

Siena PRIMA SH Forum

22nd of May 2017

Within the 4PRIMA project the University of Siena organized a Stakeholder Forum aimed at engaging industrial actors in the Euro-Mediterranean Research and Innovation on food and water themes. The Siena Forum generally aimed at reinforcing the link between research, innovation and industrial know-how, and at promoting and stimulating adoption of innovation in Mediterranean companies of the agrifood sector. The development of innovative solutions in the food and water systems can promote the welfare of local communities, the business competitiveness and the regional economic development, which are essential conditions for more sustainable and inclusive Mediterranean societies.

The event has been organized with the auspices of Tuscany Region and in co-partnership with the Sustainable Development Solutions Network (SDSN), it tried to enhance the innovation potential of the PRIMA initiative and to inform Stakeholders about the PRIMA actions, making easier the way to participate to the calls for project that will be launched in 2018.

Together with academic representatives, Siena Stakeholder Forum was particularly useful because it involved more than 100 main MED agri-food players, such us:

- Representatives of Businesses belonging to each of the Agri-food value chain phase, with a particular attention to the Small and Medium Enterprises.
- Innovators and entrepreneurs especially young ones, and their representative associations.
- Consumers and their representative associations.
- Agri-food industrial policy makers.
- Financial Institutions.

The work sessions were characterized by business case presentations and debates focusing on the current issues of innovations implemented in agri-food by companies supporting sustainable development. In particular, it has been investigated the state of art of: the reasons, which have induced companies to implement their innovations, the difficulties found implementing innovative corporate operating solutions and practices, and which added value could be achieved by firms in cooperating activities developed with Northern and Southern MED partners. The highlights of the discussions are summed in the next sessions.



Session 1 Process and product innovations

In the first section, several interesting process and product innovations implemented around the Mediterranean area in agri-food industry have been presented. The aim of this section was to demonstrate that innovation not only is possible but are also needed to improve the Mediterranean cultivations. During the debate has emerged a strong need of cooperation in order to exchange and share knowledge, products, and innovation within all over the Mediterranean area because each country has a different capability in terms of storage, production, packaging, and labeling and could have a suitable solution for a particular problem of a neighbor country. Below is reported a detailed description of the individual business cases presented:

1. SEKEM-The Egyptian company focused on harnessing, safeguarding and reducing the use of water, through biodynamic farming, drip irrigation, natural wastewater treatment and wastewater reutilization.

RQ:

1. Biodynamic model is adopted to protect scarce resources and soil nutrition, help biodiversity, provide carbon sequestration and low energy consumption, provide healthy food and farms, greater employment and fighting poverty.

2. Difficulties mainly regards the in public and private partnership

3. The value added underlines the necessity to become more resilient for Africa. The co-operation will help transfer products all over Egypt, helping decrease poverty and malnutrition.

2. PIERALISI - The Pieralisi Group is leader in providing avant-garde separation solutions through centrifugal force. The Group has adopted a business organization based on two large divisions: the Olive Oil Division and the Separation Solutions Division.

RQ:

1. The main reasons regard managing time reduction, temperature decrease, energy saving connected to risk reduction, quality increase, and efficient extraction time.

2. Difficulty to change from the reality and traditional way to a new opportunity, and spread it throw-out the countries.

3. The value added by the new Agri-Food Business Model allows maintaining the quality and guaranteeing decrease in water distribution, thus saving water with the new technology.

3. FORMA NOVA - Innovation in dairy sheep farming- The FORMA NOVA has the aim to obtain optimized feeding and grazing techniques increasing the milk yield of the farm.

RQ:

1. To manage to prove how pecorino was not one of the first foods one should eliminate from the diet of those with cholesterol problems”. The chance to make way for a new way of conceiving sheep breeding and farming.



2. The difficulty raises from the international collaboration, due to limited partner numbers, high standards of milk quality, feeding process, animal's health, herds productivity.

3. The value added from the collaboration can be translated into technology transfer, knowledge transfer and local diversification.

4. CONFAGRICOLTURA - The intensive greenhouse horticulture production system allows to provide reduction of chemical inputs and water resources, the use of innovative materials with lower environmental impact and the adoption of virtuous farming practices.

RQ:

1. The reasons to implement innovation were pushed by the necessity to develop an integrated system EU-MED, in order to help farmers be aware of sustainability, plan intervention as to ensure sustainability to sustain such process.

