



Needs of young farmers

Report I of the Pilot project: Exchange
programmes for young farmers

Preliminary results

Marie-Jose Zondag & Sacha Koppert (Ecorys Netherlands)
Carolien de Lauwere (LEI-Wageningen UR)
Peter Sloot (Aequator Groen & Ruimte)
Andreas Pauer (Ecorys Brussels)



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E-mail: agri-evaluation@ec.europa.eu

*European Commission
B-1049 Brussels*

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Ecorys Netherlands, Sacha Koppert & Marie-Jose Zondag

LEI-Wageningen UR, Carolien de Lauwere

Aequator Groen & Ruimte, Peter Sloot

Ecorys Brussels, Andreas Pauer

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1. Introduction

Objective of the Pilot Project study on young farmers

The “Pilot Project: Exchange programmes for young farmers” has been commissioned by the European Commission, Directorate-General for Agriculture and Rural Development (DG AGRI) to identify the needs of young farmers, get an overview of the existing exchange schemes for young farmers and develop a guide to establish or improve exchange schemes for young farmers (DG AGRI, Tender No AGRI-2012-Eval-03). The study has been implemented by Ecorys in cooperation with LEI and Aequator Groen & Ruimte in 2014-2015.

The aims of this study were:

- To provide a comprehensive assessment of the specific needs of young farmers across the EU (this report);
- To describe and assess existing schemes and initiatives for the exchange of young farmers;
- To identify specific results of exchange schemes and specific support measures that have proved to be effective and efficient;
- To provide recommendations on the design, implementation and delivery of exchange programmes and schemes.

Some context

The background to the study is that the evolution and specialisation of agriculture and forestry and the particular challenges faced by micro-, small- and medium-sized enterprises in rural areas (e.g. farmers, forest producers, winegrowers, horticulturalists, etc.) require an appropriate level of technical and economic training (DG AGRI, Tender No AGRI-2012-Eval-03). The regulatory framework for EU rural development 2014-2020 has stipulated that knowledge transfer and information actions should not so much be provided in the form of traditional training courses, but rather be adapted to the needs of rural actors (European Commission, 2013).

Appropriate training is especially important for young farmers because it is this group specifically that can contribute the most to fostering the innovation and resource-efficiency needed to achieve the EU2020¹ objectives (Dellapasqua, 2010). Furthermore, young farmers face specific challenges linked to the high investments needed in the start-up phase, difficulties in accessing finance and low turnover in the first years of business. Combined with prolonged generational renewal and diminished access to land, this can reduce the interest of young farmers in entering the sector. Moreover, the decreasing number of young people in the agricultural sector creates specific difficulties for generational renewal and raises concerns regarding the loss of valuable skills and knowledge as older, but experienced people, leave the sector. According to the ‘Overview of CAP² reform 2014-2020’, only 14% of European farmers are aged under 40 (European Commission, 2013).

¹ EU2020 = Main European strategy for 2020.

² CAP = Common Agricultural Policy.

This needs analysis

In this report, the needs of young farmers are presented based on a survey of 2 205 young farmers and focus group discussions in EU-28. This needs analysis brings together a vast quantity of information, collected during a wide range of activities in 2014 and 2015, including:

- Literature review study and desk research on exchange schemes;
- Study of publicity and communication on exchange schemes;
- Interviews with stakeholders throughout the European Union;
- Survey of 2 205 young farmers in 28 Member States;
- Focus group discussions and consultations in 28 Member States.

The methodology used for the survey is described in chapter two, the results of the survey are given in chapter three and a reflection on the results of the survey are in chapter four. The results of the focus group discussions are given in chapter five and conclusions and recommendations are provided in chapter six.

The report is targeted at policy officers and other stakeholders interested in getting an insight into the needs of young farmers.

The analysis of the survey results per country is described extensively in the Annexes I.1-I.29. A country report on the needs of young farmers, based on the survey and the focus groups, has been drafted for each Member State. Furthermore, Annex I.29 contains the background data used for the figures in this report broken down by Member State.

The survey questionnaire and the approach used for the data analysis is included in Annex I.30.

Where to find more information

In total there are four main reports in the Pilot Project: Exchange programmes for young farmers:

0. Synthesis;
- I. Needs of young farmers (this report) (including 28 country reports);
- II. Analysis of existing exchange schemes for young farmers (including a description and contact details of all exchange schemes and 22 case studies);
- III. A guide to designing exchange schemes for young farmers, taking country-specific differences into account.

These are available at http://ec.europa.eu/agriculture/external-studies/index_en.htm.

2. Methodology

2.1. Data collection

In the spring of 2014, a survey was carried out among 2 205 farmers under the age of 40 (referred to hereafter as 'young farmers') in all 28 EU Member States. Initially, it was decided to carry out the questionnaires over the phone. This, however, did not work in all EU Member States. The farmers therefore were also given the opportunity to finish the questionnaire by email or through a web-based questionnaire. This resulted in 1 518 completed phone questionnaires, 657 completed web-based questionnaires and 30 completed questionnaires by email (Table 2.1).

The number of collected questionnaires per country was set beforehand on the basis of the following criteria:

- The total number of collected questionnaires should be 2 100;
- At least 25 questionnaires should be collected per country;
- 50 questionnaires should be collected in a country if the percentage of Utilised Agricultural Area (UAA) that is defined as a less favoured area (LFA) is less than 50% and the number of holdings with a standard output of more than EUR 8 000 is 20 000 or lower;
- 75 questionnaires should be collected in a country if the percentage of UAA that is defined as LFA is less than 50% and the number of holdings with a standard output economic size class of more than EUR 8 000 is higher than 20 000;
- 50 questionnaires should be collected in a country if the number of holdings with a standard output of more than EUR 8 000 is lower than 10 000;
- 25 extra questionnaires should be collected in a country if the percentage UAA that is defined as LFA is more than 50%;
- 25 extra questionnaires should be collected in a country if the number of holdings with a standard output of more than EUR 8 000 is higher than 100 000.

Most countries succeeded in collecting the number of responses agreed on (or collecting more questionnaires). Only in France, Ireland and Malta did the response rate fall short (Table 2.1).

Table 2.1 Achieved versus planned number of completed questionnaires per country

Country	Planned Number	Completed questionnaires				
		By email	By internet	By phone	Total	% of planned
Austria	75	1	75	28	104	138.7
Belgium	75	0	3	76	79	105.3
Bulgaria	75	0	0	77	77	102.7
Croatia	75	0	0	73	73	97.3
Cyprus (the Greek part)	50	0	0	52	52	104.0
Czech Republic	50	0	49	8	57	114.0
Denmark	75	0	26	48	74	98.7
Estonia	50	0	0	51	51	102.0
Finland	75	0	57	27	84	112.0
France	100	0	47	22	69	69.0
Germany	100	0	104	21	125	125.0
Greece	100	0	0	101	101	101.0

Country	Planned Number	Completed questionnaires				
		By email	By internet	By phone	Total	% of planned
Hungary	75	0	1	75	76	103.0
Ireland	75	0	31	0	31	41.3
Italy	100	0	1	101	102	102.0
Latvia	75	0	0	75	75	100.0
Lithuania	75	0	0	75	75	100.0
Luxembourg	25	0	1	22	23	92.0
Malta	25	0	3	9	12	48.0
Poland	100	0	0	100	100	100.0
Portugal	75	0	0	73	73	97.3
Romania	100	0	0	101	101	101.0
Slovakia	50	0	0	52	52	104.0
Slovenia	75	0	1	71	72	96.0
Spain	100	29	71	36	136	136.0
Sweden	75	0	59	68	127	169.3
The Netherlands	75	0	1	76	77	102.7
United Kingdom	100	0	127	0	127	127.0
Total EU-28	2 100	30	657	1 518	2 205	105.0

2.2. *Content of the survey*

The biggest part of the questionnaire was made up of structured questions with pre-programmed answers to guarantee that all questions were asked in the same way in each country and to make it possible to analyse the data in a statistically sound way. Some open questions were asked at the end of the questionnaire about the age of the farmers and the mean hectares (ha) of owned and rented UAA (Utilised Agricultural Area). Besides this, at the beginning of the telephone interviews, questions were asked to determine whether the farmer on the phone met the criteria for participation in the survey.

These criteria were:

- The farmer should be less than 40 years of age (otherwise he/she would not qualify according to the EU definition);
- The farmer should sell most of his/her products to the market; this means that self-subsistence farms are excluded from the survey.

The structured questions focused on:

- The general needs of the farmers;
- The likelihood that the farmers would develop certain skills (knowledge needs);
- The sources that the farmers use to obtain knowledge;
- The information sources that the farmers use;
- Issues that hinder the farmers in obtaining information;
- The farmers' participation in and awareness of exchange schemes and the extent to which they were content about these exchange schemes;
- The farmers' attitude about participation in a(n) (inter)national exchange scheme;
- Issues that hinder the farmers in participating in an exchange scheme;
- The farmers' intention of joining a(n) (inter)national exchange scheme;

- The farmers' expectations about participation in an exchange scheme.

The questionnaire is given in Annex I.30.

2.3. **Data analysis**

The data were analysed by country, the moment of accession to the EU (EU-15 or new Member State³) and by sector. Moreover, the following elements were checked to see if they affected the results: education level, the farm situation (owner of the farm, partnership with parents or others, being an employee on a farm or parents' farm), the type of area (favourable/flat or less favourable/hilly/mountainous/NATURA2000) and the type of farm (conventional or organic). The results of the analysis are included in chapter three. The data analysis was carried out in seven steps (see Annex I.30 for more details).

An additional analysis was carried out on:

- Whether there are differences between countries applying for a Single Payment Scheme (SPS) and countries applying for a Single Area Payment Scheme (SAPS).⁴ They hardly differed from the variations found between EU-15 and new Member States;
- Whether the distribution method of the survey (telephone, internet or email) affected the results. Although some differences were found, this only slightly affected the final results.⁵

2.4. **Focus groups to validate the analysis**

Focus groups were organised in almost all EU countries (one focus group per country). During the focus groups, the main outcomes of the survey were validated and explanations for deviations from the general EU results were sought.

