

# Training Needs Report



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# 1. Executive summary

eTOMATO is an initiative of 10 partners from 4 European countries (Belgium, Bulgaria, Italy and Spain) aimed at creating an educational offer for easing the uptake of new business practices respecting the Multifunctional Agriculture (MA) framework, particularly in the domains of Social and Didactic Agriculture, Rural Tourism and Short Food Supply Chains. MA is the approach for diversifying agricultural business through the application of Lean Resources Management practices to promote the Rural Development. The MA outputs generate the so-called the Triple Bottom Line results (Environmental, Social, Economics), carrying benefits to as many stakeholders as possible.

The first WP of eTOMATO wants to identify the training needs and set up an identikit for MA practitioners. This identikit will allow an easy understanding of the learning needs of multifunctional farmers to become professionally ready for a MA business. The identikit will be based on required knowledge, competences, skills and roles. The identification of training needs, which is the main goal of WP1 and is crucial for the further execution of the eTOMATO project, was based on the input of farmers, students and experts within the field of MA.

This document, the training needs report, will present all the data obtained by identifying the training needs in the first work package. This data was collected using three different types of methodology: (i) interviews with farmers, (ii) focus group with MA experts and (iii) questionnaire spread among (graduated) students enrolled in MA programmes. A guide was developed by Ghent University and validated by the other university partners to ensure a standardized way of data collection among the 4 European countries under study. Data collection and analyzing is the cornerstone of the overall project and all outcomes will influence the future tasks of the project. Therefore special care was given to ensure reliability, validity and trustworthiness. The focus of the report was to provide answers on “why” is training needed, “how” training will cure the problems identified, “what” the best way is to get the best results and “when” training needs to take place.

Each university of the partner institution was responsible for the data collection in their home country. Minimum targets were set, at least interviews of 6 farmers (minimum 2 involved with short supply chain, minimum 2 involved with tourism, minimum 2 involved with social and didactic agriculture. For the focus groups, at least 8 experts should be involved while the consortium agreed that there should be data collected from at least 50 students in each country. Data collection took place during Spring 2019 after which each university analysed the obtained data from the own country. This data analysis is included in this report, under section 2. Farmers interviews, section 3. Focus groups with experts and section 4. Students’ questionnaires.

The data shows that there is a need for adequate training related to MFA, both for student and interested persons (e.g. existing farmers, potential MFA farmers,...). These needs and interests are for some expertise different between the countries. Furthermore, a single organisation or platform for each country which is the single point of contact regarding MFA would be recommended. This would not only enhance course development, but would also make it more easy to find the correct training for interested parties.

## 2. Farmers interviews

### 2.1. Belgium

#### 2.1.1. Methodology & participant profile

##### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

##### Participant selection

Participants were recruited throughout existing contacts of the department of Agricultural economics of Ghent University combined with some suggestions of Innovatiesteunpunt (associated with the Local farmers union of Belgium).

##### Participants profile

- Female - 43 years old – Eastern languages and culture + educational master (University) – graduated in 1999 – education on the farm
- Female - 37 years old – Bioscience engineering (University) – graduated in 2004 – social farming (since 2013)
- Male- 31 years old - Applied biosciences (University college)- graduated in 2011- short supply chain (since 2016)
- Female – 47 years old – Bachelor chemistry (University college) – graduated in 1993 – short supply chain (since 1999)
- Female – 50 years old – Nurse (University college) – graduated in 1989- agro tourism (since 2004)
- Female – 33 years old – Agricultural studies (High school) – graduated in 2005 – agro tourism (since 2018)

## 2.1.2. Results and discussion

### Q1.a. What benefits do you recognize from multifunctional agriculture in your business?

- Short supply chain: higher income through higher margins
- Educational & social: most advantage lies in the community and personal development and satisfaction
- Agro-tourism: additional way of revenue & it might be a perfect fit in combination with other farming activities depending on when those take place

### Q1.b. What benefits do you recognize from multifunctional agriculture for the community

- Short supply chain: freshness & sometimes lower prices for the consumers
- Educational & social: for education at the farm, children are getting in touch with the farm and get a more realistic view of where certain food products come from. For the social farm: the advantage lies more in giving some people, who are not always able to work in a regular environment, some structure and the possibilities of a purpose.
- Agro-tourism: introduction to farming, cheaper accommodation for larger groups (youth groups), relaxation in a more rural environment

### Q2. Did you receive funds to practice MA?

Most farmers mention the regular funds they receive from the EU. Further, one participant mention that the current funds are not adapted towards MFA as they have less farming activities which result in lower funding. Both participants related to educational and social farming mention funding. For educational farming, funding is provided directly to the schools which then pay the farmer for the educational part. Regarding social farming, the participant mention that they receive funding from the Flemish government (department 'Green care') and that they also receive PDPO funding.

### Q3. How were your higher studies relevant for MA?

Participants who followed an agricultural related educational programme mentioned that this was relevant for the farming activities, but less for the MA. For the educational farming, the participant has earlier followed the teacher training has been relevant for educational part and also the eastern languages so that the farmer is able to speak to some children in their mother tongue. The person involved in social farming mentioned that a friend, who is nurse, has also provided relevant input. T

### Q4. Do you think that further training is needed to turn farmers into multifunctional farmers?

All participants thought that further training is needed so that farmers become MF.

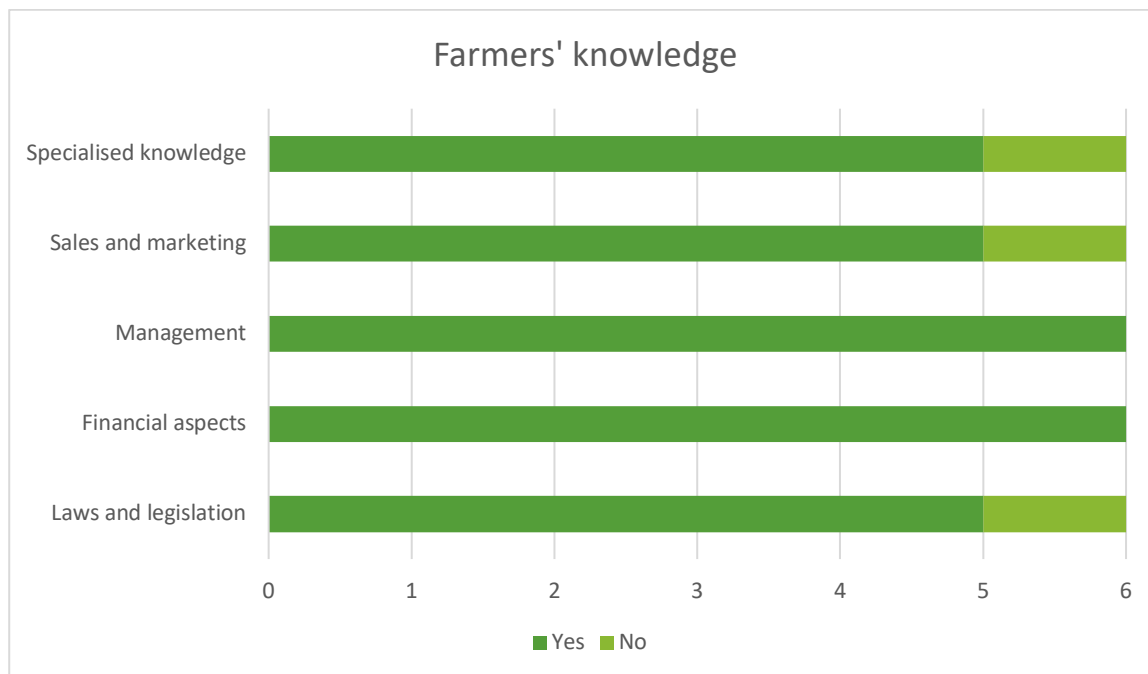
### Q5. Did you follow extra training / evening courses and if yes, in what field and why?

- Short supply chain: Both participants mentioned that they followed extra training. One person mentioned Agara and the organisation for Fruit and Vegetable farmers. The other person mentioned that he participated in several study days related to short supply chain.
- Educational and social farming: person involved in educational farming has participated in additional training organised by melk4kids so that she had additional information about the teaching and some good practices. The participant involved in social farming followed an additional higher educational programme (orthopedagogy) and performs self study regarding relevant themes.
- Agro-tourism: One participant followed courses from C.R.A.B.E. (related to organic farming) and Vlaams Agrarisch Centrum. The other person participated in the project 'Beleverij' and



also through 'Logeren in Vlaanderen'. She also mentions that she sometimes visits other farms who are open for tourists to experience what they do and hear if they have tips and tricks.

Q6. Do you feel you have sufficient knowledge to run your farm?



Most participants indicate that they have sufficient knowledge regards all parts, however this knowledge is mainly the result due to additional training and not their higher education. They stress the importance of lifelong learning and also that help can come from other farmers related in MFA. Regarding the financial aspects, most people just have basic knowledge but trust their accountant.

Q7. What are the most important challenges you are confronted with to execute your multifunctional farming activities?

- Short supply chain: keeping up with the latest trends, getting people to the local shop at the farm, convincing why it can be that short supply chain products cost more in the store of the farmer than at the supermarket, maintaining the social contacts
- Educational & social MFA: there is local legislation which limits the maximum costs for children at school. This limit is sometimes a problem to cover the costs of a visit by young children. For social mfa: a lot is voluntarily, the main challenge is to make it profitable.
- Agro-tourism: main challenge is the related to the behaviour of the tourists, so making sure that everyone keeps everything tidy, does not disturb the neighbours,...

Q8. What skills would you like to acquire in the future to perform multifunctional agriculture and why?

- Short supply chain: life long learning for one participant, the other participant mentioned that graphical skills and more about accounting could be interesting
- Educational & social MFA: both find that, at the moment, they have sufficient knowledge and skills

- Agro-tourism: need to constantly follow additional courses to keep people interested in the farm and keeping up with latest trends + legislation. Further, also marketing courses might be interesting (e.g. to have companies during the week and tourism during the weekend)

Q9. Do you feel a need for a more specialized educational offer related to multifunctional agriculture?

- Short supply chain: one participant mentioned that there is already lot available, but that it is not always easy to have the overview of all the possible educational offers. The other participant highlight the importance to involve sufficient entrepreneurship courses in higher education, also including (fictive) examples so that graduated students have a more realistic view and are better able to start in a MFA
- Educational & social mfa: regarding educational mfa, there might be more specific education regarding how to work with children. It could also be interesting to involve the parents. For social MFA, the focus should also lie on communication so that farmers are better able to communicate what they are exactly doing.
- Agro-tourism: there might be more centralised information, there is not one single point of contact.

Q10. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

- Short supply chain: One participant highlight that students should have a more realistic view and know that one don't need to work harder but wiser to run a MFA successfully. The other participant mentions that, as you need to sell your products directly to the consumer, it is important to have sufficient knowledge of marketing.
- Educational & social MFA: the person involved in educational MFA highlights the importance of real education at the farm. Children who come back several times and also use other knowledge at the farm, e.g. learn to read a map, mathematical calculations based upon farm-related questions,... The participant involved in social farming highlight that the current educational programme too narrow, the main focus lies on production. Regarding personnel: they need to have more information regarding the latest trends, legislation,... It is also important that students make some visits and get to experience the farms in real life.
- Agro-tourism: it is important that you have a broad knowledge and that you know several languages. Further, some basic knowledge in accounting is important. As MFA is broad, it is important that students have a rather broad view and know a bit of everything.

### 2.1.3. Discussion

All participants highlighted that additional training is necessary for MA. Participants with a background in agricultural studies (high school / university) mentioned that their studies were primarily focused on the production and that little attention was paid to MA. As such, they found that students should have a brighter view of MA and come into contact with MA farms. Further, all participants indicated that they followed additional training so that they are able to perform MA. The topics of MA differed, given the different types of MA involved in this study. However, most participants highlighted the necessity of adequate accounting skills for MA. Further, for short chain marketing and social skills seems necessary. For educational and societal farming, additional skills related to education are a major asset. Regarding agritourism, there is also a need for marketing skills but participants also mentioned that they need keep track of legislation. Participants mainly followed trainings at specific organisations, related to the type of MA. They also highlighted the importance of good practices of other MA who are doing similar work. One major drawback is that it is not always easy to find the right type of training as the educational offer is spread over a lot of different providers.

### 2.1.4. Recommendations

*Three main recommendations can be formulated based upon the interviews with the farmers. First, there should be a better overview of the possibilities for education and a single point of contact for such information could be handy. Second, MA farmers need to participate in lifelong learning and lack some skills when they were just graduated. These skills can be obtained by further training and are depending of the type of MA. Third, students enrolled in agricultural educational programmes should also come in contact with MA during their studies.*

## 2.2.Bulgaria

### 2.2.1. Methodology & participants profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

#### Participant selection

When selecting farmers, we were looking for representatives in the three domains – social and didactic agriculture, short food supply channels and rural tourism. We headed to the more educated farmers to adequately respond to the questions.

#### Participants profile

The survey was conducted with 6 farmers – 2 farmers with social and didactic activities, 2 - rural tourism and 2 shortening food supply channels. The surveyed farmers have the following education:

- On average - 29% of respondents.
- Higher - 71% of respondents.

All farmers are under the age of 45 and have completed their education in the period 1995-2000.

### 2.2.2. Results and discussion

#### Q1.a. What benefits do you recognize from multifunctional agriculture in your business?

As the benefits of multifunctional agriculture, surveyed farmers point out:

- economic - making direct sales, higher profits, and more – 100 % of respondents.
- ecological - sustainable organic agriculture – 83.33% of respondents.
- social - re-education of prisoners, creating a social networking environment – 66.67% of respondents.

It should be noted that some of the respondents indicated more than one answer.

#### Q1.b. What benefits do you recognize from multifunctional agriculture for the community

The benefits of multifunctional farming for the community are:

- Synergy of bio-farming with alternative tourism - wine, rural, cycling, eco.
- Providing jobs. Provide seasonal work to long-term unemployed.
- Increasing added value of output.
- Protect land from pollution.
- Working with disadvantaged people, re-educating prisoners.
- Selection and maintenance of a local breed of Bulgarian cattle.

#### Q2. Did you receive funds to practice MA?

42.86% - Yes, 57.14% - No

The received subsidies are:

- Part of the financial resources from the State Fund "Agriculture"
- EU subsidies - small size.

#### Q3. How were your higher studies relevant for MA?

The surveyed farmers have the following education:

- On average - 29% of respondents.
- Higher - 71% of respondents.

Farmers have an appropriate MA education - milk and dairy technology, zoo-engineering, food hygiene in the food industry, economy, and so on. Additional training on MA topics has also been completed.