2. The difficulties met regard mainly the development of broker profiles, networks with universities and institutions, due to different legislations, different market goals and different specific farmer requests.

3. The added value links to the opportunity to share knowledge, practises, security, quality of goods and international labour standards.

5. TRA.PRE.VIT Project - The aim of the project regards the farm technology vineyard platform while protecting the environment.

RQ:

1. The innovation regards the usage of TAGs RFID inside plants that did not compromise growth of the start-up and vegetation growth.

2. The future challenges regard the increase use of automation technologies in precision farming aimed to reduce the impact of the agricultural practices and to preserve the environment.

3. The added value through cooperation allow a better adoption of agronomical practices following the different vegetative status of the area.



Session 2 Precision agriculture and aquaponic

Precision agriculture and aquaponic are two branches of the agricultural sector which are particularly suitable to the objectives of sustainability promoted by PRIMA. Precision agriculture allows farmers to avoid waste e to reduce environment impacts by using high technology agricultural instruments. Aquaponic, instead, represents a cultivation technique which allows to cultivate into the city center by using a particular water system technology. This type of cultivation has the advantage to grow plants in the same place where they will be consumed, avoiding the use of track for the transport, implementing a km 0 market and so reducing N₂O emissions. The speakers have presented their specifics techniques of cultivation inherent one branch or another.

Below is reported a detailed description of the individual business cases presented:

1. APPCoT – The main goals of the project are represented by the development of an innovative production model based on the integration of agronomic knowledge with the latest technology for environmental monitoring and spatial location of the machinery and its application to companies.

RQ:

1. The reasons of the innovation is to store all information useful not only for traceability of activities, but also to refine more farming operations and adopt new production models.

2. The difficulties are connected to the environmental adaptation

3. The added value specifies that the cooperation have positive innovation effects for the farms' productivity and performance.

2. CÀ COLONNA - The agri-food value chains depends on natural resources, human resources and their interactions. The goal of the project is to implement a community of food and biodiversity of agricultural and food interest.

RQ:

1. The innovation through lineal model adoption and the switch to a dedicated supply chain.

2. The difficulties are connected to the complexity of stakeholders, like government, producers, consumers and NGOs.

3. The added value of the cooperation connects resources to the access of these resources and technology transfer.

3. REFARMERS - ZipGrow is a vertical hydroponics and acquaponics technology, which recirculates water and use less water than field agriculture. It is perfectly suited for urban settings and allows to make the best of controlled environments.

RQ:

1. The innovation allows to farm in the city, to obtain high yields on small space, allows to make the best of controlled environments and use less water than field agriculture.



2. The difficulties mostly are connected to long sales cycles, little institutional support, no or few access to space and funding, no regulation and difficult to get both, business and technological skills.

3. The added value from the cooperation regards the better way to understand Mediterranean Market and exchange with Southern Med Market.

4. LIFELAB BIODIVERSITY- Lifelab is an advanced Agritech company that designs and manufactures fully automated vertical hydroponics crops. The technology used is able to increase the food quality and safety of products given the cultivation devoid of pesticides and chemicals, uniform, and able to produce under any atmospheric condition.

RQ:

1. The innovation consists of the ability to develop turnkey indoor vertical hydroponic farms, face global agro-food problems.

2. The difficulties regards the lack of support, unavailable funding programs, bureaucracy and antique legislation.

3. The added value through cooperation support knowledge sharing, building up networks, reshape existing markets, empower to design and implement strategic resource security solutions.



Session 3 DSS

The session dedicated on Decision Support Systems has been focused on the adoption of tools for precision agriculture, which are mainly used to improve and optimize soils, water and row materials management by supporting farmers in decision making process. The main issue that has emerged regards the need to shift from a traditional agriculture to a more ICT-based one. The aim in particular is to develop a computer –based system in which integrate different type of agronomic skills and data (e.g. time, crop, weather, characteristics of the ground...) in order to improve farmer’s awareness in what they are doing and achieve more sustainable cultivations.

Below is reported a detailed description of the individual business cases presented:

1. HORT@ - Hort@ is a spin-off of the University of the Sacred heart Catholic who is dedicated to research in the development of DSS for sustainable management of crops based on new information technologies.