Besides young farmers, the focus groups were attended by representatives of young farmers' organisations and other agricultural organisations. In five countries,⁶ it was not possible to arrange focus groups. In those countries, interviews with stakeholders were carried out instead. In general, the participants of the focus groups (or interviewed experts) endorsed the results of the survey. The results of the focus groups are included in the country reports (Annex I.1-I.28).

³ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Spain, Sweden, the Netherlands and the United Kingdom belong to EU-15, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Malta, Romania, Slovakia and Slovenia belong to the new Member States (new MS). In total 1 332 of the interviewed farmers came from EU-15 and 873 of them came from one of the new MS.

⁴ All EU-15 countries and Malta, Croatia and Slovenia make use of the Single Payment Scheme (SPS). The other new MS countries make use of the Single Area Payment Scheme (SAPS). In total, 1 489 of the interviewed young farmers lived in SPS countries and 716 of them lived in SAPS countries.

⁵ Of the 2 205 finished questionnaires, 1 518 were finished by phone, 657 through the internet and 30 by email.

⁶ Denmark, Germany, Ireland, Luxembourg and United Kingdom.

3. The needs of young farmers based on the literature review

3.1. *Challenges for (young) farmers across the EU*

According to the Common Agricultural Policy of the EU, 'EU agriculture needs to attain higher levels of production of safe and quality food, while preserving the natural resources that agricultural productivity depend upon. This can only be achieved by a competitive and viable agricultural sector operating within a properly functioning supply chain which contributes to the maintenance of a thriving rural economy' (European Commission, 2013). Consumer demands and governmental legislations are becoming stricter and agricultural entrepreneurs need to commit increasing resources to animal welfare, environmental measures and landscape maintenance. Furthermore, farmers have to face challenges of: increased competition due to the gradual opening of markets, the need for integration within the agricultural chain, the diminishing attractiveness of the sector as an employer and the increasing flexibility of working hours and contracts (De Lauwere, 2005; Fuller-Love, 2006; Batterink et al., 2006).

Agricultural entrepreneurs are indeed facing many challenges. Many of these have been identified by the Common Agricultural Policy as economic in nature, such as food security and globalisation, a declining rate of productivity growth, price volatility, pressures on production costs due to high input prices and the deteriorating position of farmers in the food supply chain. Other challenges are environmental in nature, relating to resource efficiency, soil and water quality, and threats to habitats and biodiversity. Others still are territorial, especially where rural areas are faced with demographic, economic and social developments, including depopulation and relocation of businesses (European Commission, 2013).

3.2. *Knowledge needs of (young) farmers*

The evolution and specialisation of agriculture and forestry, and the particular challenges faced by micro-, small- and medium-sized enterprises in rural areas (e.g. farmers, forest producers, winegrowers, horticulturalists, etc.) require an appropriate level of technical and economic training (DG AGRI, Tender No AGRI-2012-Eval-03). This training not only should comprise technological and managerial skills, but also entrepreneurial skills (Martin, 1987; Klair et al., 1998). Verstegen and Huirne (2001) divide the competences of farmers into three categories: craftsmanship, management and entrepreneurship. Craftsmanship relates to knowledge and experience on the technical level (regarding the product and means of production), management relates to the arrangement and organisation of the production process, and entrepreneurship relates to strategic choices. In the past, knowledge development often focused on craftsmanship and management, while much less attention was paid to entrepreneurship. It is however generally accepted that the development of entrepreneurship is important to enable socially responsible farming (Lans et al., 2004; De Lauwere, 2005; Nuthall, 2006; McElwee, 2008; Alsos and Carter, 2006; Lans, 2009), as well as other strategic choices such as those related to the succession of the farm, diversification of the business and investment decisions that have an impact on the overall competitiveness of the farm.

The regulatory framework for EU rural development 2014-2020 has stipulated that knowledge transfer and information actions should not so much be provided in the form of traditional training courses, but rather be adapted to the needs of rural actors (European Commission, 2013). The importance of fine-tuning agricultural training programmes to the needs of farmers has been mentioned previously (Brent and Adams, 1999; Duram and Larson, 2001; Obaa et al., 2005). Brent and Adams (1999) for example stated that 'it is certain that it would be beneficial to pay more attention

to what the farmer perceives as his/her needs if extension services are to be more effective.' Other authors also emphasise the importance of taking the needs of farmers into account in other situations, for example for the grounding of agricultural research (Nederlof et al., 2004) or the successful implementation of field margin measures (Mante and Gerowitt, 2009).

However, it is not only important to adapt training programmes or other forms of knowledge transfer to the needs of (young) farmers. It is equally important to know to whom the knowledge is being provided, as different types of farmers need different kinds of knowledge and learning methods (Chase et al., 2006; Noar et al., 2007; Hawkins et al., 2008; Jansen et al., 2010). Interactive educational programmes, such as exchange programmes may not be suitable for all kinds of farmers. This suitability will depend on the farmer's competences (Man et al., 2002) but also on context-specific factors, such as the institutional environment a farmer has to deal with, the availability of resources and the opportunities and threats that farmer perceives. According to Vanclay (2004) 'an understanding of social issues, the social nature of farming, and the social basis of adoption is needed if agricultural extension is to be effective in addressing natural resource management issues, and in promoting sustainability in its triple bottom line conceptualisation.'

The above findings lead to the conclusion that training programmes for farmers should be based on their needs as well as on their preferred learning methods. This is in line with Klair et al. (1998) who stated in 1998 that the information needs of farmers are closely linked to the evolution of the CAP. They stated that 'different approaches to managing the agricultural sector involve the need for a different information system for farmers. It means not only new content in information, but also new ways to inform and do technical assistance.' According to these authors, the primary information needs from 1998 centred on farm management, risk management, EU programmes and measures, quality production, low input and organic farming, marketing and advertising management, new technology introduction, structural adjustment funds management, investment decisions, rural tourism and recreational activities management (Klair et al., 1998). The authors stated that 'providing information has become the most important part of the extension activity' and that 'information must include trainings sessions, demonstrations in the field and assessment, together with the farmers, of the activities and the results obtained.' Brent and Adams (1999) also emphasised the importance of good communication and the transfer of information. Although communication channels at that time would have been different to today.

3.3. ***Addressing the needs of young farmers***

Appropriate training is especially important for young farmers because it is this group specifically that can contribute the most to fostering the innovation and resource-efficiency needed to achieve the EU2020 objectives (Dellapasqua, 2010). Furthermore, they face specific challenges linked to the high investments needed in the start-up phase, difficulties in accessing finance and low turnover in the first years of business. Combined with prolonged generational renewal and diminished access to land, this can reduce the interest of young farmers in entering the sector.

Moreover, the decreasing number of young people in the agricultural sector creates specific difficulties for generational renewal and raises concerns regarding the loss of valuable skills and knowledge as older, but experienced people, leave the sector. According to the 'Overview of CAP reform 2014-2020', only 14% of EU farmers are aged under 40 (European Commission, 2013). Sotte (2003) already stated in 2003 that 'the presence of young people is declining practically everywhere, both in absolute terms and in relation to older age groups.' Therefore, according to Sotte, the issue of young people entering agriculture and rural areas should be the starting point of the implementation of European agricultural policies. The recent SCARLED project highlighted how the farming population is likely to continue ageing, given the tendency for the young, educated and mobile to seek alternative employment outside of the agriculture sector in the industrial or service sectors (van Herck, 2009).

The above issues demonstrate that young farmers are facing specific challenges that require advice and knowledge adjusted to their particular situation (Sotte, 2003).

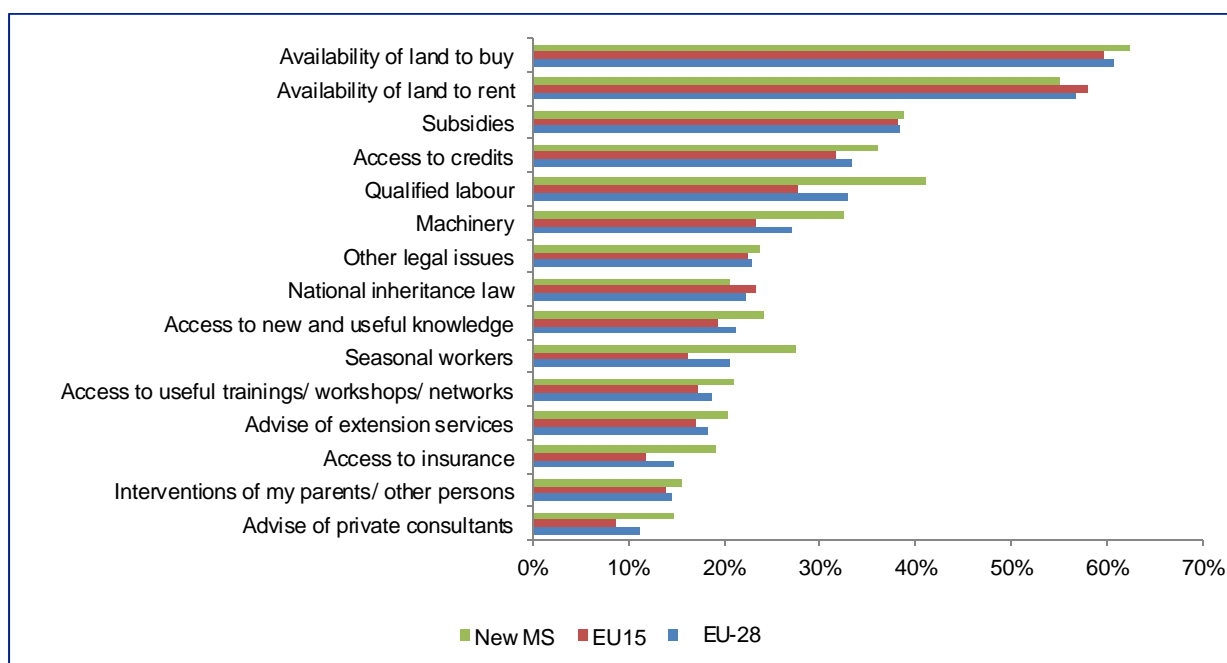
4. The needs of young farmers based on the survey and the focus group discussions

4.1. General needs of young farmers in the EU

Land (to buy and to rent) is the most important general need of the interviewed young farmers throughout the EU. Subsidies, credit and qualified labour are also quite important general needs for the interviewed young farmers (Figure 4.1).

