms in a more financially and environmentally sustainable manner. As a female farmer myself, I try to get educated on a daily basis through reading relevant articles and finding out about new innovations in the farming sector. Applying innovations to our farm, could minimise physical labour and improve the well-being for our sheep. Such methods overall could both increase production efficiency and enable more women to get professionally involved with the farming sector.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Είμαι μια 46χρονη γυναίκα κτηνοτρόφος που εργάζεται σε μια οικογενειακή επιχείρηση εκτροφής προβάτων στην Ελλάδα. Το να είσαι γυναίκα στον αγροτικό τομέα είναι απαιτητικό εγχείρημα καθώς καλείσαι να ανταπεξέλθεις ταυτόχρονα σε πολλούς, διακριτούς ρόλους. Ως σύζυγος και μητέρα, πρέπει να φροντίζεις το νοικοκυριό και τα παιδιά. Ως επαγγελματίας, πρέπει να συνεισφέρεις στη φάρμα με πολλαπλούς τρόπους; από τη διαχείριση των ζώων, το καθάρισμα, την τήρηση ημερολογίου φάρμας και λογιστικών βιβλίων.</p> <p>Ο όγκος της δουλειάς και των ευθυνών που έχω μπορεί να είναι δύσκολα διαχειρίσιμος, αλλά είναι επίσης ικανοποιητικό να γνωρίζεις ότι οι γυναίκες μπορούν να παίξουν πολύ σημαντικό</p>

	<p>ρόλο σε ένα τόσο δύσκολο επάγγελμα που κυριαρχείται σε μεγάλο βαθμό από άντρες. Ακόμη, η εκτροφή προβάτων με την πάροδο των ετών έχει γίνει λιγότερο απαιτητική σωματικά με όλες τις νέες τεχνολογίες που χρησιμοποιούνται για τη σίτιση και το άρμεγμα, μεταξύ άλλων. Έτσι, δίνεται η ευκαιρία στις γυναίκες να μπορούν να διαχειρίζονται μια φάρμα με πρόβατα, αγελάδες ή οποιοδήποτε άλλο ζωικό κεφάλαιο, πιο αποτελεσματικά.</p> <p>Επιπλέον, δεδομένου ότι οι γυναίκες σήμερα έχουν καλύτερη εκπαίδευση και ενημέρωση σε θέματα γεωργίας και αγροτικές πρακτικές, έχουν τη δυνατότητα να εισάγουν νέες μεθόδους παραγωγής ώστε η διαχείριση της παραγωγής να γίνεται με πιο οικονομικά και περιβαλλοντικά βιώσιμο τρόπο. Ως κτηνοτρόφος, προσπαθώ να ενημερώνομαι σε καθημερινή βάση διαβάζοντας σχετικά άρθρα και μαθαίνοντας για νέες καινοτομίες στον κτηνοτροφικό τομέα. Η εφαρμογή καινοτομιών στη φάρμα μας, θα μπορούσε να ελαχιστοποιήσει τη σωματική εργασία και να βελτιώσει την ευημερία των προβάτων μας. Η χρήση καινοτομιών συνολικά, παρέχει τη δυνατότητα για αύξηση της παραγωγικής αποδοτικότητας, επιτρέποντας παράλληλα σε περισσότερες γυναίκες να ασχοληθούν επαγγελματικά με τον τομέα της αγροτικής παραγωγής.</p>
Link	

## 43 PA#104: Test and development of the NextFood Impact Framework in a research context

Nextfood Practice Abstract #104	Partner	Swedish University of Agricultural Sciences, Sveriges Lantbruksuniversitet, Lisa Blix Germundsson
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Short title in English	Test and development of the NextFood Impact Framework in a research context
Short title in native language	Testa och utveckla NextFood Impact Framework i forskningssammanhang
Short summary for practitioners (English) on the final or expected outcomes	<p>The overall aim of this study is to test and develop an assessment framework for defining and evaluating the quality of interactive innovation and practice-oriented research in the agri-food and forestry sectors, focused on economic and social usefulness than on their scientific character. This framework will advance global research evaluation practice and bring a degree of standardization and transparency to the assessment of innovation and practice-oriented research quality.</p> <p>The aim of this pilot phase, is to test the Nextfood Impact Framework, disclose its strengths and weaknesses, and make suggestions for further refinement of the framework. The pilot consisted of four agricultural research projects at SLU. The main results include the following:</p> <ul style="list-style-type: none"> <li>- Adaptation of the framework structure and procedural steps to facilitate the practical use of the framework in a research context</li> <li>- A set of general indicators to allow for comparability between projects, such as; external actors involved from the beginning; financial commitments by external actors; number of meetings in the project, face-to-face or via digital meetings.</li> <li>- Identification of issues of concern such as stakeholder inclusion and group constitution, the need for resources, impacts on different levels and dimensions, flexibility versus comparability in developing indicators, and time of when to measures impacts.</li> </ul> <p>The main practical recommendations concluded from this project is to form a stakeholder group early, include them in the impact work, and chose indicators carefully.</p>
Short summary for practitioners in native language on the final or expected outcomes	<p>Syftet med denna studie är att utveckla ett ramverk för att utvärdera forskning inom jordbruks- och skogsbrukssektorn. Det nuvarande systemet för utvärdering av tillämpad forskning är baserat på akademiska meriter, t ex antalet vetenskapliga publikationer. Denna metod för resultatmätning skapar inte tillräckliga incitament för att gynna praktikorienterad forskning tillsammans med intressenter. Utvärdering av tillämpad forskning</p>