#### Q4. Do you think that further training is needed to turn farmers into multifunctional farmers?

83,33% - Yes, 16.67% - No

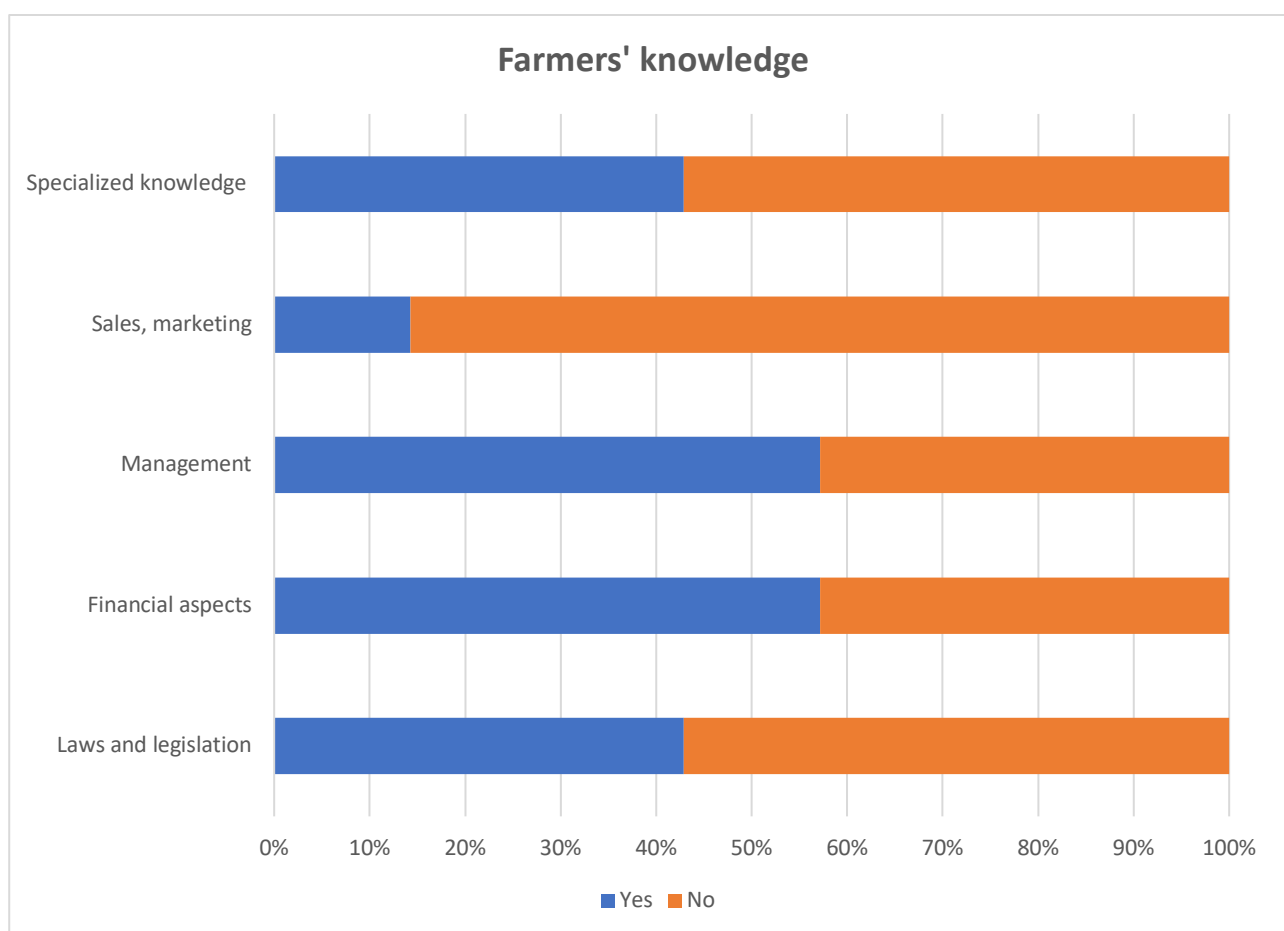
#### Q5. Did you follow extra training/ evening courses and if yes, in what field and why?

100% of respondents consider that further training is needed.

Additional training areas are:

- Agroecology;
- Organic farming;
- Fruit growing;
- Animal welfare;
- Marketing and sales.

#### Q6. Do you feel you have sufficient knowledge to run your farm?



As a result of the survey conducted, farmers respond negatively (about 57.14%) to the question: do you have enough knowledge to manage your farm? They have better training in finance and management (about 57.14% of positive responses) and additional training on sales and marketing (85.71% negative answers), specialized knowledge (about 58%) and laws and legislation (about 57.6%) are needed.

Q7. What are the most important challenges you are confronted with to execute your multifunctional farming activities?

The most important challenges for the implementation of their multifunctional agricultural activities farmers consider:

- Lack of additional financial resources and insufficient involvement of regional authorities;
- Productivity issues;
- Fighting bureaucracy and obstacles by the institutions;
- Lack of facilities;
- Lack of qualified staff;
- Problems in sales advertising;
- Climate change.

Q8. What skills would you like to acquire in the future to perform multifunctional agriculture and why?

The necessary skills that farmers would like to acquire in the future for multifunctional farming are:

- Resource management, environmental practices, biodynamic farming;
- Qualification and processing technology of manufactured raw materials;
- Knowledge of what plants to plant, additional knowledge of the soil, cheaper energy;
- Marketing and advertising skills, market research and product realization;
- Practical training on MA;
- Online marketing and product marketing training;
- Social farming - with disadvantaged people.

Q9. Do you feel a need for a more specialized educational offer related to multifunctional agriculture?

100% of respondents respond that there is a need for a more specialized educational offer related to multifunctional agriculture. The main points should be:

- Need for specialized equipment.
- Training on social farming in HEIs.
- Specialized training related to processing of production.

Q10. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

In order to enable farmers to better perform activities in the field of multifunctional agriculture, the following must be taken into account:

- Make more practical classes in secondary schools with the possibility of re-training. Keep students on traineeships for at least a month or two;
- Reducing bureaucracy;
- Strengthen the link between agribusiness, universities and qualified staff;
- The various functions of the Council of Ministers should be divided into: provision of food; water management; energy production from the farm; social farming.

### 2.2.3. Conclusions

From the interviews conducted, it can be concluded that farmers do not have enough knowledge to manage their farm for the development of multifunctional agriculture. Most needed, they say, additional training in sales, marketing and management.

The most important challenges for the implementation of their multifunctional farming activities are: lack of additional financial resources and greater involvement of regional authorities, problems with the marketing of production, the fight against bureaucracy, the lack of material base, the lack of trained staff, etc.

As a result of the inquiry among farmers found that most are environmental benefits of multifunctional agriculture. A large percentage (over 50%) is also the economic and social benefits. Assistance to farmers setting up multifunctional farming is very limited - insignificant funds within the State Fund Agriculture and EU Subsidies.

Most of the farmers surveyed had higher education (71% of respondents). Farmers have an appropriate education for MA - milk and dairy technology, zooengineering, food hygiene in the food industry, economy, etc. They also mention that they have received additional training on MA issues.

### 2.2.4. Recommendations

In order to successfully develop multifunctional farming, farmers would like to acquire in the future: resource management skills, environmental practices, biodynamic farming;

to acquire qualification in technologies for processing the manufactured raw materials;

to acquire additional knowledge, what crops to grow, additional knowledge of the soil, production and use of cheaper energy;

developing marketing and advertising skills, looking for markets and realizing the production. Strengthen and develop practical training on MA. Improve training in online marketing and product advertising. Pay particular attention to social farming with disadvantaged people.

**All respondents pay attention to the need for a more specialized educational offer related to multifunctional agriculture, with key accents such as: the need for training in social farming HEIs as well as specialized training related to the processing of manufactured produce.**

The main recommendations of farmers working in the field of multifunctional agriculture are:

1. Make more practical classes in secondary schools with the possibility of real-time internships. Keep students on traineeships for at least a month or two.
2. Strengthen the link between agribusiness, universities and qualified staff.
3. Different functions of the MA are divided into: provision of food; water management; energy production from the farm; social farming.



## 2.3.Italy

### 2.3.1. Methodology & participant profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

#### Participant selection

University of Foggia and Masseria Redenta found interviewees by exploiting their networks. Specifically, Confagricoltura Bari (farmers labour union) was used to find farmers dealing with Short Food Chains (SFCs) and Rural Tourism, and the regional Association of Social and Didactic Farms, led by Domenico Frizzale (Masseria Redenta owner) was exploited to interview farmers dealing with Social and Didactic Farmers.

#### Participants profile

The survey was conducted with 10 farmers: 2 dealing with only SFCs; 3 with SFCs and Rural Tourism; 3 with SFCs and Social and Didactic farming; 2 with SFCs, Rural Tourism and Social and Didactic farming.

Almost all respondents hold a university degree.

The age is between 35 and 55, on average.

### 2.3.2. Discussion of the results

#### Q1.a. What benefits do you recognize from multifunctional agriculture in your business?

The common idea is that this way allows to diversify business incomes, so that increasing incomes by using a lower quantity of land than traditional farming. MA reduces the risk of losses from climate changes.

MA is even a way of social innovation to enable farmers to improve the quality of their life by preventing/overcoming the loneliness they often suffer from.

#### Q1.b. What benefits do you recognize from multifunctional agriculture for the community

1. MA allows group of people to know and understand the countryside lifestyle and how natural resources have been managed.
2. Living the farms means raising the respect for the environment as well.
3. Didactic agriculture is an effective way to lead youngsters and pupils to a health diet (100% of the respondents dealing with).
4. Combination of multiple dimensions of MA allows exploit leisure time (rural tourism) to undertake educational short journey for kids, as well as increasing the demand of foodstuff delivered by SFCs (100% of respondents dealing with all dimensions).

#### Q2. Did you receive funds to practice MA?

All respondents received European funds for either start up or reorganize the farm.

#### Q3. How were your higher studies relevant for MA?

80% respondents replied that they did not find useful the studies they did for MA. It might be useful to stimulate their creativity in thinking to bring innovation and advancement (compared to the existing ones) into their idea. However, almost all of their skills were acquired by working on the field.

20% respondents replied that they exploited their studies as long as they run with traditional farming.

#### Q4. Do you think that further training is needed to turn farmers into multifunctional farmers?

100% respondents replied that the development of this sector is underway, so it is required a constant updating and upgrading of the skills. It is much more complex than traditional farming mainly with reference to the demand to attract: for example, in the field of Rural Tourism, what about the tourists you wish you were host? If you go for family you need to offer specific services that are definitely different from backpackers.

It is even the case of social farming: what do you mean? People having disabilities? Elderly? Ex-convicted?

#### Q5. Did you follow extra training/ evening courses and if yes, in what field and why?

3 farmers followed training in order to learn how to host kids and preserve the environment.

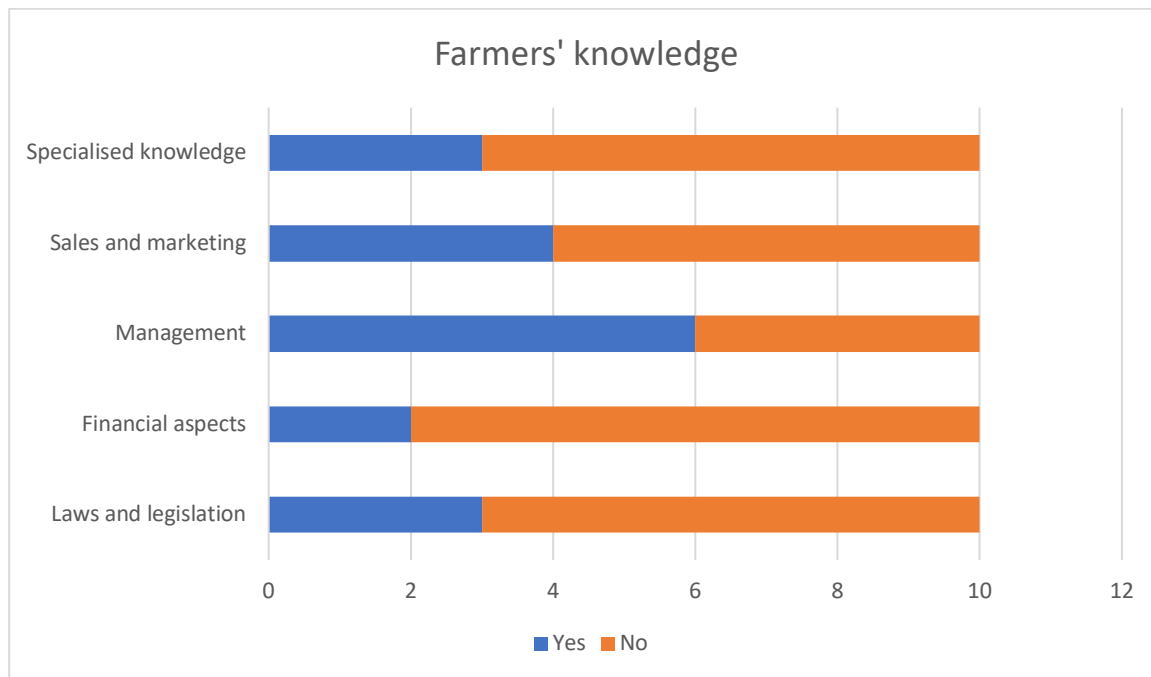
2 farmers followed training in natural resources preservation, organic farming, dairy production and touristic guide.

2 farmers followed training in pedagogical matters.

3 farmers followed training in marketing, focusing on product placement and how to segment markets.

1 farmer followed training in smart devices for agriculture (ICTs, drones and precision agriculture) and organic farming.

Q6. Do you feel you have sufficient knowledge to run your farm?



Q7. What are the most important challenges you are confronted with to execute your multifunctional farming activities?

1. Bureaucratic issues: to obtain a license to do something, too long takes from public authorities so that the opportunity of the business initiative risks to vanish;
2. Problems affecting socio-economic environment, such as illegalities, scares civic engagement and sense of communities, thefts, eco-crimes, racket;
3. Domestic issues: convince my family to engage with undertaking an innovative way of thinking at farming;
4. Entry markets and keeping local (short) supply channels over time;
5. Attitude in believing in what I was doing;
6. Scarce services and infrastructures offered by the region.

Q8. What skills would you like to acquire in the future to perform multifunctional agriculture and why?

Half of the respondents replied that they would like to learn the English language.

Others, although recognized that further training is needed, they are confused in reply because almost all are still running around to achieve the best performance. This is motivated mainly by the fact that in the last decades dynamism of the market has increased too much.

Q9. Do you feel a need for a more specialized educational offer related to multifunctional agriculture?

All replied YES.

Q10. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

All agreed with the strong need of more practical experience beside the theoretical training.

### 2.3.3. Conclusions

Turning into MA is surely a big challenge that need to be addressed with updated skills through updated educational courses. In the wake of this, answers seem to raise the need for awareness of the community living the territory. For example, people do not often recognise the higher value of the food supplied by SFCs and is that they just see the SFCs to exploit as a way to find a bargain when paying the price for the food.