Compared to EU-28, qualified labour, seasonal workers, machinery, advice of private consultants and access to insurance are perceived relatively often as problematic in new MS and perceived relatively infrequently as problematic in EU-15 (Table 4.1).

Figure 4.1 General needs of young farmers in the EU - percentage of interviewed young farmers who perceived the issues mentioned in the figure below as problematic



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.1 General needs of young farmers in the EU – percentage of respondents who perceived the issues mentioned in the table below as problematic

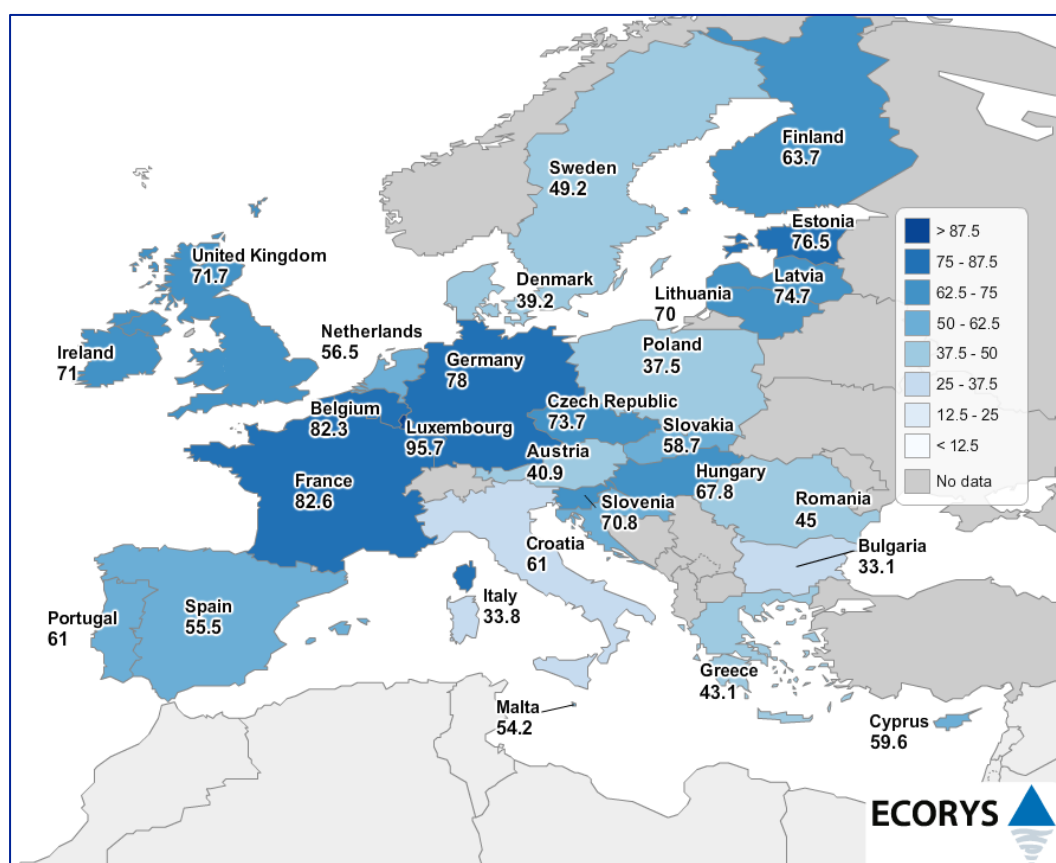
A cell is coloured **red** if the % of farmers who answered that an issue is problematic is significantly higher in comparison with EU-28 and coloured **green** if this percentage is significantly lower.

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Availability of land to buy	60.8	59.6	62.5
Availability of land to rent	56.8	58.0	55.0
Access to credits	33.4	31.7	36.1
Subsidies	38.4	38.1	38.8
Machinery	27.0	23.3	32.6
Qualified labour	33.0	27.7	41.1
Seasonal workers	20.6	16.2	27.4
Advice of extension services	18.3	17.0	20.3
Advice of private consultants	11.1	8.7	14.7
Access to new and useful knowledge	21.3	19.4	24.2
Access to insurance	14.7	11.8	19.1
National inheritance law	22.3	23.3	20.6
Other legal issues	23.0	22.4	23.8
Interventions of my parents/other persons	14.6	14.0	15.5
Access to useful trainings/ workshops/ networks	18.8	17.3	21.0

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Availability of land seems to be less problematic in Sweden, Denmark, Poland, Austria, Bulgaria, Romania, Greece and Italy than in other EU countries (Figure 4.2). This may be related to the main agricultural sectors in some of these countries. In Bulgaria, Italy and Greece, the interviewed young farmers grow permanent crops relatively often; an intensive sector for which not much land is needed. In addition, results from the focus groups show that the low need for land in Austria can be explained by the fact that the country is characterised by small farms which do not produce sufficient output for the young farmer and his/her family. Therefore most farmers have jobs in addition to their farm, which are for the most part not related to agriculture. This is accepted by young farmers and they do not feel the need to expand their farms. In Bulgaria, the need for land is not so significant (yet) due to the 'Agricultural Land and Ownership and Use Act', which came into force in 1991 and regulates restitution of agricultural land to the persons (or to their inheritors) who were forced to put their land under collective control after 1945. As a result, citizens became owners of parcels of land after 1991 and rent or sell it, meaning the availability of land has exceeded demand for many years. In Sweden, Denmark and Poland, the focus group members do not confirm a low need for land. On the contrary, they mention that land is hard to obtain because it is very expensive and therefore specifically causes difficulties for young farmers. The Romanian focus group members also mention that land is hard to get in Romania and that it is expensive. However, they confirm that land is not such an urgent need at the moment because there is a sufficient amount for young farmers to develop farming activities.

Figure 4.2 Percentage of interviewed young farmers who perceived the availability of land (to buy and to rent) as problematic



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

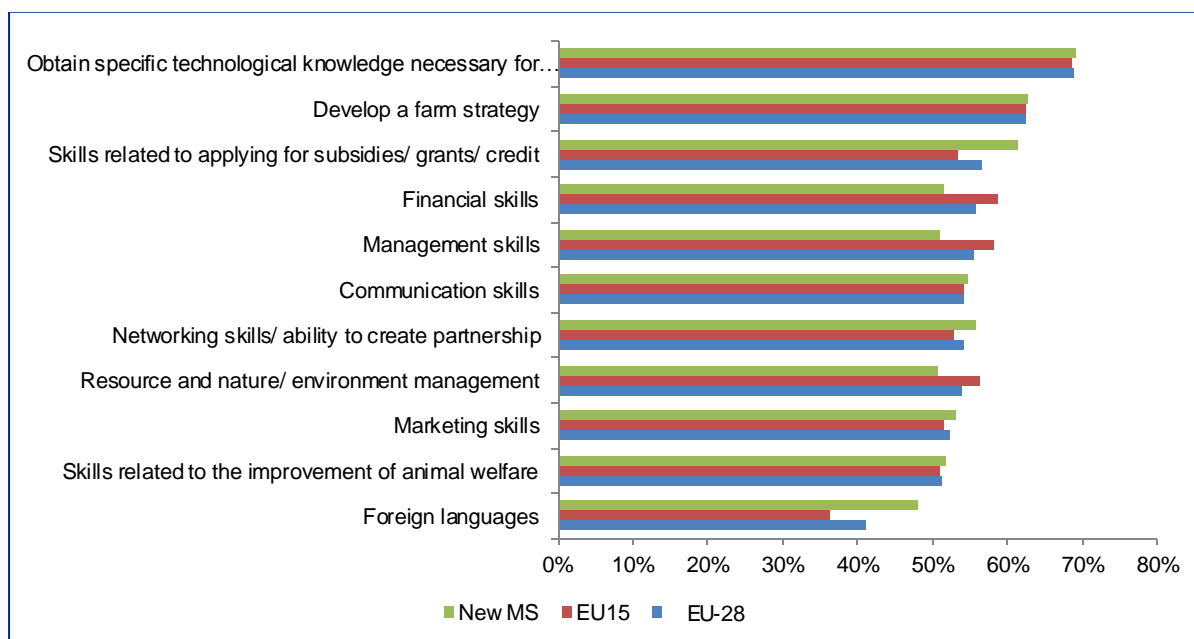
Conclusion

The interviewed young farmers in EU-15 in general seem to have fewer general needs compared to EU-28, while the interviewed young farmers in new MS seem to have more. Land (to buy and to rent) is an exception. This seems to be a general need in most countries.

4.2. Knowledge needs of young farmers in the EU

The knowledge needs of the interviewed young farmers are presented in Figure 4.3. Looking at EU-28 reveals that all interviewed young farmers are fairly interested in (further) developing their skills. More than 50% of them perceive it as likely that they will develop the skills mentioned in Figure 4.1 and more than 60% of them perceive it as likely that they will develop skills to obtain specific technological knowledge necessary for the farm and skills related to the development of a farm strategy. Skills related to foreign languages seem to be an exception. These are mentioned only by 41% of the respondents (Table 4.2).

Figure 4.3 Knowledge needs of young farmers in the EU – percentage of respondents who answered that it was likely that they will develop the skills mentioned in the figure below through trainings, courses, workshops, study groups or participation in an exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

With regards to the young farmers' knowledge needs, there are differences within the EU. Compared to EU-28, the interviewed young farmers in EU-15 are less interested in the development of skills related to foreign languages and the interviewed young farmers in new MS are more interested in the development of these skills (Table 4.2).

Table 4.2 Knowledge needs of young farmers in the EU – percentage of respondents who answered that it was likely that they will develop the skills mentioned in the table below

A cell is coloured **red** if the % of farmers who answered that they will develop a certain skill is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher.