	<p>bör istället fokusera på ekonomisk och social användbarhet, snarare än vetenskaplig publicerbarhet.</p> <p>Syftet med denna pilotfas är att testa Nextfood Impact Framework, för att identifiera styrkor och svagheter, samt generera insikter inför den fortsatta utvecklingen av ramverket. Två pilotstudier kommer att genomföras, i Sverige respektive i Tjeckien. Den svenska piloten består av fyra fall, presenterade nedan. Dessa fyra fall är alla tillämpade forskningsprojekt vid SLU Alnarp. Resultaten inkluderar följande:</p> <ul style="list-style-type: none"> <li>- Anpassning av ramverkets struktur och process för att underlätta den praktiska användningen i forskningssammanhang</li> <li>- En uppsättning indikatorer för att möjliggöra jämförbarhet mellan projekt, såsom; externa aktörer involverade från början; finansiella åtaganden från externa aktörer; antal möten i projektet, ansikte mot ansikte eller via digitala möten.</li> <li>- Identifiering av problem som hur intressenter kan inkluderas, behovet av resurser, effekter på olika nivåer och dimensioner, flexibilitet kontra jämförbarhet vid utveckling av indikatorer, samt tidpunkt för när effekterna ska mätas.</li> </ul> <p>De viktigaste praktiska rekommendationerna från detta projekt är att tidigt bilda en intressentgrupp, inkludera dem i effektarbetet och välja indikatorer noggrant.</p>
Link	<a href="https://nextfood-project.eu">NextFood Project   Science &amp; Education for Sustainable Agriculture (nextfood-project.eu)</a>



## 44 PA#105: The NextfOOD Audit Tool – an assessment and reflection tool for educational actors

Nextfood Practice Abstract #105	Partner	Lund University, Roskilde University, Ivanche Dimitrievski, Stine Rosenlund Hansen
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Short title in English	The NextfOOD Audit Tool – an assessment and reflection tool for educational actors
Short title in native language	
Short summary for practitioners (English) on the final or expected outcomes	<p>The NextFOOD Audit tool was developed to enable educational actors to assess the extent to which they prepare students for their future careers in the agri-food and forestry sectors. The tool can be used for self-assessment or for creating surveys to collect inputs from other stakeholders, such as students. The tool is available online, free of charge, and consists of four interconnected parts:</p> <ol style="list-style-type: none"> <li>1. In the first part, users are asked to provide background information on gender, age, work experience, type of education, etc.</li> <li>2. The second part is a questionnaire, including ranking questions organized around seven skilling themes.</li> <li>3. In the third part, users are invited to reflect on the results of the questionnaire in relation to a set of open-ended questions.</li> <li>4. The fourth part consists of reflection exercises, designed to engage users in dialogues over ways to develop their educational activities further.</li> </ol> <p>Users can download the results as Excel files, to be used for statistical analysis. The insights generated in this way will enable educational actors to finetune their education towards sustainable agriculture and forestry sectors.</p>
Short summary for practitioners in native language on the final or expected outcomes	
Link	The audit tool can be found at the Nextfood website: <a href="https://www.nextfood-project.eu/">https://www.nextfood-project.eu/</a>

## 45 PA#106: NextFood Sustainability Impact Framework

Nextfood Practice Abstract #106	Partner	Swedish University of Agricultural Sciences, University of South Bohemia in České Budějovice, Ivanche Dimitrievski, Lisa Blix Germundsson, Håkan Jönsson, Jan Moudrý
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Short title in English	NextFood Sustainability Impact Framework
Short title in native language	NextFood - Rámec pro hodnocení udržitelnosti
Short summary for practitioners (English) on the final or expected outcomes	The <i>NextFood Sustainability Impact Framework</i> is designed to evaluate the impacts of practice-oriented agri-food and forestry research, to facilitate the production of practice abstracts and assess their relevance to practitioners, and to evaluate the impacts of research work that is part of educational activities. It is thus relevant to agriculture, food, and forestry researchers and stakeholders, participants in EU-funded projects in these areas, and actors in agri-food and forestry education. The framework enables evaluating process- and product-related impacts in relation to social, environmental, and economic sustainability on the individual, project, organizational, and systemic levels. It encourages the inclusion of diverse stakeholders in the evaluation process and jointly specifying the impact areas relevant to the context in question. The framework differentiates between project-specific and general indicators of impact, including tentative examples for each category. Using the framework results in an impact index, including quantitative and qualitative components, to be used by individuals and organizations for planning and reporting purposes.
Short summary for practitioners in native language on the final or expected outcomes	NextFood – Rámec pro hodnocení udržitelnosti je navržen tak, aby vyhodnotil dopady prakticky orientovaného zemědělsko-potravinářského a lesnického výzkumu, aby usnadnil tvorbu praktických abstraktů a zhodnotil jejich relevanci pro odborníky a aby vyhodnotil dopady výzkumné práce, která je součástí vzdělávacích aktivit. Je tedy relevantní pro výzkumné pracovníky a zúčastněné strany v oblasti zemědělství, potravinářství a lesnictví, účastníky projektů financovaných EU v těchto oblastech a aktéry v oblasti zemědělsko-potravinářského a lesnického vzdělávání. Rámec umožňuje vyhodnotit procesní a produktové dopady ve vztahu k sociální, environmentální a ekonomické udržitelnosti na individuální, projektové, organizační a systémové úrovni. Podporuje zapojení různých zúčastněných stran do procesu hodnocení a společné upřesnění oblastí dopadu relevantních pro daný kontext. Rámec rozlišuje mezi projektovými a obecnými indikátory dopadu, včetně předběžných příkladů pro každou kategorii. Výsledkem použití rámce je index dopadu, včetně kvantitativních a kvalitativních složek, který mohou jednotlivci a organizace používat pro účely plánování a podávání zpráv.
Link	