Rural Tourism is a sort of “experience” that farmers offer. To make this sustainable overtime, however, it is required an improvement with the civic engagement and social community. This is why the “experience” should involve as much elements as possible of the socio-economic environment, and whether locals are not engaged in behaving by respecting rules, the experience can fail and this may fuel disappointment.

In the field of Social and Didactic farming emerges a strong detachment between farming system and educational world: teach does not mean applying into farming and holding both expertise is hard to find out.

From this general overview emerges that lacks an inter-sectorial perspective. How to merge different sectors? How to enable students/practitioners to think that the farming system can be seen by combining different activities that appear completely opposite each other at a glance?

The graph clearly shows that there is a gap with knowing legislations, laws, financial aspects and specialized knowledge. However, those who acknowledge holding specialized knowledge, declared having followed specialized course(s) to acquire it.

### 2.3.4. Recommendations

First of all, it should be designed a course closer to the practice, and successful experience should be told students during classes in order to engage a discussion on how the business idea popped up and was unfolded. This appears fundamental to stimulate the attitude to be multifunctional. Secondly, knowledge on how to attract demand of different domains of MA should be taught.

## 2.4.Spain

### 2.4.1. Methodology & participant profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

#### Participant selection

The data collection has counted with the support and contacts of La Junquera Farm and the ecological association of ALVELAL. From the beginning both entities have shown their availability.

#### Participants profile

<i>Farmer</i>	<i>Education</i>	<i>Age</i>	<i>Year of graduation</i>	<i>Institution</i>	<i>Specific activities of MA</i>
<i>Miguel Campoy</i>	<i>Graduate (school teaching)</i>	<i>40 aprox.</i>	<i>2012</i>	<i>Small farmer associated with ALVELAL</i>	<i>Agritourism, apitourism, wine tourism</i>
<i>Ángel</i>	<i>Secondary studies, (“professional training” in electronic)</i>	<i>50 aprox.</i>	<i>1988</i>	<i>Cuevas La Atalaya</i>	<i>Agritourism, Cave hotel,</i>
<i>Heidi</i>	<i>Graduate (ecologic farm and sociology)</i>	<i>43 aprox.</i>	<i>2000</i>	<i>Paco &amp; Heidi farmers, Biosegura</i>	<i>Short chain, organic wine</i>
<i>José Pedro</i>	<i>Secondary studies</i>	<i>45 aprox.</i>	<i>2016</i>	<i>Terracultura</i>	<i>Short chain, vegetables, recover traditional tomato seeds</i>
<i>Víctor</i>	<i>Graduate (forestry engineer, environmentalist)</i>	<i>35 aprox.</i>	<i>2006</i>	<i>Tecnocetis</i>	<i>Social and didactic agriculture, training, courses and visits about the cultivation of aromatic plants</i>
<i>Yanniek</i>	<i>Graduate (business administration)</i>	<i>30 aprox.</i>	<i>2012</i>	<i>La Junquera</i>	<i>Social and didactic agriculture, sustainable management of farm landscape, rural tourism and visits</i>

## 2.4.2. Results and discussion

### Q1.a. What benefits do you recognize from multifunctional agriculture in your business?

The benefits shown by the farmers have been **numerous and different**:

- Promoting **innovation**, improvement of another kind of activities and applications, valorise new kind of plants and products.
- **Economics**, new business, being a new **market niche and opportunities**, economic diversification, supplement incomes (refuge sector in the economic crisis), food zero km, ecological production, new opportunities of job; different incomes in different moments of the year.
- In **heritage, recovering** ancient, traditional and autochthonous seeds and built heritage (caves), and keeping the traditional farm landscape and activities.
- Increasing the opportunity to stay in the village, **living in rural areas**.
- **Showing** our activity, farm, **way of life**.
- **Self-empowerment and recognition**. Diversifying and valorising their roles as farmers and gardeners of nature (teacher, guide). Different tasks and labours. "You are no longer a link in the chain".
- Environmentally, doing the business more **flexible (adaptable) and resilient to climatic change and meteorological inclemency**.

### Q1.b. What benefits do you recognize from multifunctional agriculture for the community

- **Teaching and training** for farmers, self-confidence.
- **Social benefits**, and human inclusion, increasing and **setting habitants** in the rural areas, **building social capital and networks, new jobs for women**; recovering **heritage**, values and labours.
- **Environmental benefits, fighting against soil erosion and the climatic change**, helping keep the biodiversity, removing chemical products, higher variety on landscapes, among others.
- **Economics, direct contact between producers and consumers**, knowing these ones the problems affecting production, **economic diversification**, different incomes in different moments of the year.

### Q2. Did you receive funds to practice MA?

- Most of them, know about the existence of funds, but for **small farmers is complicated to obtain them**. In addition, **funds are very limited** their amount (percentage of financing), and the **complexity of its application**. Also, this kind of funds, **are not specifically directed for MA and small farmers**. In **related products**, issues or topics, in **sustainable agriculture**, and the recovering of traditional seeds of vegetable.
- **One of them**, in Social and didactic agriculture, **has applied for grants**, but is expecting currently.
- One of them, **doesn't know about the existence of public funds on MA**. He knows about **LEADER approach**, but he claims about the **excessive bureaucracy** in this kind of programme, not being feasible this kind of requirement on his farm.

### Q3. How were your higher studies relevant for MA?

- **Most of them note the low importance of the higher studies**. Even, two of them, have not higher studies. Just in one case one farmer highlights the importance of the higher studies.
- **Only two of them have answered in opposite way**: for one case, in social and didactic agriculture, studies have **incorporated knowledge**, and to know where call and ask; and in

another, in **business administration**, it is very relevant to be farmer because the need to know how to work inside a company, in a farm dedicated to MA.

- In another case, in agritourism, higher studies have helped to foster **the need to show, teach and learn**, and even, the need to apply a teaching methodology of “**learning by doing**”.

*Q4. Do you think that further training is needed to turn farmers into multifunctional farmers?*

All of them note the **need of further training**. Concretely, for two of them, in **business administration** to create enterprises, marketing, management; in **complex systems**, which are composed MA; in **environmental aspects**: landscape treatment and sustainable development; and in **traditional knowledge**. But: one of them specifies that it depends, the way of the teaching, pointing the huge necessity of higher emphasis on **practice training**. Another one points the problem of time in farmers, the **availability of free time** for it, and the complicated to convince of it to farmers.

*Q5. Did you follow extra training/ evening courses and if yes, in what field and why?*

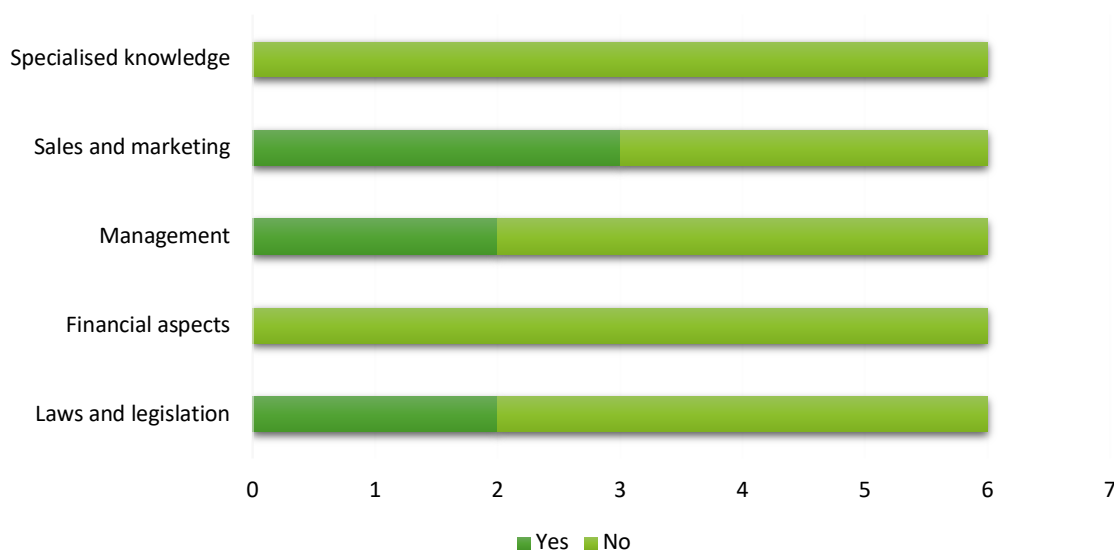
Most of them answered in **positive way, looking for “real”, practice and “needed” training** to look for their own objectives. Small courses on:

- rural and nature **tourism**;
- in **sustainable development and MA**: how to work without tractors, seeds, diversification of production and **management**, the cultivation of aromatic plants, obtaining the ecologic certificate, permaculture, biodynamic agriculture and so on.
- Others: **leadership**, sommelier, beekeeping, in agriculture to be young farmer, ... .
- These courses are developed by the ecologic association of ALVELAL, La Junquera farm, and the regional government, showing demonstrative farms, projects and farmers.

Only two of them notes that the training by small courses has not been necessary in their cases. The own work is the learning.

*Q6. Do you feel you have sufficient knowledge to run your farm?*

### Farmers' knowledge





Q7. What are the most important challenges you are confronted with to execute your multifunctional farming activities?

- For two of them: **sales**, how to sell the products, looking for customers, fight against low prices.
- One of them: “the **thought in MA**, having, at the same time, three tasks, jobs or challenges”.
- One of them: “**legislation aspects on healthy requirements**” and “recognition” of their endogenous and traditional products for local inhabitants, building a local market for local and small farmers.
- One of them: **climatic change** and efficient use of water, drought, water and irrigation availabilities in agriculture, plants adapted to drought.
- One of them: **social capital**, the need of collaboration and cooperatives inside the sector, synergies, coworking. The educative system does not teach to collaborate, only to compete.
- One of them: specific projects on **tourism**: cave and sustainable accommodation, local and traditional heritage.

Q8. What skills would you like to acquire in the future to perform multifunctional agriculture and why?

Five of them noted: **organizational** skills, being able to work at the same time with several projects; **management of customers**, how to get to the customer, manage contacts and customers. At the same time, **management of human resources and students**, and public interested on learning. And in addition, **projects management**, improving in this, in small projects about all.

Two of them: **traditional and plants knowledge**, conciliating agriculture and environment. Recovering or innovating on cultivation of endemic and aromatic species, **handcraft**.

**Software and technologies** skills to work efficiently with time and resources.

Q9. Do you feel a need for a more specialized educational offer related to multifunctional agriculture?

**Yes** for all of them. The **improvement is easy in MA**, because nothing or few is done in this topic. **Farmers don't tend to work in a multifunctionality way**, so, it is necessary to show them the advantages of MA. Thus:

- **focused on farmers** about all, in conventional farmers, to transform their respective farms;
- in **ecological and sustainable topics**, removing fake news, beliefs and stories.
- and **not only for graduate students, for everybody**
- with “**learning by doing**” and practical methodologies, with fieldwork.

Q10. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

On several fronts:

- **Changing values and habits, recovering traditional aspects**, dedicating more time to family and environment.
- **Primary learning** on landscape, territory, food and environmental aspects. Fieldworks, and visits to farmers. Caring gardens for students. Higher commitment with Earth, environmental aspects, food, ... .
- **Secondary education, professional training modules for farmers**
- **MA signatures and philosophy inside the university careers** of agronomist engineering and environmental sciences. More practice teaching, more practice lessons.
- **For farmers: learning in how to work in a changing world**, and **diversify the farm, chances** and how to implement MA.

#### 2.4.3. Conclusions

**Benefits inside the business:** creating innovation, new market opportunities, recovering and keeping skills, showing a way of life, self-empowerment and building a farm more resilient to climatic change.

**Benefits for the community:** social benefits, setting habitants in rural areas, building social capital and networks, new jobs for women, recovering heritage, environmental benefits fighting against soil erosion and the climatic change, direct contact between producers and consumers, and economic diversification.

**Funds to practice MA.** One of them didn't know about it. For small farmers are complicated to obtain them, funds are very limited. Complexity of its application and the excessive bureaucracy in them. These funds are not specifically directed for MA, for example, to foster sustainable agriculture.

**Role of higher studies for MA.** Low importance of these on MA. Higher studies have incorporated knowledge, for example, on business administration. The need to show, teach and learn applying the methodology "learning by doing".

**Further training?** Need of it. On business administration, complex systems, environmental aspects, traditional knowledge, highlighting practice training.

**Extra training courses.** They participated in courses, looking for practice and "needed" training about: tourism, sustainable development and MA, management, leadership, as main topics.

**Needed knowledge,** and in this order: 1) financial aspects; 2) specialized knowledge; 3) management; 4) laws and legislation; and finally, 5) sales and marketing.

**Challenges.** Sales, thought in MA, legislation aspects on healthy requirements, climatic change, social capital and coworking, and tourism.

**Skills.** Organizational skills; management of customers, human resources, students and projects; traditional handcraft and plants knowledge; and software and technologies.

**Specialized educational offer related to MA.** Improvement is easy in MA because few has been done in this topic. Conventional farmers don't tend to work in MA way. In ecological and sustainable topics. Not only for graduate students. And finally with practical methodologies, "learning by doing".

**Changes in the education system.** Changing values and habits, but recovering traditional aspects. MA lessons, topics and philosophy inside the university careers. For farmers, learning on how to work in a changing world, diversifying the farm, and chances on MA.

#### 2.4.4. Recommendations

##### Behavioural modifications.

Changing values and habits. Change of mentality of conventional farmers is needed. Recovering traditional heritage, handcraft and skills. Show a way of life. Empowerment of farmers.

##### Structural improvements

Higher importance of MA in higher studies and careers.

Practical methodologies, learning by doing, teaching inside the farm.

Not only for students, training for farmers is needed to getting chances and challenges.

##### New program suggestions

Organizational skills.

Management of customers, human resources and projects.

Business administration.

Environmental and ecological aspects and sustainable agriculture.

New market opportunities and niches.

Show the advantages: social capital and networks, setting habitants in rural territories, new jobs for women, fighting against climatic change and soil erosion, direct contact between producers and consumers, economic diversification, and so on.

Financial aspects and more information about the availability of funds in MA.

Specialized knowledge on software and technologies.

Laws and legislation.

### 3. Focus groups with experts

#### 3.1. Belgium

##### 3.1.1. Methodology & participant profile

###### Focus group guide

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

###### Participant selection

Lecturers involved in higher education related to farming were invited to participate in the focus group discussions. In total, information was gathered based upon 9 experts. Participants were involved in teaching for several different educational programs, of which some take place at university colleges and some at universities. No incentives were foreseen to the participants, although it was mentioned that the final public report will be shared with them.