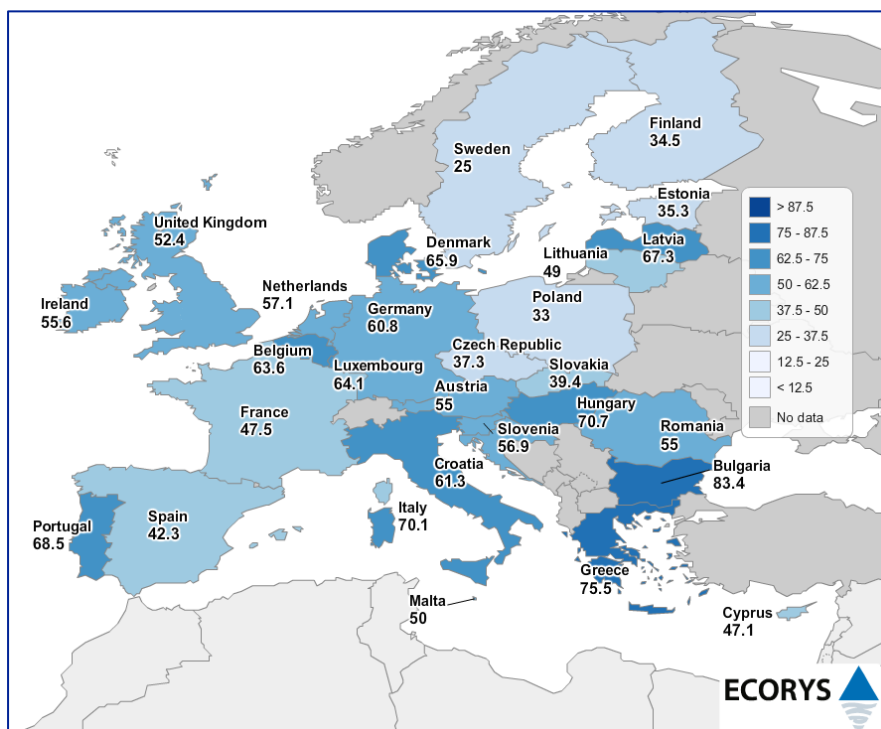
	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Marketing skills	52.2	51.5	53.2
Financial skills	55.9	58.8	51.4
Communication skills	54.3	54.1	54.8
Networking skills/ability to create partnership	54.1	52.9	55.9
Develop a farm strategy	62.5	62.4	62.7
Obtain specific technological knowledge necessary for the farm	68.9	68.7	69.2
Management skills	55.4	58.3	51.0
Resource and nature/environment management	54.0	56.2	50.6
Skills related to the improvement of animal welfare	51.2	50.9	51.7
Foreign languages	41.0	36.4	48.0
Skills related to applying for subsidies/ grants/ credit	56.5	53.4	61.3

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at the country level reveals that, in most countries, more than 50% of the interviewed young farmers perceive it as likely that they will develop marketing, financial, networking and communication skills (referred to as 'entrepreneurial skills'). However, in Sweden, Finland, Estonia, Poland, Lithuania, Czech Republic, Slovakia, Cyprus, Malta, France and Spain 50% or less of the respondents perceive it as likely that they will develop these skills (Figure 4.4). It is obvious that more interviewed young farmers are interested in the development of skills related to the development of a farm strategy, obtaining technological knowledge, improving animal welfare and applying for subsidies, managerial skills and environmental skills (referred to as 'technical and managerial skills'). More than 50% of the interviewed young farmers perceive it as likely that they will develop these skills in almost all countries except Sweden, Finland, Estonia, Poland and Cyprus (Figure 4.5). According to the focus groups, there are several reasons for relatively low knowledge needs in the countries mentioned above:

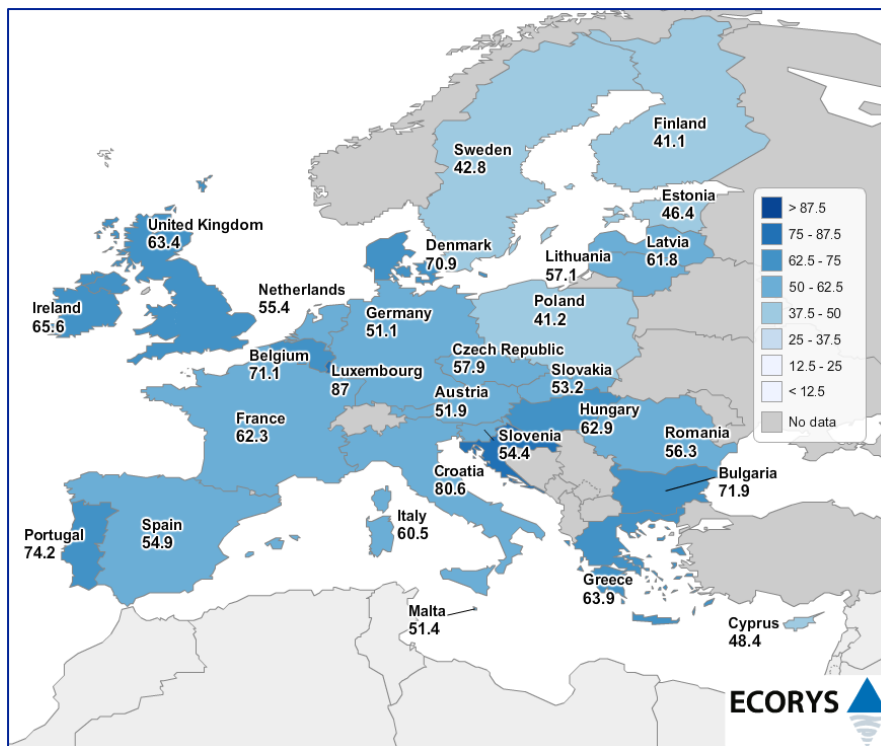
- The young farmers generally have a high level of education (Estonia, Finland);
- It is quite easy to obtain knowledge and information because the knowledge infrastructure for farmers is well-organised in their country (Estonia, Finland);
- Young farmers do not see that they would use specific knowledge, for example for marketing and communication because they live 'in the middle of nowhere', far from consumers (Finland);
- Young farmers are not aware that they need specific knowledge to run their farm (Poland, Spain and Sweden with regard to entrepreneurial skills);
- Agricultural knowledge is available free of charge (Estonia);
- Farmers are farmers 'by tradition' and do not see why they need additional knowledge, especially because their farms are small and relatively easy to manage, have little law enforcement and no requirements in terms of quality standards (Cyprus);
- It is perceived as difficult to select the right and trustworthy sources of information and knowledge in a time-efficient manner (France, Cyprus);
- Lack of trust as to whether the information obtained is suitable, to the point, practically applicable and fits the target group (Lithuania, Slovakia, Malta, Spain);
- Long distances (Finland, Sweden) or being an island (Malta);
- Having an individualistic mindset or the attitude of 'not needing anyone' (France);
- Emphasis is more on technological skills than on entrepreneurial skills (Czech Republic).

Figure 4.4 Percentage of interviewed young farmers who perceived it as likely that they will develop entrepreneurial skills related to marketing, finance, networking and communication



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.5 Percentage of interviewed young farmers who perceived it as likely that they will develop technological and managerial skills (skills related to the development of a farm strategy, obtaining technological knowledge, improving animal welfare, applying for subsidies, managerial skills and environmental skills)



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

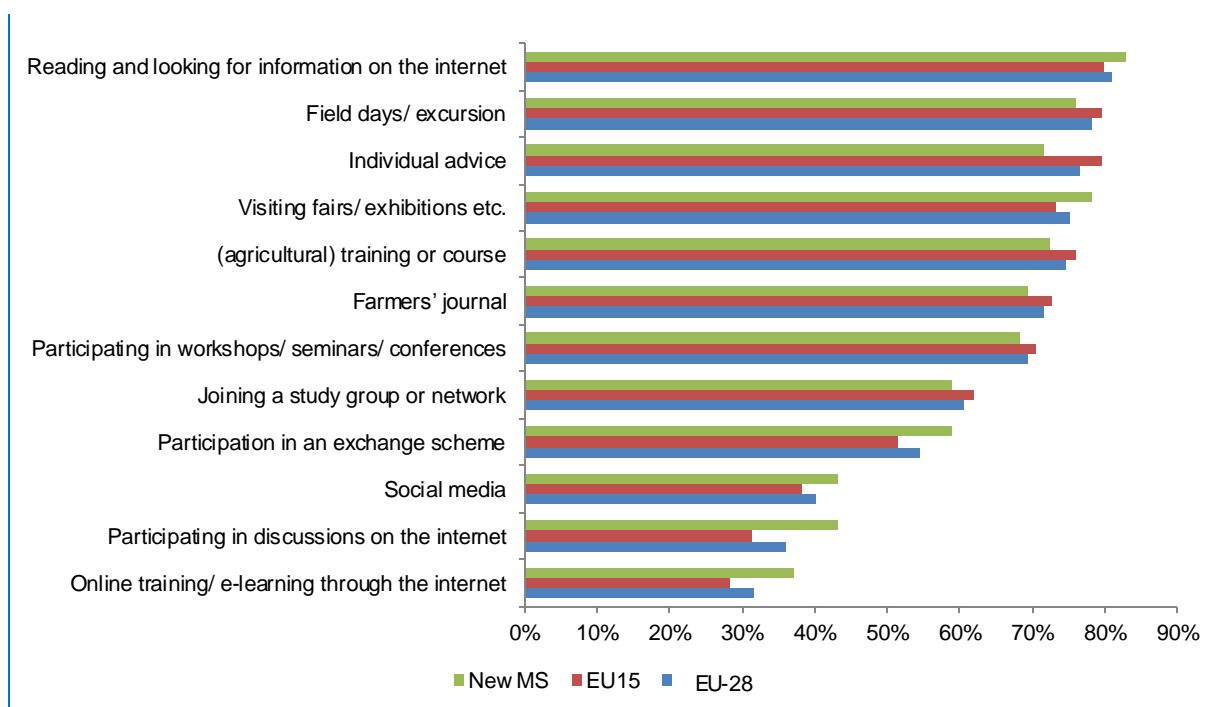
Conclusion

In general, most interviewed young farmers seem to be fairly interested in the development of entrepreneurial and technological and managerial skills. Only in Finland, Sweden, Estonia, Poland and Cyprus were the interviewed young farmers a little less interested.