RQ:

1.The innovation is based on better awareness and better treatment, low environmental impact, ability to control diseases while gathering crops and the possibility to help farmers to integrate their traditional farming system to DSS system.

2. The difficulties are mainly connected to the mistrust from the farmers point of view.

3. The added value through cooperation leads to enlarge/differentiate the environmental and social situations to face and make our systems more robust.

2. AGRICOLUS - AGRICOLUS is a cloud applications ecosystem for precision farming with multiple purposes facing different challenges on international market, induced by the climate change and cover the technological gap.

RQ:

1.The innovation reasons are linked to monitor crop productivity, prevent diseases and organize farming activities as to allow management traceability and valuable information.

2. The difficulties emerged mainly to such DSS system regards the mistrust of farmers to new approach to cultivate and harvest crops on the fields.

3. The added value from cooperation links agriculture to innovative know-how, save food quality by using less pesticides and interact with farmers.

3.AGRIVERITAS - AgriVeritas offer services connected to embedding digital technology in the value chain of wineries, covering cultivation and waste management. VitiC2 project pioneers IoT applications for agro-industrial waste valorisation, which boots the adoption of Circular Economy and create additional profit for small farmers within the winemaking industry.

RQ:



1. The innovation consists in move research expertise into a tangible cause for solving global-scale problems, decrease environmental impact and mitigate socio-economical issues.
2. The difficulties are mainly connecting to entrepreneurial ecosystem, small and lack of experienced business mentors; investors are not willing to take the risk, slow public funding procedures.
3. The added value from the cooperation emphasizes the knowledge – technological and innovative transfer connected to cross-fertilization research and implementation.



Session 4 Millennials

During the session 4 the young entrepreneurs have spoken about their own business cases and the innovations that they have implemented. The millennials entrepreneurs have highlighted the lack in using the best technology in agri-food sector. The idea that is emerged during this session is about an agriculture still anchored to the past and struggling to open up to innovation and change. Millennials feel the need to grow young again the agri-food sector through the introduction of new ideas and new technologies, which are perceived fundamental in order to improve the sustainable performance in agriculture. Below is reported a detailed description of the individual business cases presented:

1. IRIS TECHNOLOGIES - IRIS Technologies develops advanced technologies for specific monitoring and management of hives. The company provides support to beekeepers realizing preventive disease analysis, with the aim of creating a better environment for the activities related to beekeeping.

RQ:

1. The innovation provide a complete apiculture breeding control, establishing of a health and veterinary policy, developing specific training and mentoring programme and implementing a complete management system.

2. The difficulties regards mainly the investor funds, and the ability to convince farmers to use new innovative technology to monitor their activities avoiding disease and bees death.

3. The added value from the cooperation represents the possibility of global knowledge and technological sharing across countries.

2. COOLFARM - CoolFram is a turnkey solution to grow local, fresh, nutritious food all year around with minimum waste, maximum safety in a sustainable way, by approaching indoor farming.

RQ:

1. The innovation consists in creating an indoor and vertical farming, which offer good food with no waste and no transportation costs.

2. The difficulties are connected to investments in pilots and market entry.

3. The added value from the cooperation should lead to the promotion of new solutions for growers and for all stakeholders. Farming became easier, and technology improved as to support communication and find solutions for young and old growers.

3. LIVINGBOX - LivingBox is a modular and sustainable system that enables you to grow fresh vegetables in low costs & minimal efforts for everyone- The hydroponics technique allows going back to domestic production, based on water technique, without soil.

RQ:



1. The innovation reasons are connected to awareness of pesticide free food, independence and sustainability within personal home and just in time and just in quality food, decreasing food waste.

2. The difficulties are linked to lack of incentives, institutional funds and no connection to mass production.

3. The added value from the cooperation will decrease the environment pollution, will save great amount of water, will get access to food to week populations witch do not have the financial ability to buy fresh vegetables and fish.

4. AGRANDO - AGRANDO is a B2B platform for farmers, suppliers and producers that digitizes the trade of agricultural inputs. The goal is to make communications, interactions and transactions between farmers and suppliers. Farmers create price requests, receive and compare quotes, directly interact with suppliers and accept the negotiation.

RQ

1. The innovation reasons are strictly connected to saving money and being part of a network, specify needs and obtain the desired outcome at best available price.