###### Demographics

Participants were aged between 28-55 years old, with different levels of expertise regarding farming studies (ranging from 6-35 years). Of the 9 experts, 5 were female.

###### Focus groups

The focus group took place on May 13<sup>th</sup> at Ghent University. It lasted around one hour and 30 minutes and was audio recorded with permission of the participants. Next to that, the focus group leader took notes on a laptop. The language of the focus group was Dutch.

### 3.1.2. Results and discussion

Q1. Could every one of you shortly present him/herself and explain your role in the educational offer related to MFA?

All people were involved in teaching and guidance of educational programmes related to farming. For 2 persons, they were mainly assisting the lecturer with the course while the others are actually teaching. Participants are involved in educational programmes at Ghent University, Odissee Hogeschool and Hogent.

Q2. So, we already heard several institutes and educational programmes focusing on MA. Are there other important institutes missing that offer teaching or training in MA in our country?

a. Summarize responses

- Lecturers of some other university colleges were not present
- People who provide teaching in HBO 5 education
- People linked to certain educational programmes which are of interest for MFA e.g. tourism, animal doctors, pedagogy,...
- Innovatiesteunpunten: they provide support and guidance to interested farmers
- Landwijzer
- Vormingspunt
- Startingscursus B => this is related to agricultural tourism

b. Generalize overall viewpoint

In general, the participants of this focus group focus on teaching for higher education. Other organisations/institutions focus more on support for existing farmers which might not have obtained a higher educational degree of want to have more specific information regarding MFA. Further, the participants acknowledge that there is specific expertise needed for each domain of MFA. For instance, if you want to focus on agricultural tourism, it is interesting to have experts related to tourism involved.

Q3. Is there an inventory available of the existing educational offer in the field of MA?

a. Summarize responses

No, this is not available.

b. Generalize overall viewpoint

There is not such inventory available.

Q4. Is there a platform where all knowledge on different themes related to MA is gathered, or where different experts meet each other?

a. Summarize responses

Such platform does not exist, but it would be a big help so that lecturers are better able to integrate MFA in their courses. At this moment, time and knowledge lacks for the quick integration of MFA in most several educational programmes. Such platform could also help to exchange good practices and for instance case studies. There is a growing demand to implement the balance of agriculture and society in the educational programme which might be accomplished by having such platform.

b. Generalize overall viewpoint

There is a consensus that such platform would be interesting, but that it currently does not exist in Belgium.

Q5. Are you familiar with an organization at local/regional or national level that is interested in the problems of farmers focusing on multifunctional agriculture? If yes, please name it.

a. Summarize responses

In Flanders, the 'Innovatiesteunpunten' guide farmers for MFA.

b. Generalize overall viewpoint

In Flanders, the 'Innovatiesteunpunten' guide farmers regarding MFA.

Q6. Did you see changes during the last years in the educational offer focusing on MFA, and in what direction? How did your offer change, what elements were included/excluded?

a. Summarize responses

The general consensus is that topics related to MFA are only be added in the educational offer. Depending on the educational programme, different changes took place among others, inclusion of agro-ecology, agriculture and society, circular economics, city farming, sustainability, agro and biotechnology for the 21<sup>st</sup> century,...

b. Generalize overall viewpoint

There is a growing inclusion of topics related to MFA in the educational programmes in Belgium. However, the inclusion is highly depending on the type of the educational programme. In certain programmes, only some lectures are added while in other programmes whole new courses were developed. Given that the number of ECTS stays the same, it is sometimes a challenge to have new things included in the educational programmes as it needs to replace other content.

Q7. Do you expect changes in the future, and in what direction?

a. Summarize responses

The participants foresee a growing importance of MFA in the educational programme. However, there are two main challenges. There is sometimes a lack of knowledge by the lecturers to include such topics in their courses and also the lack of time to update the course content or to gather sufficient information regarding MFA plays a role. Further, some (older) lecturers are not convinced about the added value of MFA and find that the focus of the educational programme should be on production. Furthermore, the participants are also convinced that internships play an important role so that students can really experience MFA. At this moment, most students already get in contact with MFA through company visits, but internships should be an added value.

b. Generalize overall viewpoint

The participants see a growing weight of MFA in the educational offers in higher education programmes. However, there are some challenges which should be tackled. Furthermore, they highlight that students should come into contact with MFA in real life, e.g. by company visits and internships. The participants also find that students need to be able to choose if they want to have a more deeper understanding of MFA and developing MFA skills depending on their interest. Basic information regarding MFA should be foreseen for all students, but interested students should be able to have an educational programme with a higher focus on MFA so that they obtain the necessary competencies.

Q8. Do you observe fields in which farmers lack knowledge to become successful MA farmers?

a. Summarize responses

- Processing of food products, logistics and marketing skills
- Sometimes social skills e.g. for communicating with civilians, customers, clients,...
- Teaching skills
- Agroecology
- Management skills

b. Generalize overall viewpoint

The knowledge and skills are depending on the type of MFA. But in general, they are often missing social skills. However, with other staff members or their partner, they are often able to compensate for the social skills. More general management skills are sometimes also lacking.

*Q9. What challenges are you confronted with in order to set up interesting courses for future MF farmers? (infrastructure, collaboration with other departments, structure of the organization...)*

a. Summarize responses

A lot of knowledge and experience is necessary, which cannot easily be gained. Some try to tackle that with having guest lectures but that is not sustainable on the long term. New lecturers, feedback from (graduated students) and having external review of the educational programme can be a trigger to further expand interesting courses for MFA farmers. In the end, more collaboration is needed and more lecturers should be aware of the growing importance of MFA.

b. Generalize overall viewpoint

There were two main challenges identified. First, lecturers need to have the necessary knowledge and skills to develop relevant courses. Second, the awareness for the importance of MFA should be higher.

*Q10. How do you obtain insights in the educational needs of the MA farmers?*

a. Summarize responses

- direct contacts with MFA farmers
- internships
- cooperation with MFA farmers (e.g. in scientific projects, bachelor thesis,...)
- guest lectures
- feedback from (graduated) students

b. Generalize overall viewpoint

The main insights are through direct contacts with MFA farmers. These contacts can be the result through projects, cooperations, internships, company visits,...

*Q11. Do you think the educational offer is sufficiently aligned with the needs of the farmers, or how do you think this could be improved?*

a. Summarize responses

It depends on the educational programme and the choices that some students made for certain courses. Some educational programmes, especially linked to the university, might be too academic so that students don't have a good and realistic view of MFA. But in general, there is a feeling that there is too little time to get the students decently prepared for MFA especially if they are only enrolled in a bachelor degree. However, the participants of the focus groups are convinced that MFA requires additional training and that several possibilities are available in Belgium which can help farmers.

b. Generalize overall viewpoint

The time is lacking to ensure that freshly graduated students out of higher educational programmes are able to start MFA.

### 3.1.3. Conclusions

In general, there is a growing interest in MFA which is reflected in the fact that it is more and more implemented throughout the course. There is currently no platform where experts meet, which is unfortunately as such platform could help lecturers to develop course content related to MFA. The participants of the focus groups also indicate that farmers are lacking several skills, but especially management and social skills should be further developed. They highlight the importance that students have a basic notice of MFA and that interested students should be able to gather additional insights e.g. by internships or choice modules related to MFA. Foreseeing guest lectures and company visits are seen as a good practice so that students have a more realistic view of MFA. The participants believe that direct feedback from farmers is key to further develop courses and relevant educational programmes for MFA. Also, students should be aware that there is more training needed and that certain organisations (e.g. Innovatiesteunpunt) could help them when starting with MFA.

### 3.1.4. Recommendations

The main recommendation is that there is need to a platform in which different experts and lecturers need together with interested MFA farmers. This could help lecturers with the developing relevant course material and also provide input for case studies. Also contacts for internships and guest lectures could be a results of such platform. Further, several organisations foresee guidance and some sort of training for MFA. These should be more involved in the development of relevant educational MFA programmes.



## 3.2.Bulgaria

### 3.2.1. Methodology & participant profile

#### Focus group guide

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

#### Participant selection

The survey was conducted with 10 experts amongst teachers in the field of:

- Ecology and environmental protection, organic farming - 30,00%.
- Marketing and Agro-business Management - 20.00%.
- Economics of Natural Resources - 20%
- Agricultural Economics - 30,00%.

#### Demographics

The survey was conducted with 10 experts - four of them are women and six men. Eight of them are professors at universities (Agricultural University of Plovdiv and University of National and World Economy – Sofia- dept. Economics of Natural resources) and two work in scientific research institute on problems of agrarian economy, but also have teaching.

Eight experts have over 25 years of teaching experience and two - 15 years.

#### Focus groups

Six interviews were conducted in Plovdiv during the period April 15 to 19 and four in Sofia on April 22. Duration of interviews with the discussion is 1 astronomical hour. For this purpose, the questionnaires were printed on paper to facilitate the discussion between the experts. Each of the participants recorded their answers.

### 3.2.2. Results and discussion

Q1. Could every one of you shortly present him/herself and explain your role in the educational offer related to MFA?

The survey was conducted amongst teachers in the field of: Ecology and environmental protection, organic farming - 30,00%.

Marketing and Management, Agribusiness Management - 20.00%.

Economics of Natural Resources - 20%

and Agricultural economics - 30,00%.

All respondents have experience in teaching the multifunctional model of agriculture and its role in rural development as a subject involved in different disciplines and not as a separate discipline. A part of the experts holding senior positions at HEIs are committed to the inclusion of MA in curricula.

Q2. So, we already heard several institutes and educational programmes focusing on MA. Are there other important institutes missing that offer teaching or training in MA in our country?

a. Summarize responses

- Yes – 40 %
- No – 30 %
- Neutral – 30 %.

b. Generalize overall viewpoint

- I have no information about institutes that have missed teaching or training in MA - 30% of respondents.
- There is no defined MA training. There are only single questions included in different curriculum subjects - 80% of the respondents.
- The problems of MA are concerned as a matter of teaching in some subjects - 100% of the respondents.

Q3. Is there an inventory available of the existing educational offer in the field of MA?

a. Summarize responses

- Yes – 10 %
- No – 70 %
- Neutral – 20 %.

b. Generalize overall viewpoint

The main points of view are:

- There is no inventory of the existing educational offer in the field of MA - 70% of respondents.
- A MA program is to be developed - 10% of the respondents.
- No opinion - 20% of respondents.

Q4. Is there a platform where all knowledge on different themes related to MA is gathered, or where different experts meet each other?

a. Summarize responses

- Yes – 20 %
- No – 70 %

- Neutral – 10 %.

a. Generalize overall viewpoint

- There is no platform to gather knowledge on different topics related to MA - 70% of respondents.
- There are separate websites, such as the Bioselena Foundation website - 30% of respondents.
- Knowledge related to MA is exchanged within scientific forums where different experts meet.

Q5. Are you familiar with an organization at local/regional or national level that is interested in the problems of farmers focusing on multifunctional agriculture? If yes, please name it.

a. Summarize responses

- Yes – 90 %
- No – 10 %

b. Generalize overall viewpoint

Organizations interested in the problems of farmers at national and local level are:

- Municipal Agricultural Services and NAAS (National Agricultural Advisory Service), which are structures to the Ministry of Agriculture, Food and Forestry (MAFF).
- Bulgarian Association for Organic Food, MAFF
- Bulgarian Bio-Products Association
- Organic Farming Foundation "Bioselena - Karlovo"
- National Rural Network (NRN)
- Organizations of bio-producers
- NGOs and educational organizations that deal with the problems of MA in their work.

Q6. Did you see changes during the last years in the educational offer focusing on MFA, and in what direction? How did your offer change, what elements were included/excluded?

a. Summarize responses

- Yes – 60 %
- No – 30 %
- Neutral – 10 %.

b. Generalize overall viewpoint

Most experts are of the opinion that since 2007 there has been an upswing in the MA direction. This covers the inclusion of MA issues in the fields of Agricultural Economics, Rural Development, Agro-marketing, Eco-Economic Disciplines, Organic Farming, Agro-forestry Systems.

According to some experts, the institutional and managerial aspects of the MA should be explored and studied in order to develop it in Bulgarian conditions as well.

Q7. Do you expect changes in the future, and in what direction?

a. Summarize responses

- Yes – 90 %
- No – 0 %
- Neutral – 10 %.

b. Generalize overall viewpoint

The process of incorporating MA topics will increase in the coming years.

Q8. Do you observe fields in which farmers lack knowledge to become successful MA farmers?  
Please explain if yes.

a. Summarize responses

- Yes – 80 %
- No – 10 %
- Neutral – 10 %.

b. Generalize overall viewpoint

According to experts farmers lack knowledge to become successful MA farmers in following areas:

- need of experts in the field of MA;
- need of advisory services for MA farmers;
- it is proposed to create and develop MA curricula;
- to create topics and disciplines showing the relationship and dependence between the agricultural model and the development of rural regions;
- to offer new specialties of the bio-economy type;
- to create an MA platform and incorporate it into educational curricula;
- to increase the number of topics in the field of MA.

Q9. What challenges are you confronted with in order to set up interesting courses for future MF farmers? (infrastructure, collaboration with other departments, structure of the organization...)

a. Summarize responses

10% of experts say they have no difficulties, 80% share different challenges faced, and 10% have no opinion.

b. Generalize overall viewpoint

Experienced respondents share for:

- Challenges related to interdisciplinary and multi-faceted issues related to the development of the MA and its impacts on sustainable rural development.
- Need of knowledge in the field of production technologies in agriculture, processing and marketing of agricultural products and services, rural and agrarian tourism, ecosystem services provided by farmers, producer organizations, etc.

- Administrative issues for stakeholder cooperation. Organization of meetings with companies, producers and state institutions. Lack of network and permanent contact with farmers.
- Lack of knowledge and information about MA.
- Limited funding for MA courses.
- Poor student interest in real practical problems.
- Lack of examples and theoretical statements by MA in Europe, demonstrations of the MA in Bulgaria.

Q10. How do you obtain insights in the educational needs of the MA farmers?

a. Summarize responses

Information on education of farmers in the field of MA comes mainly in two ways:

- In direct meetings with farmers - 70% of the respondents.
- Internet - 30% of respondents.

b. Generalize overall viewpoint

In order to obtain information on the educational needs of the MA farmers, the main uses are:

- Participation in specially organized events, forums of NGOs and branch organizations, seminars organized by AU and scientific conferences.
- Workshops or training courses.
- Meetings with farmers, polls, interviews.
- Meetings with good farm managers and professional producer organizations.
- Polls in the framework of research projects. Expert's assessments from regional and municipal administrations.
- From the websites of the Ministry of Agriculture, Food and Forestry, the national forums, BF Bioselena, sites of Balkan Biocert.