4.3. *Sources from which to obtain knowledge for young farmers in the EU*

The knowledge sources that farmers like to use are presented in Figure 4.6. Looking at EU-28, it appeared that reading and looking for information on the internet, field days or excursions, individual advice, fairs or exhibitions, (agricultural) trainings or courses, farmers' journals and workshops, seminars or conferences are the most common sources from which to obtain knowledge for the interviewed young farmers.

Figure 4.6 Percentage of interviewed young farmers using the below knowledge sources



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Compared to EU-28, the interviewed young farmers in EU-15 are less interested, and the interviewed young farmers in the new MS are more interested in participating in discussions on the internet, online training or e-learning through the internet (

Table 4.3).

Table 4.3 Percentage of interviewed young farmers in the EU who like to use the knowledge sources mentioned in the table below

A cell is coloured **red** if the % of farmers who answered that they like to use a certain knowledge source is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher.

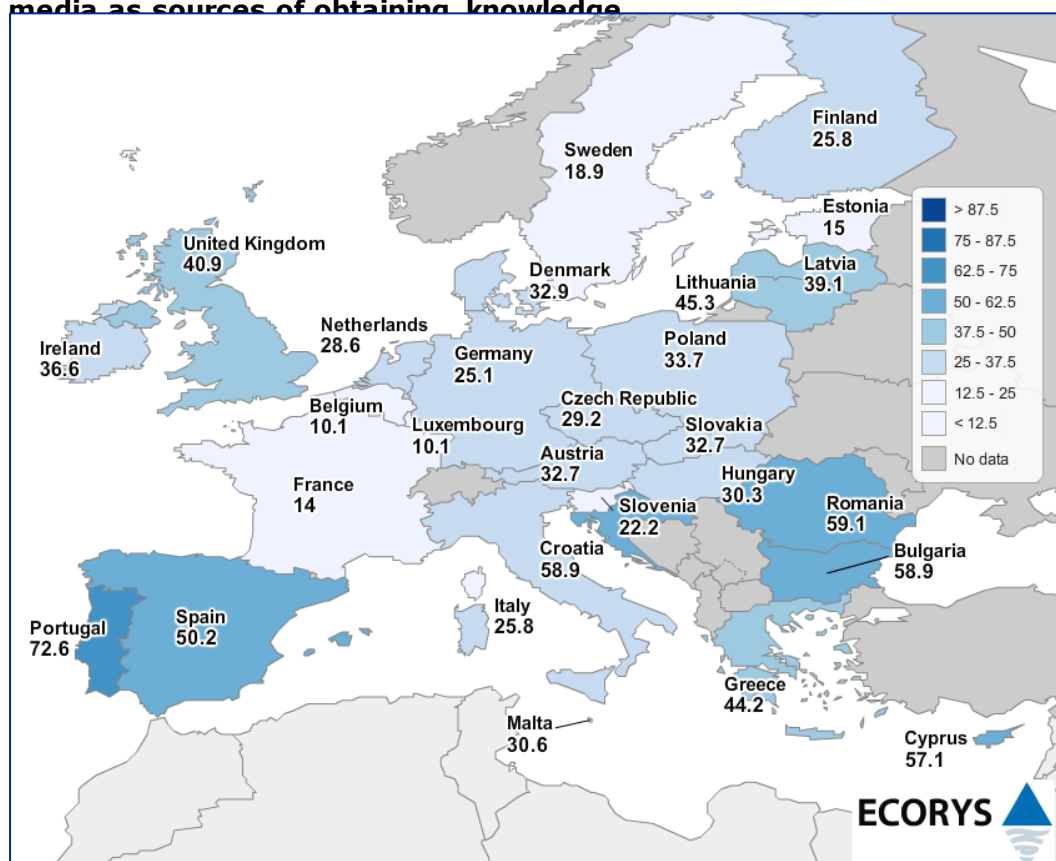
	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Individual advice	76.5	79.6	71.7
Farmers' journal	71.5	72.8	69.5
Reading and looking for information on the internet	81.1	80.0	82.8
Participating in discussions on the internet	35.9	31.2	43.2
Online training/ e-learning through the internet	31.7	28.2	37.0
Social media	40.1	38.2	43.1
Participating in workshops/ seminars/conferences	69.5	70.4	68.2
Joining a study group or network	60.7	61.9	58.8
(Agricultural) training or course	74.6	76.1	72.3
Field days/excursion	78.2	79.7	76.1
Visiting fairs/exhibitions etc.	75.2	73.3	78.1
Participation in an exchange scheme	54.5	51.6	58.9

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at individual countries makes it clear that the interviewed young farmers do not like taking part in discussions, online training, e-learning through the internet or using social media. In most countries, less than 50% of the interviewed young farmers use these sources to obtain knowledge. Only in Bulgaria, Croatia, Romania, Portugal, Spain and Cyprus did more than 50% of the interviewed young farmers say they use these sources to obtain information (

Figure 4.7). In Bulgaria, Croatia, Portugal, Spain and Cyprus, the focus group members did not reflect specifically on this finding. However, it is notable – and does not help to explain the finding – that the Romanian and Spanish focus group members mention that at least in some parts of their country, there is no suitable broadband internet connection, and that the Bulgarian and Cypriot focus group members mention that, although access to the internet is not problematic, the skills to use it are lacking. According to the Romanian focus group members, young farmers in their country like interactive and more practically oriented learning methods because the classical training methods do not always provide them with the expected practical skills.

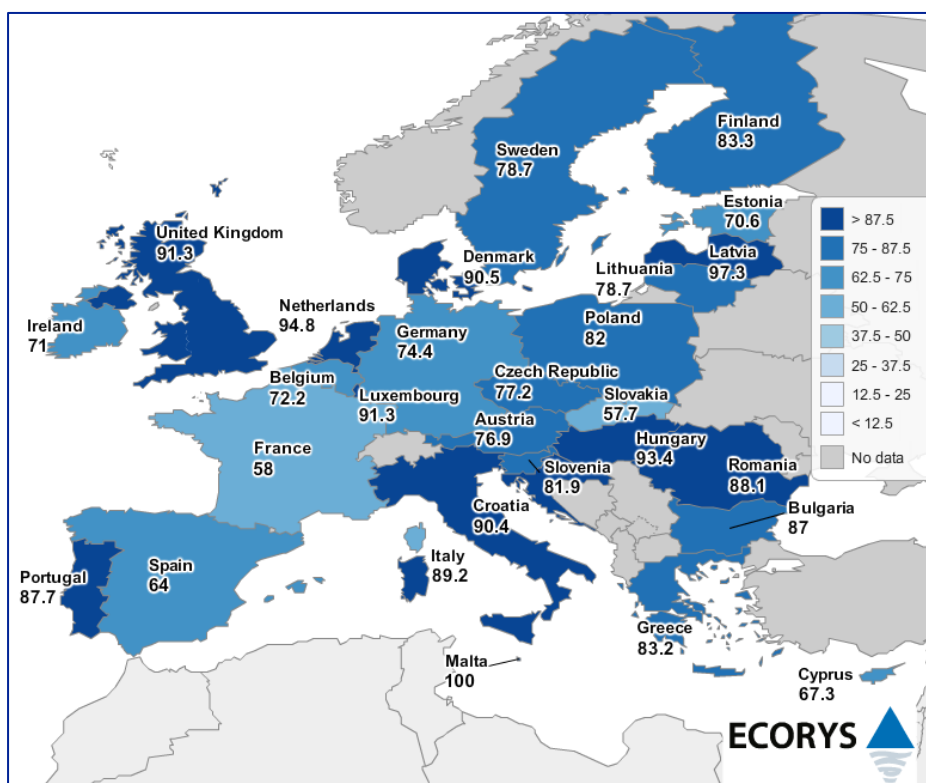
Figure 4.7 Percentage of interviewed young farmers who liked participation in discussions, online training, e-learning through the internet or using social media as sources of obtaining knowledge



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

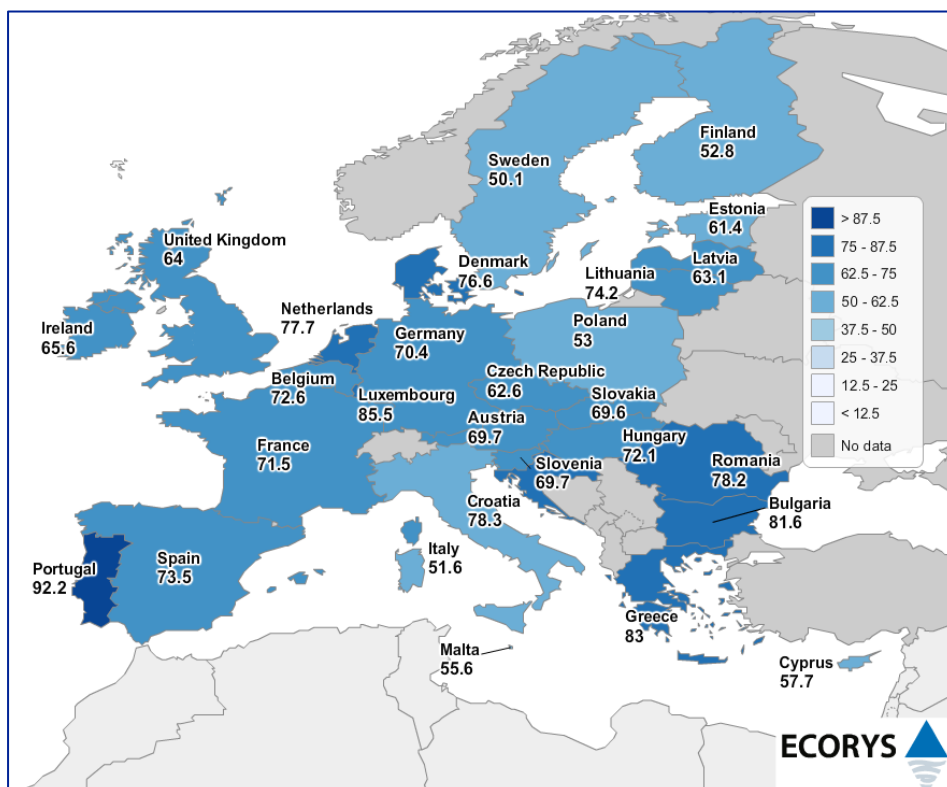
In all EU countries, more than 50% of the interviewed young farmers like reading and looking for information on the internet (Figure 4.8), using interactive knowledge sources (workshops, study groups/networks, agricultural training, field days or excursions and participation in exchange schemes (Figure 4.9) and individual advice as sources from which to obtain knowledge (Figure 4.10).