2. The difficulties are not only connected to regulations and funds, but as well to attract suppliers at the same level of farmers and individuate agricultural trends.

3. The added value from the cooperation addresses cross-border trading, price transparency, increase in efficiency and big data improvement and user growth.

5. ZOLLA 14 - Zolla 14 is a small company which cultivates with Biodynamic Agriculture method, to give life and health to the land, biodiversity and focus on the importance of proper nutrition.

RQ

1. The innovation reasons brought to use biological methods and biodynamic agriculture n order to enhance the quality of the raw materials respecting the environment and human health.

2. The difficulties connected to such innovative method regards the bureaucracy, financial subsidies and no investments to allow implement adequate technologies.

3. The added value from the cooperation can facilitate technological transfer and give possibility to countries to achieve a new biodynamic technique to improve quality and resistance of the harvest.



Roundtable discussion

The final discussion and closing remarks on the SRIA and business cases presents were hold by experts in the field of environmental issues and agriculture scientific representatives. The discussants were part of different entities from Northern and Southern shores of Mediterranean Area. They analyzed the thematic areas and the priorities connected to each area.

The value added through the Mediterranean coordination emphasizes:

- ⇒ the cross-contamination of information,
- ⇒ technologies, innovation,
- ⇒ the use of crops which require small quantity of water use,
- ⇒ increase social awareness of food loss
- ⇒ researchers from South Med, can learn from North Med and share knowledge, information, training and mentoring by their place
- ⇒ valorization of the peculiarities of the territories, introducing innovation, such as CLUSTER AGRIFOOD, through agri-food value chain traceability,
- ⇒ implementation of workshops, which represent the best way to share best practices, develop local market intensifying diversities and connecting more local communities
- ⇒ start analyzing previous mistakes, analyzing priorities for each country because each place is different one from another, and thus individuate an innovative broker which is in charged to transfer technology, adaptation and innovation, in a way to implement new technology and allow access to food and help decrease food loss and food waste in the future.



Concluding remarks

On the light of the business cases presented and the interventions made, the possibilities of implementing innovations, foster the contamination of information and ideas, sharing knowledge and protect and valorize the biodiversity, must be translated from macro view, to concrete projects, cooperation and focus on precise issues, like transferring technologies and innovative projects. The Mediterranean diet is a culture, but innovation must not impose a different culture to communities, but help them realize the necessity of eating healthy food, less precooked food and cooperate socially to increase global awareness and implement a collaboration between countries with specific skills and knowledge. More attention must be dedicated also to Water necessities.

Another important point regards the food for life issues. Many features are connected to such themes. The first issue regards large companies, which represent the frontier of knowledge. The second issue is linked to SMEs need in technological and knowledge transfer, because often are local based and thus much attention must be addressed on specific priorities, important focus deserves the language barriers, different religions, cultures and traditions.

The last issue considers that cooperation is crucial to transfer technology in low cost and low scale, sustainable focus on natural resources and an efficient way to transfer innovation. Moreover, the crucial point is supporting the cooperation within companies and partners fostering know how and technologies transfer, filling gaps and giving an higher access to funds for entrepreneurship, ensuring an increasing food value co-creation (Northern and Southern MED players), producing better together at better price and quality.

The final focus was on 3 main points of view: priorities, contributions and respect for each other. PRIMA must work as a bridge between innovation, research and farmers, because innovation stays real on the market and 3 main aims are the pivot of the PRIMA initiative: impact on goals; sustainable objectives and implementation of the program.

The main participants at this event were NGO delegates from the Med area; national corporate association representatives from both Med shores; corporate delegates; policy makers; academic representatives; corporate and financial advisors; private companies' representatives, in particular young entrepreneurs and start-ups. All these participants were actively involved into the final discussion and the total number of those were 106 disputants.

The final feedbacks and suggestions produced during the entire conference are an important input for regulations and design of the framework, which will define the structure of future PRIMA calls for proposals.

This is going to be useful in terms of matching the needs of innovation and technology transfer, the expectations of the PRIMA initiative and the effective possibilities to foster sustainability through the implementation of innovative projects.





As a positive outcome of the workshop, on following days some Egyptian entrepreneurs and experts launched a WhatsApp account named 4PRIMA Partnership.

The storify of tweets #prima4med is available at <https://storify.com/unisiena/prima4med>



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