Q11. Do you think the educational offer is sufficiently aligned with the needs of the farmers, or how do you think this could be improved?

a. Summarize responses

- Yes – 60 %
- No – 20 %
- Neutral – 20 %.

b. Generalize overall viewpoint

The main guidelines for improving the educational needs of farmers are:

- There are built structures, but farmers are not interested in the news related to the MA.
- Communication between farmers, the education system, students and businesses needs to be improved. Put more emphasis on the transfer of good practices and the implementation of innovation. Strengthening practical training on MA in the country and demonstrations from farmer to farmer.
- Education is not well geared to the needs of farmers.
- Preliminary research on farmers' preparation is needed.
- It is necessary to include the MA in the educational programs of the students.

### 3.2.3. Conclusions

- All respondents have experience in teaching the multifunctional model of agriculture and its role in rural development.
- According to most of the respondents, there is no defined MA training, and it is included as a matter in other disciplines.
- The prevailing opinion is that there is no inventory of the existing educational offer in the field of MA.
- Most respondents say there is no platform on which to gather knowledge on different MA topics. There are only separate websites of different NGOs.
- Knowledge related to MA is exchanged within scientific forums where different experts meet.
- Most experts are of the opinion that since 2007 there has been a rise in the MA. This involves the inclusion of MA issues in the disciplines of agrarian economics, agro-marketing, economic disciplines, organic farming, agro-forestry systems, rural development.

### 3.2.4. Recommendations

The main guidelines for improving the educational needs of farmers are:

- The task of the established structures is to increase the interest of farmers in innovations related to the CU.
- Communication between farmers, the education system, students and businesses needs to be improved. To give greater importance to the transfer of good practices and the introduction of innovation. Enhancing practical training in MS in the country and demonstrations from farmer to farmer.
- Education is not well targeted for farmers' needs. A preliminary study of farmers' preparation is needed. The involvement of MS in the educational programs of universities is necessary.

### 3.3.Italy

#### 3.3.1. Methodology & participant profile

##### Focus group guide

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

##### Participant selection

We contacted experts with academic background, which means from the Department of Economics of the University of Foggia. We tried to involve different profiles, whose research interests cover as much issues regarding rural development, agriculture, environment and food sciences as possible. All this “internal” experts have experience in teaching and know the state of the art of the current local educational offer and demand. To complete the group, we involved external experts dealing with the same topics of the internal ones, but bringing the point of view of the practitioners.

##### Demographics

All relevant information regarding the members attended the Focus Group can be found in the web of the project: <http://www.etomato.eu/etomato-2nd-focus-group-academia-and-stakeholders-of-the-agri-food-scenarios/>

##### Focus groups

Focus Group was held on April 9th 2019 at 4:00 pm at the University of Foggia, Department of Economics. It lasted 2 hours. Gianluigi De Pascale addressed the discussion by at first introducing the objective of the meeting and illustrating the project, then going through the questionnaire that was shared in advance with the participants. To carry out this task, a laptop was used to take note of the insights emerging from the discussion. During the session were shot some photos of the activity that was being undertaken.

### 3.3.2. Discussion of the results

<http://www.etomato.eu/etomato-2nd-focus-group-academia-and-stakeholders-of-the-agri-food-scenarios/>

*Q1. Could every one of you shortly present him/herself and explain your role in the educational offer related to MFA?*

<http://www.etomato.eu/etomato-2nd-focus-group-academia-and-stakeholders-of-the-agri-food-scenarios/>

*Q2. So, we already heard several institutes and educational programmes focusing on MA. Are there other important institutes missing that offer teaching or training in MA in our country?*

a. Summarize responses

No, there are not others in our countries.

b. Generalize overall viewpoint

All participants agreed that there are no teaching/training courses focusing on Multifunctional Agriculture. By contrast, we find many courses regarding topics such as environment, tourism, social planning, education (to become pedagogue for example) and agriculture. However they do not combine these different topics in order to come up with inter-sectorial organization able to diversify their income.

*Q3. Is there an inventory available of the existing educational offer in the field of MA?*

a. Summarize responses

Not available.

b. Generalize overall viewpoint

We are just able to find an inventory of the courses concerning the different topics/issues that MA considers as a whole. "Different" means that any topic/issue is not faced as being interrelated to each other.

*Q4. Is there a platform where all knowledge on different themes related to MA is gathered, or where different experts meet each other?*

a. Summarize responses

Not available.

b. Generalize overall viewpoint

The theme of MA still lacks of consideration. This means that although its importance for the future and the sustainability of the sector, it is deemed far from ensuring the economic viability of the sector. Therefore, no significant efforts have been put in practice to identify key knowledge. Practitioners pay attention to what returns profit in the short term. Importantly, Michele Lacenere (President of Confagricoltura Bari – organization providing services as being the labour union of the farmers operating in province of Bari) argued that practitioners are used to acquire knowledge on the field, or from being addressed by advisors dealing with supporting farms in administrative and financial issues at most. This means that practitioners, as well as new entrants into farming, do not believe that training supplied by university or whatever institute can accomplish the provision of skills: most of them think that the only way to conduct a farming organization is to apply on the field following traditional practices.

*Q5. Are you familiar with an organization at local/regional or national level that is interested in the problems of farmers focusing on multifunctional agriculture? If yes, please name it.*

a. Summarize responses



Mariarosaria Lombardi Vazapp that is an organization born to bring social innovation in farming organizations, as well as to enable potential new entrants into farming to get together, share ideas and start cooperating.

Francesco Contò there is the network of regional social and educational farming

Gianluigi De Pascale In Tuscany (Garfagnana) there is a relevant number of multifunctional farming organizations. Although no specific organizations act to gather specific interests and relevant issues of MA, in that area there are many Multifunctional farms operating in the three domains faced in eTOMATO. Farmers seem having built up a strong attitude in diversifying the income of agriculture business: they preserve the territory as they deem it is the most precious resource they have, they produce food and supply it through channels whereby they diversify the offer, they engage in social and educational activities through applying agriculture, and farmers act as host for tourists. In the latter case, the main attraction that they offer is the nature and resources placed in. This is why they strongly engage in maintaining the territory. Examples of those organizations are: “Lo Spaventapasseri” (educational farm); “Calafata” (social farm and wine producer); “Maestà della formica” (farm operating in short chains, food processor and host for tourists); “Il Grillo Agriturismo”; “Filippi farm”; “Il Corniolo farm” and “Podere ai Biagi”. They are example of case studies, whose good practices they apply for running as Multifunctional organization, could be consider as a reference point and might be brought in the educational course that will be developed.

#### b. Generalize overall viewpoint

The theme of MA still lacks of consideration. This means that although its importance for the future and the sustainability of the sector, it is still neglected by practitioners. This is mainly linked to the lack of capability of coming up with strongly innovative ideas conveying high level of knowledge and the ability of upskilling through a so-called learning by doing process aimed at reducing the gap between knowledge and skills (which stands for capability of applying knowledge). The issue of valid and innovative ideas is increasingly taking place in the research agenda, however professors struggle with teaching ways to think and manage innovation into creative ideas: the training should stress much more the attitude of the students to “think outside the box” and act as manager instead of traditional ways of farming. Acting as manager means envisaging a strategy and a plan to accomplish it (Sales, marketing, logistics and so forth).

*Q6. Did you see changes during the last years in the educational offer focusing on MFA, and in what direction? How did your offer change, what elements were included/excluded?*

#### a. Summarize responses

Professors 2 the theme of “food” as a way to improve the health quality of our lifestyle. In this regard, an interdepartmental PhD course was established at the University of Foggia. This involved three Departments: Economics, Agricultural and Medicine. The ministry of education somehow recognised the multifunctional properties of the agri-food sectors. However, the focus on food diverted researchers from the consideration of its source that is agriculture.

#### b. Generalize overall viewpoint

The theme of MA still lacks of consideration. This means that although its importance for the future and the sustainability of the sector, it is still neglected by practitioners. This is mainly linked to the lack of capability of coming up with strongly innovative ideas conveying high level of knowledge and the ability of upskilling through a so-called learning by doing process aimed at reducing the gap between knowledge and skills (which stands for capability of applying knowledge). The issue of valid and innovative ideas is increasingly taking place in the research agenda, however professors struggle with teaching ways to think and manage innovation into creative ideas: the training should stress much more the attitude of the students to “think outside the box” and act as manager instead of

traditional ways of farming. Acting as manager means envisaging a strategy and a plan to accomplish it (Sales, marketing, logistics and so forth).

Q7. Do you expect changes in the future, and in what direction?

a. Summarize responses

All participants agreed that changes will occur as the new generations, for many reasons, will convey different background/education to the farming system respect to what old farmers have been doing. The direction will follow up the need of being “smart”: more and more mechanization and computerization. But the biggest concern will remain the attitude, what about it? Will us be able to lead students and society as a whole to a new way of acting when approaching to the use of natural resources for business?

b. Generalize overall viewpoint

The point is that policy makers, civil society and worldwide entrepreneurial system have been acting to address business towards the application of sustainable practices. However, many variables cannot be kept under control over time: who takes the decision of designing a business model instead of each other? The answer is easy: whoever decides to engage in business, but no control there is beforehand for the attitude, the capability and the objective of nascent organizations. And in case the objective sticks to what we actually need, is the entrepreneur able to fulfil it? This happens even for farming organizations.

The focus, then, should be not on what has to be done to overcome the issue of being sustainable in the long term, but on the pathways that should be undertaken to make actions effective.

Q8. Do you observe fields in which farmers lack knowledge to become successful MA farmers? Please explain if yes.

a. Summarize responses

- how to host guests;
- how to use smart devices (precision agriculture for example)
- networking and willing to cooperate
- recovering traditions in processing food (handcrafts have appeal for tourists)
- reuse of scraps
- agri-energies
- management skills

b. Generalize overall viewpoint

The scope of MFA is large: the more the farmers feel to constrained within the traditional farming, the less is the chance to become successful. This is strongly linked to the lack of education: most of them are not aware about the possibility of reusing the scraps to diversify the income; do not have managerial skills; language skills; do not know the needs of the foreign guests; do not know how to prevent risks of climate changes and so on.

Q9. What challenges are you confronted with in order to set up interesting courses for future MF farmers? (infrastructure, collaboration with other departments, structure of the organization...)

a. Summarize responses

- Parochialism
- Scarce willingness of the students to interact during the classes;
- Farmers are not open to receive training: they think that their work can be learnt just by practice;

- In the field of educational agriculture should be engaged a cooperation with the department do humanities science whose courses offer paths to become educators.

b. Generalize overall viewpoint

The point is that practitioners are not open to cooperate each other and they do not want to share what they own (even in terms of know-how). The neighbour is seen as a competitor, and so this hinders the know-how exchange, the cooperation to improve the contractual power, the capacity to engage together in taking care of the surrounding environment.

Q10. How do you obtain insights in the educational needs of the MA farmers?

a. Summarize responses

Participants agreed with the fact that students should be stimulated in developing their own ideas and addressed in framing a good strategy to act in the markets. This means that they should learn to plan activities professionally. This would lead to the identification of the gaps affecting the educational methods. Additionally, looking at the sectorial associations (in Italy we have Confagricoltura, CIA and Vazapp for example): they are able understand in depth the real needs of the farmers. However, they often stick to needs that farmers raise for improving performance in traditional agriculture.

b. Generalize overall viewpoint

The most important matter concerns the explanation of the concept of MFA to the farmers. The main need they have is to be informed of the opportunity to turn into MFA. They ask for answer at the simple question “why should we become multifunctional”?

Q11. Do you think the educational offer is sufficiently aligned with the needs of the farmers, or how do you think this could be improved?

a. Summarize responses

Any expert argued that there is a big distance between educational offer and the needs of the farmers. These latter should be involved somehow in the educational offer. On the other hand, the strongest efforts should be applied to teach students to use knowledge and apply the most innovative and recent ones by constantly paying attention at state of the art of the newest ways to frame a business. To well address this issue, a rigorous monitor on the internships taken by students is strongly recommended. Following this approach, and as aforementioned, the development of the students own business idea is a good method to stimulate the active participation to the training. This can be facilitated by asking students to periodically (every 2 weeks) to present and discuss the advancement accomplished in framing their business idea. In other words, students should be asked to work really hard in order to somehow replicate the working conditions that perhaps they will be confronting with in the real world. This means doing in parallel: attending interactively classes, studying theory, applying theory by developing their own Multifunctional farming organization and periodically presenting and discussing advancements.

b. Generalize overall viewpoint

Along with theory, professors should start introducing practical activities in their teaching programme. This means replicate the stressful and hard conditions that one may face in the real world.

### 3.3.3. Conclusions

Focus group tried at first to outline the boundaries of multifunctional agriculture. This was deemed a relevant issue because the matter of approaching business by intersecting different sectors have been becoming increasingly current in the economy system as a whole. Importantly, agriculture plays a key role as it uses natural scarce resources, which are depleting. Their depletion negatively affect any other economic sector and in turn the whole society. This is why the hardest challenge that people are called to accomplish concerns the need of becoming sustainable: finding a trade-off among the three different corners of this word, which are economic, social and environmental sustainability. In so doing, the economic system to work on, and related issues, become increasingly complex. This means that the knowledge owned by scholars must be applied. Its application means upskill practitioners by different points of view: managerial skills, awareness of alternative ways to implement agriculture and their in depth description, attitude to be smart and able to think being innovative (by strongly stressing the concept of innovation with, for example, showing successful case studies).

In this context, MFA can be interpreted by the three dimensions set out with eTOMATO. However, other solutions to be multifunctional even work. For example:

- Agri-energies;
- Circular economies (recovering/reusing wastes);
- Vertical integration (even though this occurs with short food chains as well).

### 3.3.4. Recommendations

Experts stressed a lot the concept of being innovative with searching solutions to improve the quality of the offer by having the mission to be more and more sustainable, is what should be necessarily added to the training plan. Students will attend the course by choice (it will not be mandatory), so it is assumed that they are interested at learning and/or deepening the topic of MFA. In the wake of this, professors should 1) ask them to come up with their own agricultural idea and work on that to make it multifunctional; 2) motivate them in pursuing improving their draft when facing hurdles; 3) address students in defining a feasible market strategy; 4) take students to visit on the field several successful farms, and students should be stimulated in interacting with the farmers in order to understand strengths and weaknesses that farmers daily confront with; 5) push students to think how the weaknesses could be improved and how their business idea steps towards respect to what already exists; 6) teach that economies run by cycles (growth and crisis) and what is the most suitable time to catch opportunities.

Another issue that should be tackled during the course regards the effectiveness of the actions put in practice: the more new entrants into farming make mistakes, the more farming initiatives generate bad resources employment, which means fostering their depletion. It is therefore important to enable students to perform exercises to simulate their business idea before acting to start it up.

### 3.4.Spain

#### 3.4.1. Methodology & participant profile

##### Focus group guide

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex A.