Figure 4.8 Percentage of interviewed young farmers who liked looking and reading on the internet as a source of knowledge



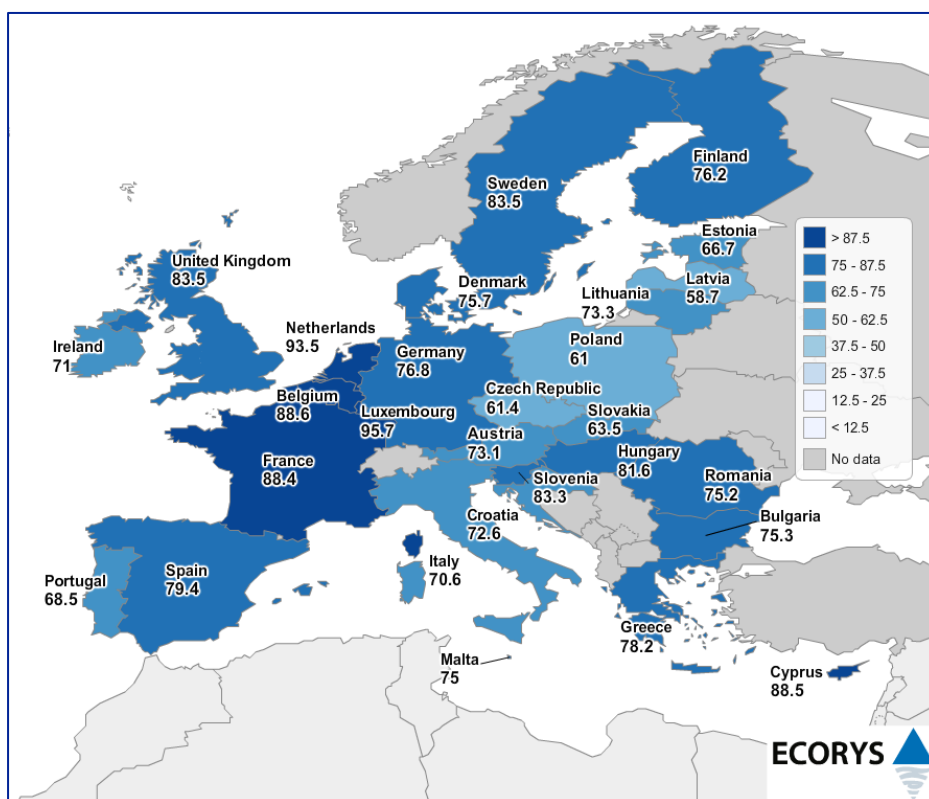
Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.9 Percentage of interviewed young farmers who liked interactive knowledge sources (workshops, study groups/networks, agricultural training, field days or excursions and participation in exchange schemes)



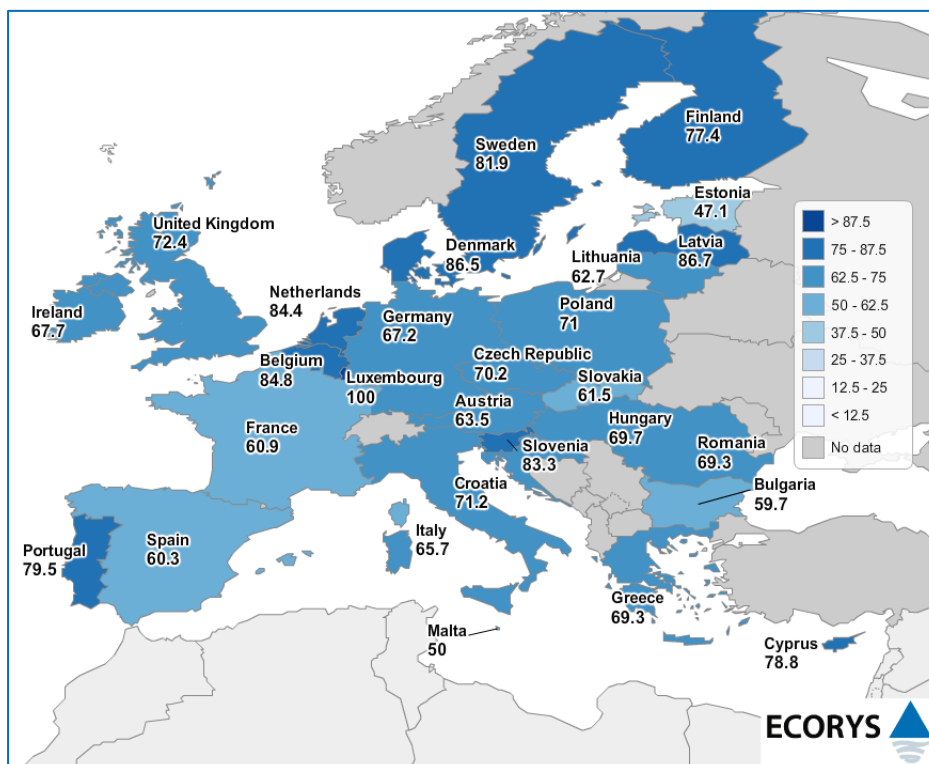
Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.10 Percentage of interviewed young farmers obtaining knowledge through individual advice



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.11 Percentage of interviewed young farmers using farmers' journals as a knowledge source



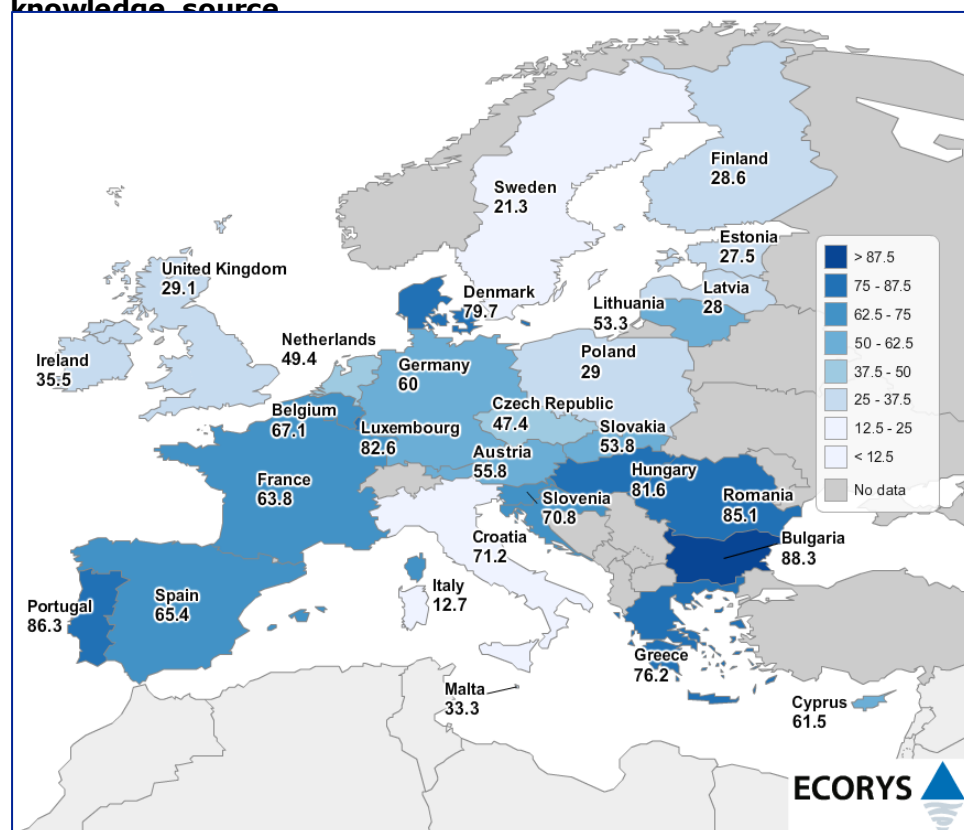
Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Farmers' journals are liked by 50% or more of the interviewed young farmers in all countries except Estonia; probably because they have a well-organised knowledge infrastructure and agricultural knowledge is available free of charge (Figure 4.11).

The opinions of the interviewed young farmers about exchange schemes as a knowledge source are divided. In Sweden, Finland, Estonia, Latvia, Poland, Czech Republic, Malta, Italy, Ireland, United Kingdom and the Netherlands less than 50% of them like to use exchange schemes as a source from which to obtain knowledge and in the other EU countries more than 50% of them like to use these schemes (Figure 4.12). However, participation in exchange schemes is rather restricted in all countries. According to the focus groups (or the interviewed experts), reasons for not liking to use exchange schemes as a knowledge source in the above-mentioned countries may be:

- The young farmers generally have a high level of education (Estonia, Finland, Ireland, the Netherlands);
- It is quite easy to obtain knowledge and information because the knowledge infrastructure for farmers is well-organised in their country (Estonia, Finland, Ireland, the Netherlands);
- Agricultural knowledge is available free of charge (Estonia);
- Long distances (Estonia, Finland, Sweden) or being an island (Malta);
- Language barriers (Czech Republic, Latvia, Poland);
- The transferability of knowledge is limited due to different farming conditions in other countries (Ireland);
- The knowledge obtained through an exchange scheme is not always practically applicable for the young farmer or does not entirely fit his/her specific knowledge needs (Malta, Poland, United Kingdom);
- Young farmers perceive it as too complex to join an exchange scheme from an organisational perspective, for example the administrative requirements, time needed to prepare applications, costs of living, etc. (Italy, Sweden);
- Exchange schemes are lacking in certain countries (Estonia, Finland, Poland);
- Travel distances (Estonia, Finland, Sweden);
- Mentality; young farmers are not interested in getting to know other cultures (Poland).