##### Participant selection

The selection of experts has been made taking as basic criteria, on the one hand, their competence with respect to the object of the questionnaire and discussion group and, on the other, the diversity of possible professional profiles. The Spanish team made a wide selection of possible candidates who, once contacted by email and / or telephone, agreed to participate in the focus group without receiving any incentive and after agreeing on the date of its completion. The problems of calendar and the number of participants forced us to perform two sessions. The questionnaire was sent to the participants and, a few days later, the focus groups were made.

##### Demographics

<i>N º</i>	<i>Expert</i>	<i>sector</i>	<i>Age</i>	<i>Year of experien ce</i>	<i>sex</i>	<i>Institution</i>	<i>Specific activities of MA</i>
1	Eugenio Cejudo García	Researcher/Professor	50 apro x.	30	men	University of Granada	Agriculture, rural development
2	Juan Carlos Maroto Martos	Researcher/Professor	50 apro x.	30	men	University of Granada	Rural tourism, methodology docent
3	Alberto Matarán Ruiz	Researcher/Professor	40 apro x.	15	men	University of Granada	Ecological agriculture, cidadana participation
4	Maria Inmaculada Oria Lopez	Political responsible	45 apro x.	13	wom en	Junta de Andalucí a (Andalusia n Regional Governme nt)	Management Rural Development Programmes/Agricu Iture
5	Francisco Beltrán Sánchez	profesor de enseñanza secundaria y responsable del área de cultura de la plataforma ciudadana Salvemos la Vega-VegaEduca	50 apro x.	15	men	IES Juan XXIII (Highschool, Granada). Salvemos la Vega-VegaEduca	Teaching; Social activist

						<i>Associations</i>	
6	Alberto	Manager Cooperativa Las Torcas	45 aprox.	10	men	Las Torcas	Manager, didactical farming; participation and governance
7	Fernando Bautista Expósito	Technical responsible AlVelAl Association	30 aprox.	5	men	AlVelAl Association I	Technical dissemination, participation
8	Miguel Ángel García Arias	técnico GDR a cargo de un programa de formación agrícola	40 aprox.	10	men	Technical support Local Action Group	Agricultural formation (technical knowledge)

#### Focus groups

<i>Location</i>	<i>Day</i>	<i>City</i>	<i>Duration</i>	<i>Participants</i>
Facultad de Letras	15-May-2019	Granada	2'5 hour	Exp. 1, 3, 5 y 7
Facultad de Letras	17-May-2019	Granada	2'5 hour	Exp. 2, 4, 6 y 8

### 3.4.2. Discussion of the results

Q1. Could every one of you shortly present him/herself and explain your role in the educational offer related to MFA?

a. Summarize responses

Teachers: both regulated (University and Secondary) and non-regulated (workshops, seminars, courses, etc.), 3 cases.

Managers and technicians of associations and cooperatives of ecological and multifunctional agriculture, 3 cases

Members of organizations and civil associations in defense of multifunctional agricultural spaces (Vega Educa or Discover la Vega, both provincial), 1 case

Political managers related to the rural world and the environment, 1 case

b. Generalize overall viewpoint

The diversity of selected profiles has generated a rich diversity in the responses obtained and the debates generated being representative of the inherent intrinsic diversity of the MFA.

Q2. So, we already heard several institutes and educational programmes focusing on MA. Are there other important institutes missing that offer teaching or training in MA in our country?

a. Summarize responses

In 7 of the 8 cases they state that they do know of the existence of centers, institutes and universities that have educational programs in AM. Only one of the participants states that he does not know any

b. Generalize overall viewpoint

In general, it is said that there is knowledge although, according to the profiles, they point to very diverse examples in tune with their professional profile. Thus the political manager points out the IFAPA (Andalusian Institute of Agricultural Research and Training) as a training and research center of the regional Administration (Junta de Andalucía); the university experts focus on undergraduate and postgraduate university studies; those coming from associations refer to other forms of non-regulated training carried out both for their own members and for civil society as a whole (Intervegas, ALVELAL for example). Only the manager of Las Torcas says he does not know any, although in the discussion group it is clear to him that in the cooperative of which he is the manager, this type of activity is carried out in a non-regulated manner.

Q3. Is there an inventory available of the existing educational offer in the field of MA?

a. Summarize responses

The 8 experts point out that they do not know of any inventory

b. Generalize overall viewpoint

Regardless of the profile of the experts, there is consensus on the lack of agreement on this issue. In the group meeting, there is no progress in this respect either

Q4. Is there a platform where all knowledge on different themes related to MA is gathered, or where different experts meet each other?

a. Summarize responses

The existence of these platforms is known in half of the 8 cases, the rest is unknown.

b. Generalize overall viewpoint

The answers and the group discussions indicate that only at the university level are repositories of an institutional nature linked to Universities, Research Centers (CSIC, IFAPA) or public bodies of the regional or national administration (Ministries, Ministries). It also refers others related to specific

research projects housed in their respective web. In the cases of the experts from the associations, they cite their own platforms, such as VegaEduca or ALVelAL.

*Q5. Are you familiar with an organization at local/regional or national level that is interested in the problems of farmers focusing on multifunctional agriculture? If yes, please name it.*

a. Summarize responses

In all cases, the knowledge of this type of organizations at the regional / local or national level is mentioned, mentioning some of them.

b. Generalize overall viewpoint

The examples cited are related to movements and groups of a citizen nature and linked to ecological approaches increasingly visible socially through platforms or associations of different nature and scale. Platforms such as Salvemos la Vega or Vega-Educa of local / regional implementation; InterVegas of national scope or Ecologist in Action at an international level.

*Q6. Did you see changes during the last years in the educational offer focusing on MFA, and in what direction? How did your offer change, what elements were included/excluded?*

a. Summarize responses

There is no unanimous view of this issue although in 5 of the cases it is stated that there are changes in the training activity linked to the MA.

b. Generalize overall viewpoint

Majority points out that there are changes and that they are important in line with the greater social awareness of environmental problems: They also review and comment on the greater importance of these approaches in relation to the dynamics of the rural world and its depopulation processes and the need of alternatives through productions of quality of the productions and of health of the consumers.

On the other hand, we find opinions that do not see those changes and, in one case, do not answer.

*Q7. Do you expect changes in the future, and in what direction?*

a. Summarize responses

Majority indicates that there will be changes although in 2 cases they do not believe that they will exist

b. Generalize overall viewpoint

One important aspect to review is that those who affirm in the survey that changes will occur during the process of discussing this issue will qualify this position. In such a way that two different approaches are appreciated among this group: those who defend this change more as a desire than as a reality that will end up being imposed on those who defend that the change will be imposed

*Q8. Do you observe fields in which farmers lack knowledge to become successful MA farmers? Please explain if yes.*

a. Summarize responses

In all cases experts point out the knowledge deficit on the part of farmers for the development of multifunctional agriculture

b. Generalize overall viewpoint

All indicate important deficits although the weaknesses are very varied according to experts and range from soil studies; marketing of their products; scarce professional training in alternative activities (tourism); little training in "bio" agriculture; lack of traditional knowledge by "traditional" farmers, etc.



Q9. What challenges are you confronted with in order to set up interesting courses for future MF farmers? (infrastructure, collaboration with other departments, structure of the organization...)

a. Summarize responses

All the experts, except one that does not answer, outline challenges and challenges that must be faced for the implementation of these courses.

b. Generalize overall viewpoint

The aspects that are repeated more by the experts can be summarized in the following. Lack of money and support from the Administration; the presence of farmers in regulated teaching; the need for centers of "Agrarian Extension" linked to the territories and a greater offer of courses in the studios of Vocational Training adapted to each territory

Q10. How do you obtain insights in the educational needs of the MA farmers?

a. Summarize responses

The answers obtained are very diverse and even contradictory, which points to a lack of clarity or a misinterpretation in the question that could only be addressed in the development of the group activity. In two of the questionnaires the question is not answered.

b. Generalize overall viewpoint

The answers are very diverse and are answered in opposite ways. The results are not significant

Q11. Do you think the educational offer is sufficiently aligned with the needs of the farmers, or how do you think this could be improved?

a. Summarize responses

In most cases it is clearly stated that there is no exception in the case of the political representative who believes that it is sufficient and that what is missing are farmers who have an interest in training once they are already working in the activity due to the average age what are they presenting. These limitations, he points out, are exacerbated by the scarce young population that wants to dedicate themselves to this activity in an increasingly unpopulated rural world

b. Generalize overall viewpoint

The answers in this aspect, when it is negative, are being approached from the different training cycles at all levels, therefore non-agricultural students; The answer indicated by a sufficient training offer is from the point of view of the active farmer and is thought of in continuous training

#### 3.4.3. Conclusions

The answers show the need to increase the knowledge that society as a whole has regarding AM as well as the training activities needed to conveniently train the farmer. It is the experts of the research profile linked to the University who demonstrate a greater knowledge of this problem. By contrast, the other groups show a rather partial vision, closely linked to their profile of origin, which varies and is extended in the group sessions.

Faced with this negative view of training needs, and although there are significant difficulties to improve this situation, it manifests itself in a majority way that changes are taking place in this situation. The greater citizen awareness regarding transcendental issues such as environmental problems, the production of healthy foods or the depopulation of rural areas are the arguments that sustain this optimism towards the future of the MA.

#### 3.4.4. Recommendations

Due to the need to increase the knowledge that the society as a whole has respect to the MA, construction and maintenance of a platform in which the different actors share ideas and reflections (experts, professors, farmers and the rest of civil society interested in the MA) becomes a basic instrument of dissemination and socialization of knowledge. This platform could also allow the communication channel of participatory interaction, to improve the necessary cooperation between the actors reviewed.

That necessary complementarity between the different actors must, compulsory, be specified in the farmer's participation in the formative process. And not only as a true “teacher” that treasures relevant and necessary knowledge related to the MA, but also in its practical and applied aspect.

From this point of view, the training received by the students must have a transcendental practical burden of field work in charge of the farmer. The training must leave the classrooms and work in the countryside.

Finally, from this perspective, learning based on applied work focused on the study of specific cases offers to the student the double perspective of successful and failed processes of the hand of its promoters. Concepts such as innovation, opportunity, success/failure come true in the testimony of its promoters not of the academy.

## 4. Students' questionnaires

### 4.1. Belgium

#### 4.1.1. Methodology & participant profile

##### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex C.

##### Participant selection

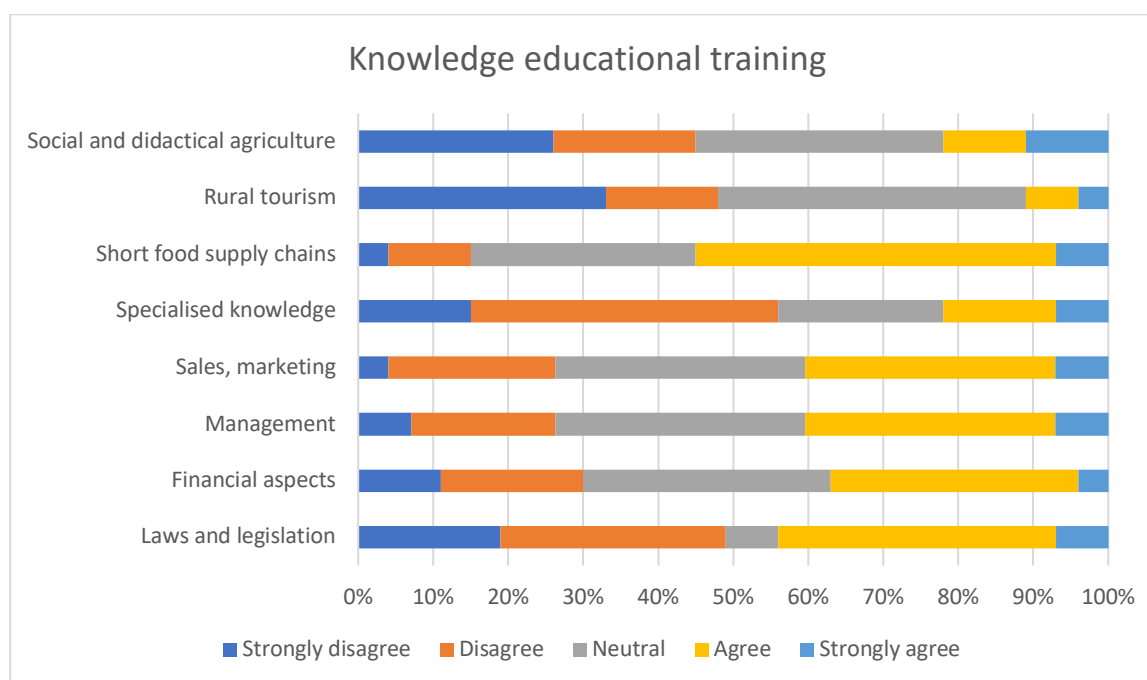
Students of different educational programmes (related to farming) at Ghent University were invited to participate in the questionnaire. Further, the questionnaire was also distributed to several university colleges in Flanders as they provide educational programmes related to farming. The questionnaire was also spread through social media channels in order to reach recently graduated students.

##### Participants profile

Responses of in total 54 people were gathered through the questionnaire. Most participants (94%) were graduating either in 2019 or 2020. One participant graduated in 2018 while two other participants graduated a longer time ago (one in 2012 and one in 2013). A majority (65%) of the participants were enrolled at Ghent University, followed by Odisee Hogeschool (20%) and HoGent (15%). Participants were enrolled at a wide variety of educational programmes: 25% followed Agrobiotechnology, 19% Bioscience engineering (option agriculture), 15% Applied biological sciences, 15% Nutrition and rural development, 11% Food technology, 7% Food sciences and nutrition and 7% Sustainable Food Systems. 70% of the participants had a special interest in MFA. When specifying in which topic of MFA they had interest, nobody mentioned agricultural tourism. Instead, most were interested in short chain (74%) while the others were interested in social and educational farming.

#### 4.1.2. Results and discussion

Q1. My educational training offers me sufficient knowledge to run a farm appropriately regarding:



Q2. Are there specific skills that you would like to acquire in the future, or topics that you would like to study?

Just over half, 52%, responded that they would like to acquire additional skills in the future.

The most listed skills they wanted to acquire is management, which was mentioned by 11 participants. Next to that, 7 participants highlighted their need of additional marketing skills. Also, some more specific skills were mentioned only once: skills for handling certain equipment, export, rural development, local supply system and agroecology.

Q3. Do you think in general that further training is needed to turn farmers into multifunctional farmers?

An overwhelming 93% of the respondents thought that farmers need additional training so that they can become multifunctional farmers.

Also here, the importance of training related to management skills was important as it was mentioned by 15 participants. Further, marketing skills were also listed by 9 participants. Several people mentioned that skills are also depending on the type of MFA and the background of the farmers. Depending on the type of MFA, some additional skills might be necessary in order to successfully performed MFA such as legislation, integration of ecology, practical skills, negotiation and financial skills.

Q4. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

A wide variety of answers was given to this question, which might be the result of the different backgrounds of the participants. Internships were mentioned by 7 participants and management by 5 participants. Furthermore, several participants highlighted that it is important to come into contact with farmers through seminars, elective courses, company visits, guest lectures,... so that students can obtain more information. The educational system should also highlight the importance of farmers throughout the school career (mentioned by 3 participants). Some people mention that farmers are seen as 'lower class'. Cooperation with farmers was also mentioned by 3 participants as a necessary improvement so that both students and farmers can learn from each other. Further, a student also mentioned the importance of have sufficient technical background for certain jobs. Also, education regarding more efficient processing and agroecology should be included so that farmers are better able to perform MFA.

#### 4.1.3. Conclusions

Overall, participants indicate that the highest need is for management and marketing skills. Also, more specialised knowledge (e.g. technical knowledge) should be obtained during the studies. Further, participants mention that it is important that they have sufficient contacts with MFA farmers; e.g. through seminars, guest lecturers, company visits. Furthermore, some participants declare that internships could be interesting. Lastly, the importance of farming (in general) should be mentioned throughout the educational system so that people are more aware of the importance of farming. This could also contribute to a better image of farmers in the society.

#### 4.1.4. Recommendations

First of all, one need to consider that around 70% of the respondents were interested in MFA and that there was a variety of educational background. This makes that it is harder to generalize the results, but also implicates that the main recommendations are suggestions which should be implemented in different educational programmes related to farming in Belgium. In general, management and marketing skills should be more developed during the educational programs. Also, technical and practical knowledge could be better implemented, however this is not always easy given the variety of activities of MFA. Therefore, it could be interesting to include internships so that students can have more practical experience within the MFA that they prefer.

## 4.2. Bulgaria

### 4.2.1. Methodology & participant profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex C.

#### Participant selection

When selecting students consciously we are oriented to students in higher training course when they have already passed the study of many disciplines of the educational program. In this way, they would more effectively assess the areas in which they need additional training.

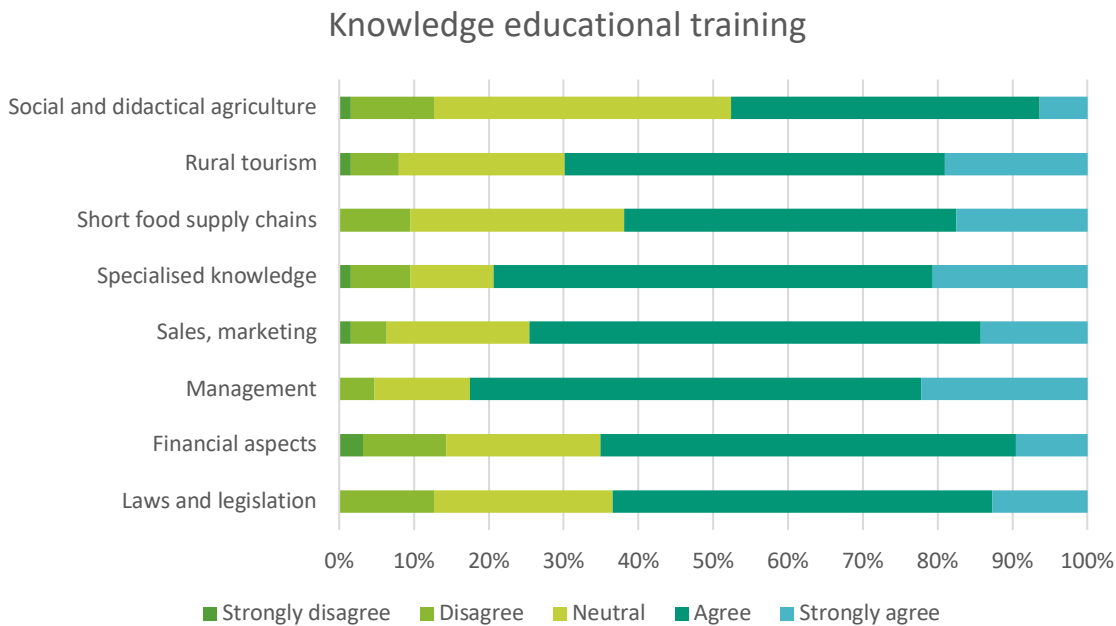
Describe the process of selecting participants for questionnaire. Include information regarding the actions taken to recruit, any incentives given to participant and any other relevant information.

#### Participants profile

The survey was conducted with 63 students from 6 majors from three faculties of Bachelor's and Master's degree of AUP. Expected year of graduation - 2019 and 2020. Students from all majors are interested in the MA, and in particular in the following domains: social and didactic agriculture - in the first place; short food supply chains - in the second place; rural tourism – in the third place.

#### 4.2.2. Discussion of the results

##### Q1. My educational training offers me sufficient knowledge to run a farm appropriately regarding:



As a result of the survey, the students responded on average 68.05% positive (52.78% agree and 15.27% strongly agree) that their training offers sufficient knowledge to manage the farm properly. The best (74.60% positive answers – agree and strongly agree) is sales, marketing and management training, and the lowest is social and didactic agriculture with 12.70% positive responses ( 1.59% are strongly disagree, 11.11% - disagree that it is offered sufficient training and 39.68% are neutral, which in a conversation with them was clarified that they respond so as they are not aware of their essence). The situation is similar with Short food supply chains – 9.53% think that not getting enough training in this area, 28.57% are neutral.

##### Q2. Are there specific skills that you would like to acquire in the future, or topics that you would like to study? If yes, which skills and why?

A positive response was given by 85.72% of respondents and 14.28% responded – Don't know. To acquire specific skills in the future, students would like to study the following topics in more detail:

- Sales and marketing (short food supply chains) - 28.58% of respondents have given a positive response.
- Multifunctional agriculture - 25.39% of the respondents answered positively.
- Rural tourism and rural development – 17.46%.
- I do not know - 14.28%
- Management and financial aspects - 9.53% of the respondents answered positively.
- Innovation and software technologies, Digitization of agriculture - 4.76% of the respondents have given a positive answer.

It should be noted that some of the respondents have given more than one answer. If yes, which skills and why?



Over 35% of those asked why they want to acquire these skills do not respond, and the rest (about 65%) associate the acquisition of these skills with their desire to become better professionals, eventually organize their own farm to apply their knowledge, work in large supermarkets that are supplied directly from farms, to develop rural and wine tourism.

Q3. Do you think in general that further training is needed to turn farmers into multifunctional farmers?

Positively responded 87.30% of respondents and 12.70% responded with no.

Q4. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

The respondents' summary responses are as follows:

- Involvement in the curriculum of more practical activities in real production conditions - 22.22%
- More hours for rural management disciplines, including rural tourism - 19.05%.
- Include in the curriculum more disciplines related to marketing and shortening supply chains - 17.46%
- Studying disciplines on multifunctional agriculture - 15,87%
- Closer cooperation and work with NGOs - 12.70%
- Innovative training models - 3,10%
- I cannot judge - 9.60%.

It should be noted that some of the respondents gave more than one answer.

#### 4.2.3. Conclusions

From the poll conducted, it can be concluded that the students at AUP are not well acquainted with the problems of the MA - some of them for the first time hear about concepts such as social and didactic agriculture.

To acquire specific skills in the future, students would like to study the following topics in more detail:

- Sales and marketing (short food supply chains);
- Multifunctional agriculture – social and didactic agriculture;
- Rural tourism and rural development

#### 4.2.4. Recommendations

From the interviews with the students and the data obtained, the following recommendations can be made:

- inclusion in the curricula and programs of disciplines devoted to the problems of the MA - especially social and didactic agriculture;
- the teaching disciplines sales and marketing to include more questions about short food supply chain and for agronomic specialties where these subjects are not studied, to offer their study as compulsory or at least optional;
- More practical activities in real production conditions, business relationship and farms practicing multifunctional activities. More interaction between students, farmers and traders;
- Organizing seminars and scientific conferences devoted to MA issues;
- Dual education in secondary and higher education.

## 4.3. Italy

### 4.3.1. Methodology & participant profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex C.

#### Participant selection

Students that can actually deal with MFA by their university journey. Hence, master students in the classes of economics degree (Department of Economics) and master students of the educational science degree (Department of humanistic studies). The idea was to invite people that will potentially deal with enterprises and self-entrepreneurship, and students that will potentially deal with education. The latter group of interviewed was chosen because one of the issues that graduated in humanistic sciences struggle to find a job, and one of their shortcomings is that they do not know all possible channels to approach to when searching for a job, perhaps. And in our perspective, Didactic Agriculture can play a role in addressing their job placement.

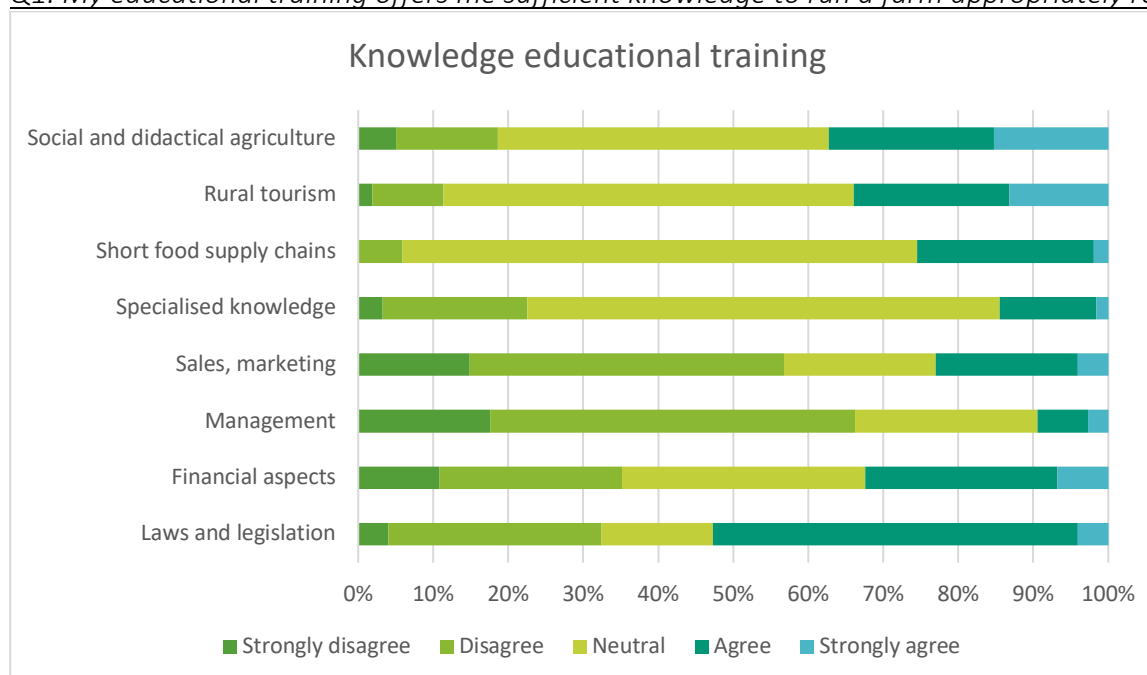
#### Participants profile

74 students fully replied the questionnaire. The majority of them replied that they foresee the graduation between 2019 and 2021.

Almost half of them showed interest in MFA: 40% Rural Tourism; 35% Social and Didactic Agriculture and 25% SFCs. Anyway the participant selection brought a bias into the sample (no random process).

#### 4.3.2. Discussion of the results

Q1. My educational training offers me sufficient knowledge to run a farm appropriately regarding:



Q2. Are there specific skills that you would like to acquire in the future, or topics that you would like to study?

The majority of the responses steer towards thinking that interviewees feel the need of more deepened training in market sales, financial matters (sources from which collecting financial resources) and how preserve environment and making a profit simultaneously.

Q3. Do you think in general that further training is needed to turn farmers into multifunctional farmers?

The overall feeling is that further training is necessary to undertake a MFA initiative (respondents just replied “yes”).

Q4. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

Two main things came forward:

- More practical experience – students are usually far from thinking to find job opportunities in the agricultural sector. For MFA is even worse. Practical experience might enable attendees to touch with hand the what it means and in turn develop its own business idea;
- Higher perception of the benefit coming from studying MFA.

#### 4.3.3. Conclusions

Participants showed an overall interest in the MFA, even though they had no high awareness on it. Specifically, when asked to reply whether they educational training needs for improvements, the majority of the responses for the specific domains of MFA were neutral. By contrast, a need of additional training seems to be required for management, marketing and sales, law and legislations. Respondents even showed the need of practical training in order to understand the usefulness of the MFA and how to make this business viable overtime.

#### 4.3.4. Recommendations

Careful reading of the responses steer toward thinking that students need to build up attitudes for understating what means innovating agriculture by MFA. This is strongly required because a business is not just a single activity or task: must be designed, planned and re-planned overtime and implemented. To make this long-run sustainable, new farmer should be able to think new solutions for people: it should be taught to develop solutions for the latent or known needs of the socio-economic environment. Then thinking at MFA is just a second stage of this path since without attitude it is hard to move away from the traditional understanding of the agricultural sector.

## 4.4. Spain

### 4.4.1. Methodology & participant profile

#### Questionnaire

The guide was developed by Ghent University and validated by the university partners. It can be found in Annex C.

#### Participant selection

Students of different educational programmes (related to farming) at University of Granada were invited to participate in the questionnaire. The questionnaire was also spread through social media channels in order to reach recently graduated students.

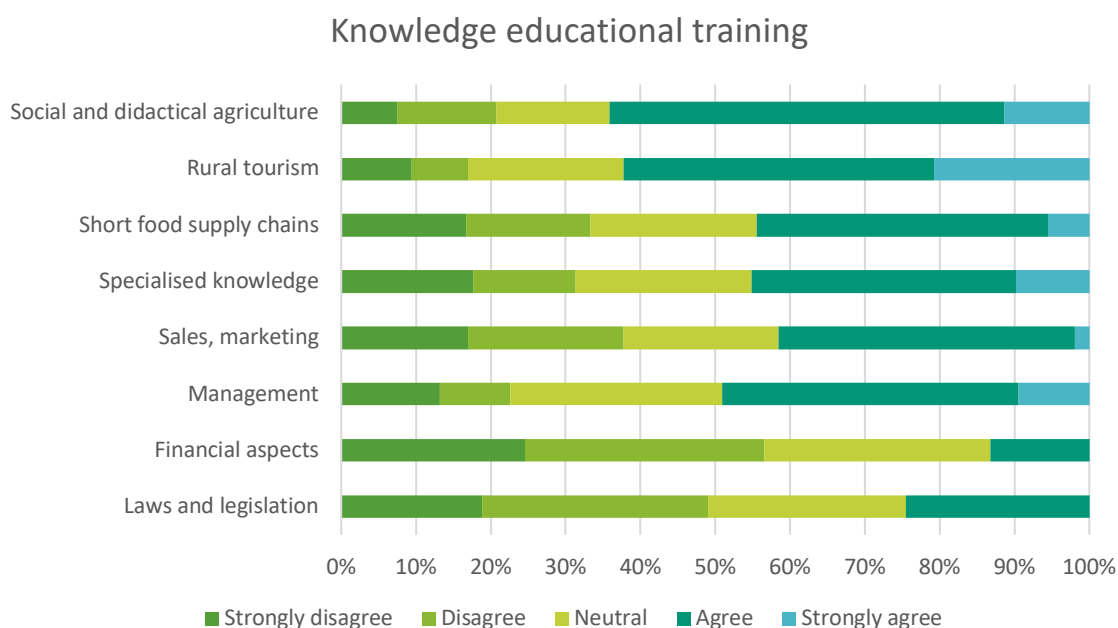
#### Participants profile

Responses of in total 53 people were gathered through the questionnaire. Most of them are undergraduate (64,1%) and the rest is postgraduate (28,3%). 8% of the total did not give any information in this field. All of the participants were enrolled at University of Granada.

As we indicated, 64,1% of the questionnaires were made by undergraduate students: 67,6% of them are students in Environmental Engineer, 26,5% are studying Geography, and finally, 3% are studying Geology, Tourism (another 3%) and one did not give information at all (3% of the total). On the other side, participants postgraduate were enrolled at a wide variety of educational programmes: above all Geography (53%), followed by Architecture (20%), Sociology (16%) and History of Art (6%), Environmental Engineer (6%), Politics (6%) and Social Worker (6%). 3 people didn't answer anything in this part. As a remarkable information, 85% of the participants were interested in MA. Only 15% did not. Among the interested students, 42,4% are interested in Social and Didactical Farming; 36% are interested in Rural Tourism; and finally, 20,1% are interested in Short Chain Supply Food.

#### 4.4.2. Discussion of the results

Q1. My educational training offers me sufficient knowledge to run a farm appropriately regarding:



Q2. Are there specific skills that you would like to acquire in the future, or topics that you would like to study?

88,6% YES; 1,9% NO; 9,5% Didn't answer

⇒ If yes, which skills and why?

The most listed skills they wanted to acquire are agroecology, languages, marketing (related to develop a touristic project in rural areas), traditional knowledge (something is disappearing, and it is necessary for a more sustainable production) and entrepreneurship (in general, as a skill for new projects). All the ideas are focused on two big domains: the change of the production into a new and more sustainable context; and the return of the traditional rural culture, trying to make this more productive and profitable in the postmodern context.

Q3. Do you think in general that further training is needed to turn farmers into multifunctional farmers?

88,6% Yes , 7,5% No; 3,7% Didn't answer.

Again, the participants write down about management skills, the return of the traditional rural culture and the necessary revaluation of the rural world.

Q4. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

Undoubtedly, the most complicated question for the participants, as it is demanding and open. We have gathered the answers in 3 groups. In the first place, we find the group of those who refer a necessary training in environmental aspects and related to the sustainability of the productive system (15 response of 53, 28%). Second, the largest group, with a response of 53 (55%), which includes those who speak of the need for more training in respecting agriculture, and within this, for the development of more agriculture modern that respondents relate to MA. In this group, 4 of

them speak of an interesting concept: to teach "rurality", as a way to dignify the activities of the rural world in the 21st century. Finally, third, there is the group of respondents who either did not answer the question or did not understand its meaning, with a total of 9 out of 53 (17%).



#### 4.4.3. Conclusions

*Overall, participants indicate that the highest need is for management and marketing skills, followed by traditional knowledge and sustainable background for their future activities. Also, more specialised knowledge (e.g. technical knowledge) should be obtained during the studies. Further, participants mention that it is important that they have sufficient contacts with MFA farmers; e.g. through seminars, guest lecturers, company visits. Furthermore, some participants declare that internships could be interesting. Lastly, the importance of farming (in general) should be mentioned throughout the educational system so that people are more aware of the importance of farming. This could also contribute to a better image of farmers in the society.*

#### 4.4.4. Recommendations

First of all, it is necessary to emphasize the remoteness that the respondents have regarding the concept of MA. They have heard about it, they know it, but they do not know exactly what it means, how it is substantiated in reality, and what are its possibilities to change the reality of traditional agriculture. Hence, for example, the problems of many respondents to answer question 8. There are two fundamental concerns at the time of this concept: we must rethink sustainable behaviors in agriculture in particular and in the rural world in general; and, also, it is necessary to recover traditional practices and knowledge to avoid their disappearance and also because they are more sustainable. The idea of "farmer" or "rancher" are artificial creations of modern politics; we must recover the idea of "peasant", someone who performs many activities at the same time, in different sectors, and the sum of all of them results in a multifunctional agriculture and productive diversification in the rural world. Going further, it is interesting to incorporate, explicitly, the idea of "rurality", as a way to restore dignity, modernity and modernize the rural in a massively urban society like ours.

## 5. General conclusions and recommendations

The training needs analysis made it clear that students lack the skills to start their own MFA company or to work in MFA. MFA companies also indicated that the lack of adequate trained graduates makes it harder to find skilled persons who can directly be involved at a MFA company.

It was clear from the need analysis that more training is needed. However, in order to do so, also single points of contact regarding MFA could be interesting. These single point of contacts should make sure that all the knowledge of MFA is present, helping instructors and teachers to develop course material, bring them in contact with good MFA companies and ensure that also other stakeholders (farmers, government, students,...) can easily connect with each other. That single point of contact should also make sure that there is a good overview of the potential trainings regarding MFA, both for students and non-students. People interested in MFA can at the moment not easily find the correct information regarding educational programmes and trainings in MFA in several countries.

Regarding the trainings itself, the needs for specific topics differ between the countries suggesting that part of the trainings will need to be country specific. The main needs for each country are listed below (Table 1).

*Table 1 Main training needs for each country under study*

Country	Needs
Belgium	<ul style="list-style-type: none"><li>• Marketing skills</li><li>• Law and legislation</li><li>• Social skills (=&gt; how to interact with clients,...)</li><li>• Practical knowledge on business plans</li><li>• More specialised knowledge (e.g. through training / internships by students / cooperation with other farmers)</li><li>• Knowledge regarding management (strategic decisions,...)</li></ul>
Bulgaria	<ul style="list-style-type: none"><li>• Knowledge regarding social and didactic agriculture</li><li>• Development of social skills necessary for practicing social agriculture</li><li>• Rural tourism and rural development</li><li>• Additional training in sales and marketing</li><li>• Knowledge in financial aspects of management and strategic planning</li><li>• Law and legislation</li></ul>
Italy	<ul style="list-style-type: none"><li>• Attitude to think innovative solution to satisfy costumer' needs (apply innovation, but ask yourself what innovation: search for good practices already implemented)</li><li>• Networking: how to find good practices to be replicated</li><li>• Source of financial resources (public and private): EU funds for example</li><li>• Green solutions for energy supply</li><li>• Circular management of waste</li><li>• Sales: channels to supply local markets and smart solutions to share the offer (e.g. e-commerce)</li><li>• Human resources: how to find qualified expertise (reach out HEIs)</li></ul>

Spain	<ul style="list-style-type: none"> <li>• Lifelong learning. Assistance to farmers setting up multifunctional farming</li> <li>• Students should be in contact with MA during their studies</li> <li>• Platform of MA</li> <li>• Teaching on cooperative and collaborative work</li> <li>• Management of human resources and students</li> <li>• Marketing –short supply chain concretely-, management, project, business administration and financial skills</li> <li>• Social and didactical agriculture –make it profitable-</li> <li>• Social agriculture –communicate what farmers are exactly doing-</li> <li>• Higher knowledge of funds to apply in MA</li> </ul>
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Furthermore, it was also stressed that sometimes it is not clear to (prospective) students that MFA exists and what the potential is for MFA. Therefore, it is important that students are more aware of the possibilities of MFA and come into contact with successful MFA companies. This can be by for instance inviting speakers of such companies, but most experts mention that it would be better that students are visiting successful MFA companies. It was even mentioned that even young children should come into contact with MFA which might stir up their interest to work in MFA. In higher education, the added value of internships at MFA companies was also mentioned by farmers, experts and students as this give also a more realistic image of what MFA could be. Also a more integrative approach was seen as a potential solution by implementing MFA as part in other curses e.g. letting students develop a business plan for a MFA company during a course of Business management.

In order to further expand MFA in Europe, it is crucial that training is at least foreseen to students in higher education. Moreover, there is a clear need for additional training for people interested in MFA and farmers who want to apply MFA. In order to fulfil those training needs, current trainings should be optimised to the country specific needs so that they are better prepared. Given that those people are already working, it is recommended that trainings are easily accessible (e.g. online modules) with also some contact moments with other interested parties so that they could learn from each other and from successful MFA companies.

## 6. Annexes

### Annex A. Interview guide

Good afternoon, my name is..., and I will conduct this interview on behalf of...

Together with 3 other universities throughout Europe, ... will conduct a European project of 3 years, called e-Tomato, which seeks to enhance an educational offer easing the uptake of new business practices in the field of multifunctional agriculture (MA). Multifunctional agriculture is an umbrella term used to indicate companies that combine their agricultural production and environment with services to society. Key to these services is the relationship between farms and civilians/consumers. In other words, multifunctional agriculture is the reconnection of agriculture to society. This project particularly would like to contribute to the domains of social and didactic agriculture, rural tourism and short food supply chains. Possible examples in these domains are sales on the farm or on a farmers market, agri-tourism like B&B, didactical farms, or care farms where people who are having problems integrating into society can be helped through a suitable programme of daily activities.

This investigation of the context and needs is the first step of the e-Tomato Project. It aims at identifying the training needs among the relevant target groups, in order to develop skills for multifunctional agriculture.

The results of the need analysis will be communicated through the e-Tomato website.

1. What kind of multifunctional farming activities do you perform and why? Since when?
- 2.a. What benefits do you recognize from multifunctional agriculture in your business?
  - b. What benefits do you identify for the community?
- 3.a. Did you receive funds to practice MA?
  - b. If so, which funds (origin)?

If not, do you know about its existence? Have you decided not to ask for them?
4. What kind of studies (higher education) did you follow, and how were they relevant for your multifunctional farming activities?
5. What is your age and when did you graduate?
6. Do you think that further training is needed to turn farmers into multifunctional farmers?
7. Did you follow extra training/ evening courses and if yes, in what field and why?
8. Do you feel you have sufficient knowledge to run your farm appropriately regarding
  - Laws and legislation
  - Financial aspects
  - Management
  - Sales, marketing
  - Specialized knowledge, for example software, technologies, equipment
9. What are the most important challenges you are confronted with to execute your multifunctional farming activities?
10. What skills would you like to acquire in the future to perform multifunctional agriculture and why?
11. Do you feel a need for a more specialized educational offer related to multifunctional agriculture?
12. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?

## Annex B. Focus group protocol

Good afternoon, my name is..., and I am a researcher at ...

Together with 3 other universities throughout Europe, ... will conduct a European project of 3 years, called e-Tomato, which seeks to enhance an educational offer easing the uptake of new business practices in the field of multifunctional agriculture (MA). Multifunctional agriculture is an umbrella term used to indicate companies that combine their agricultural production and environment with services to society. Key to these services is the relationship between farms and civilians/consumers. In other words, multifunctional agriculture is the reconnection of agriculture to society. This project particularly would like to contribute to the domains of social and didactic agriculture, rural tourism and short food supply chains. Possible examples in these domains are sales on the farm or on a farmers market, agri-tourism like B&B, didactical farms, or care farms where people who are having problems integrating into society can be helped through a suitable programme of daily activities.

This investigation of the context and needs is the first step of the e-Tomato Project. It aims at identifying the training needs among the relevant target groups, in order to develop skills for multifunctional agriculture.

The results of the need analysis will be communicated through the e-Tomato website.

1. Could every one of you shortly present him/herself and explain your role in the educational offer related to MFA?
2. So, we already heard several institutes and educational programmes focusing on MA. Are there other important institutes missing that offer teaching or training in MA in our country?
3. Is there an inventory available of the existing educational offer in the field of MA?
4. Is there a platform where all knowledge on different themes related to MA is gathered, or where different experts meet each other?
5. Are you familiar with an organization at local/regional or national level that is interested in the problems of farmers focusing on multifunctional agriculture? If yes, please name it.
6. Did you see changes during the last years in the educational offer focusing on MFA, and in what direction? How did your offer change, what elements were included/excluded?
7. Do you expect changes in the future, and in what direction?
8. Do you observe fields in which farmers lack knowledge to become successful MA farmers? Please explain if yes.
9. What challenges are you confronted with in order to set up interesting courses for future MF farmers? (infrastructure, collaboration with other departments, structure of the organization...)
10. How do you obtain insights in the educational needs of the MA farmers?
11. Do you think the educational offer is sufficiently aligned with the needs of the farmers, or how do you think this could be improved?

## Annex C. Students' questionnaire

Dear student/alumnus

Together with 3 other universities throughout Europe, ... [organization] conducts a European project of 3 years, called e-Tomato, which seeks to enhance an educational offer easing the uptake of new business practices in the field of multifunctional agriculture (MA). Multifunctional agriculture is an umbrella term used to indicate companies that combine their agricultural production and environment with services to society. Key to these services is the relationship between farms and civilians/consumers. In other words, multifunctional agriculture is the reconnection of agriculture to society. This project particularly would like to contribute to the domains of social and didactic agriculture, rural tourism and short food supply chains. Possible examples in these domains are sales on the farm or on a farmers market, agri-tourism like B&B, didactical farms, or care farms where people who are having problems integrating into society can be helped through a suitable programme of daily activities.

Therefore, we would like to gain insight in the view of students/young alumni on the educational offer related to MA.

Could you please complete the following questions?

1. Education/specialty:.....
2. (Expected) year of graduation:...
3. Special interest in multifunctional farming?

☐ Yes

☐ No

4. If yes, in what domain do you have most interest?

☐ Interest in social and didactic agriculture

☐ Rural tourism

☐ Short food supply chain

5. My educational training offers me sufficient knowledge to run a farm appropriately regarding:

<b>Laws and legislation</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Financial aspects</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Management</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Sales, marketing</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Specialized knowledge (equipment, software, technologies,...)</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Short food supply chains</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Rural tourism</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
<b>Social and didactical agriculture</b>	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

6. Are there specific skills that you would like to acquire in the future, or topics that you would like to study? If yes, which ones and why?

7. Do you think in general that further training is needed to turn farmers into multifunctional farmers? If yes, which training?
8. What changes in the education system of your country would you advise in order to enable farmers to better perform activities in the field of multifunctional agriculture?