Figure 4.12 Percentage of young farmers using exchange schemes as a knowledge source



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

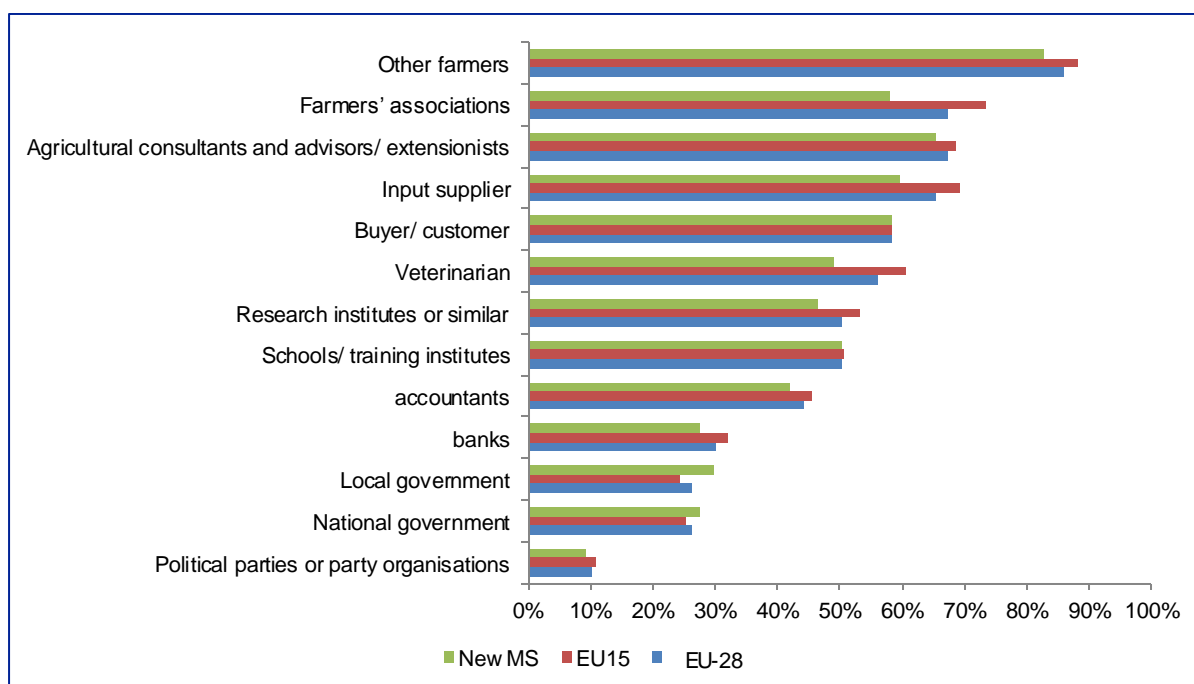
Conclusion

Looking for and reading information on the internet, interactive knowledge sources (workshops, study groups/networks, agricultural training, field days or excursions and participation in exchange schemes), individual advice and farmers' journals are the most commonly preferred sources for obtaining knowledge for the interviewed young farmers.

4.4. Information sources for young farmers in the EU

An overview of the use of information sources by the interviewed young farmers is presented in Figure 4.13. Other farmers are the most important information source for all interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors. Compared to EU-28, the interviewed young farmers in EU-15 make more use of farmers' associations and veterinarians, and the interviewed young farmers in new Member States make less use of farmers' associations, veterinarians and input suppliers (Table 4.4).

Figure 4.13 Percentage of interviewed young farmers using information sources below



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.4 Percentage of interviewed young farmers using the information sources below

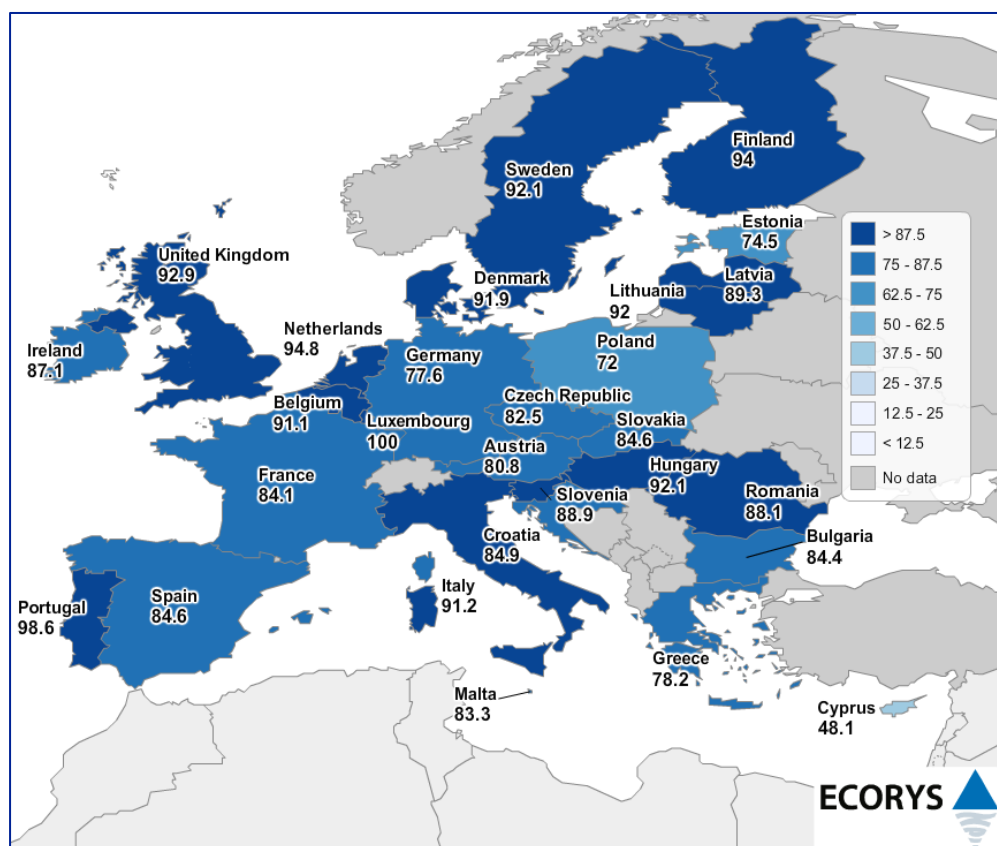
A cell is coloured **red** if the % of farmers who answered that they used the information source is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher.

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Farmers' associations	67.5	73.6	58.2
Political parties or party organisations	10.1	10.7	9.2
Agricultural consultants and advisors/extensionists	67.3	68.5	65.5
Local government	26.4	24.2	29.7
National government	26.3	25.4	27.6
Veterinarian	56.0	60.7	48.9
Input supplier	65.5	69.4	59.5
Other farmers	86.0	88.2	82.7
Buyer/customer	58.3	58.3	58.3
Schools/ training institutes	50.4	50.6	50.2
Research institutes or similar	50.5	53.2	46.4
Accountants	44.1	45.5	42.0
Banks	30.2	31.9	27.7

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at individual countries reveals that, in all EU countries except Cyprus, more than 50% of the interviewed young farmers like to use other farmers as an information source (Figure 4.14). The focus group in Cyprus reveals that this could possibly be explained by the structure of agriculture in Cyprus (smallholdings) and the easy access to farmers' journals for all Cypriot farmers.

Figure 4.14 Percentage of interviewed young farmers using other farmers as an information source

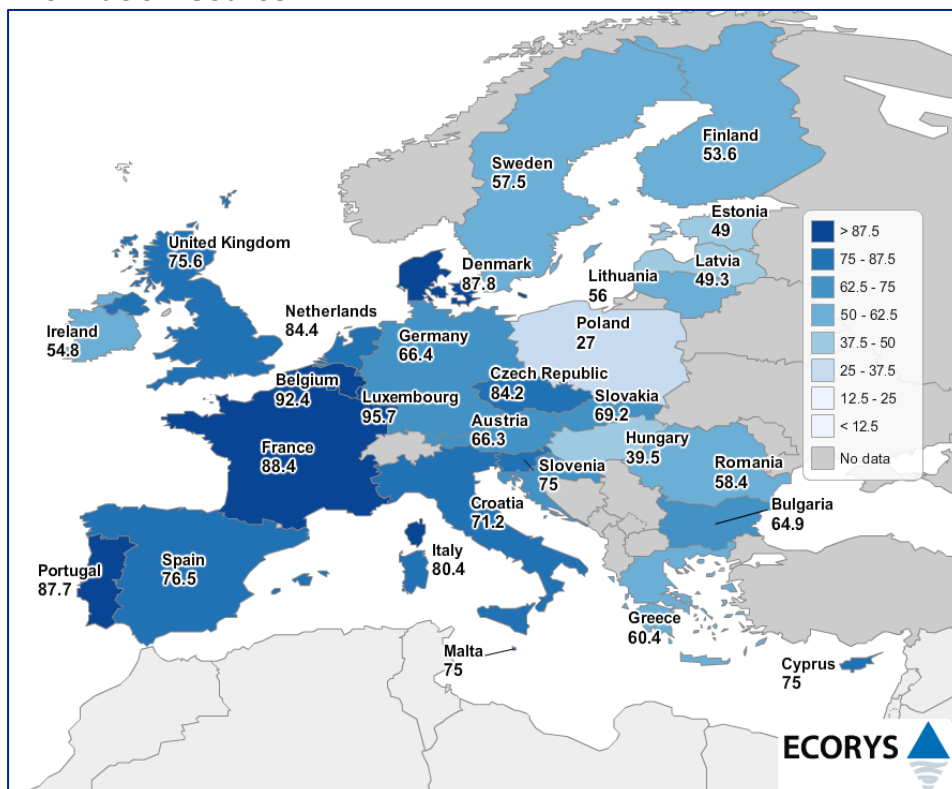


Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

In all EU countries except Estonia, Latvia, Poland and Hungary, more than 50% of the interviewed young farmers like to use farmers' associations as an information source (Figure 4.15) and in all EU countries except Greece, Malta and Slovakia, more than 50% of the interviewed young farmers liked to use agricultural advisors and consultants (Figure 4.32). The focus groups in the countries that differed from the average had the following potential explanations:

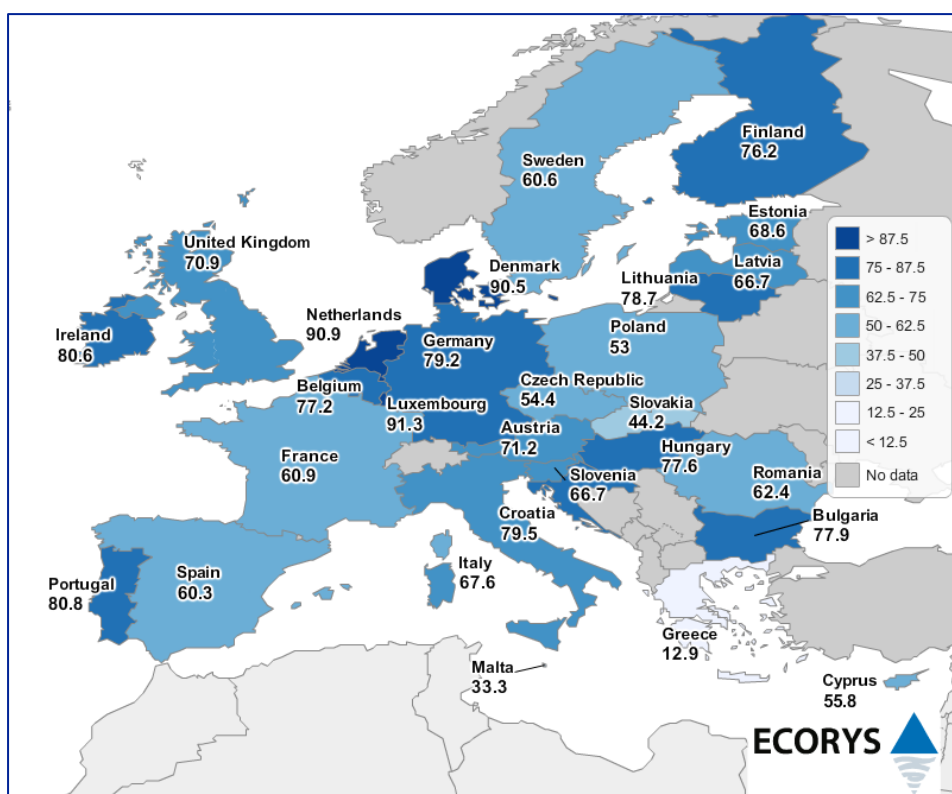
- The interviewed young farmers may perceive it as difficult to select the right and trustworthy information and knowledge sources in a time-efficient manner (Hungary, Latvia);
- The interviewed young farmers have doubts as to whether the information is sufficiently suitable, to the point, practically applicable and fits the target group (Poland, Malta, Slovakia);
- The knowledge infrastructure is well-organised in a country, the interviewed young farmers are highly educated and knowledge is available free of charge (Estonia);
- The interviewed young farmers can easily obtain information from other sources such as input suppliers (Greece).

Figure 4.15 Percentage of young farmers using farmers' associations as an information source



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.16 Percentage of young farmers using agricultural advisors and consultants as an information source



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

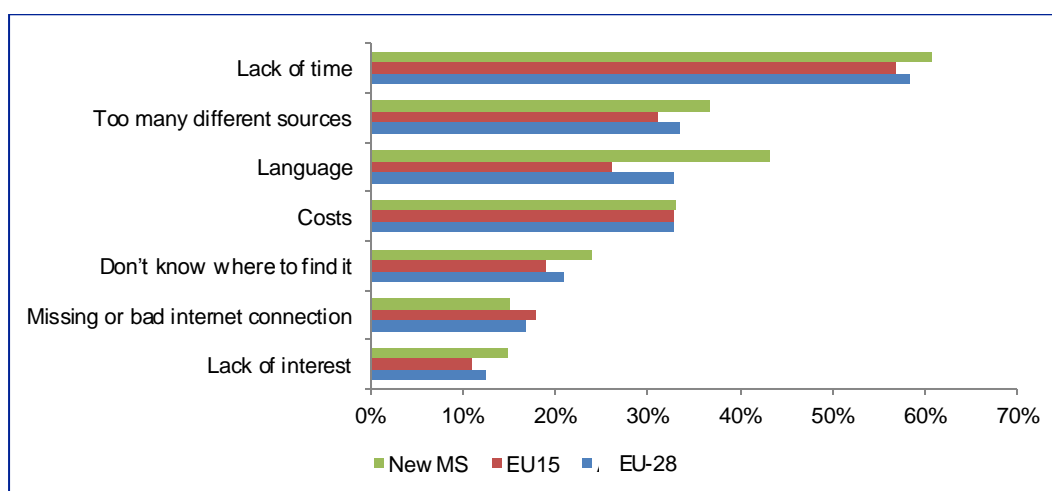
Conclusion

Other farmers are the most important information source for all interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors.

4.5. *Hindrances for young farmers to obtaining information*

The most important issue that hinders the interviewed young farmers in obtaining information is lack of time (Figure 4.17). Looking at the interviewed young farmers in EU-15 and the new MS reveals that, in comparison with EU-28, the interviewed young EU-15 farmers perceived language as less of a hindrance and the interviewed young new MS farmers perceived language as more of a hindrance (Table 4.5).

Figure 4.17 Percentage of interviewed young farmers who perceive the issues below as a hindrance



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.5 Percentage of interviewed young farmers who perceive the issues below as a hindrance

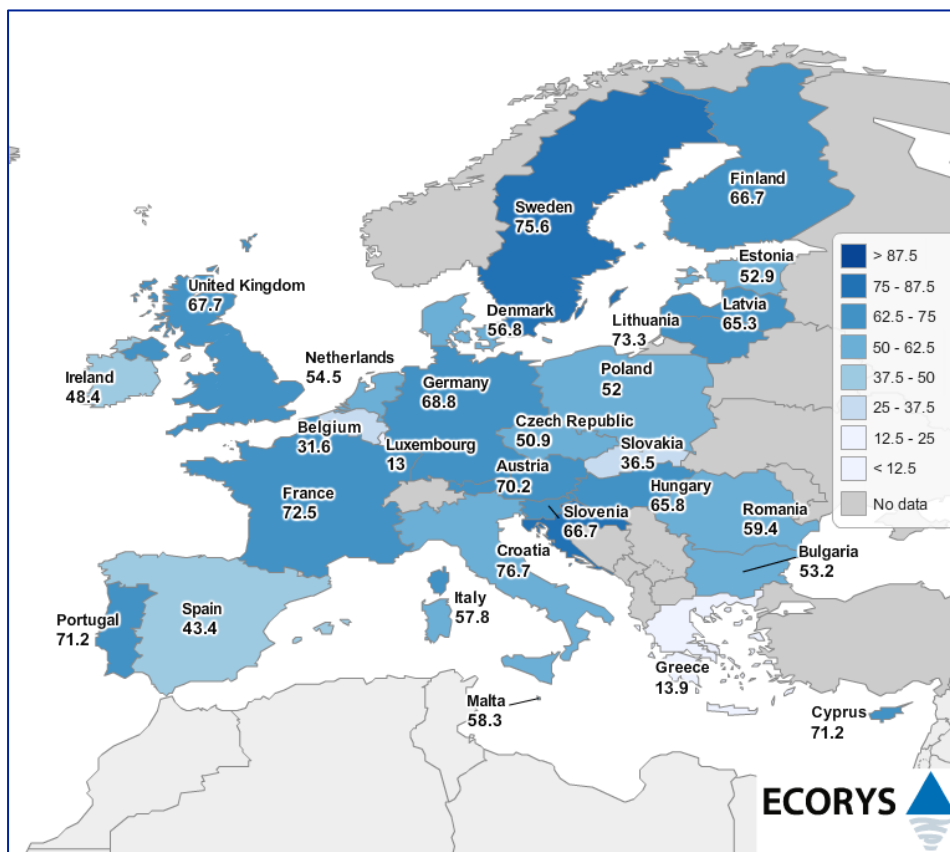
A cell is coloured **red** if the % of farmers who answered that a certain issue hinders them is significantly higher in comparison with EU-28 and coloured **green** if this percentage is significantly lower.

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Lack of interest	12.5	10.9	14.9
Lack of time	58.4	56.9	60.7
Missing or bad internet connection	16.8	17.9	15.0
Costs	32.9	32.9	33.0
Language	32.9	26.2	43.2
Too many different sources	33.4	31.2	36.8
Don't know where to find it	21.0	19.0	23.9

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at individual countries shows that in most EU countries, except Belgium, Ireland, Luxembourg, Slovakia, Greece and Spain, more than 50% of the interviewed young farmers perceive lack of time as an important hindrance to obtaining information (Figure 4.18). It is not clear why in these countries fewer interviewed young farmers perceive lack of time as a hindrance. According to the interviewed experts in Ireland, lack of time is an important hindrance because there is a lot of dairy farming in Ireland which is time consuming, but a missing or bad internet connection is a more important hindrance. The interviewed experts in Luxembourg mention that having 'too many different sources' of information is a bigger hindrance for Luxembourg young farmers than lack of time. In the focus groups in Belgium, Slovakia, Greece and Spain nothing is said about lack of time being a hindrance.

Figure 4.18 Percentage of interviewed young farmers that perceive lack of time as a hindrance to obtaining information



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

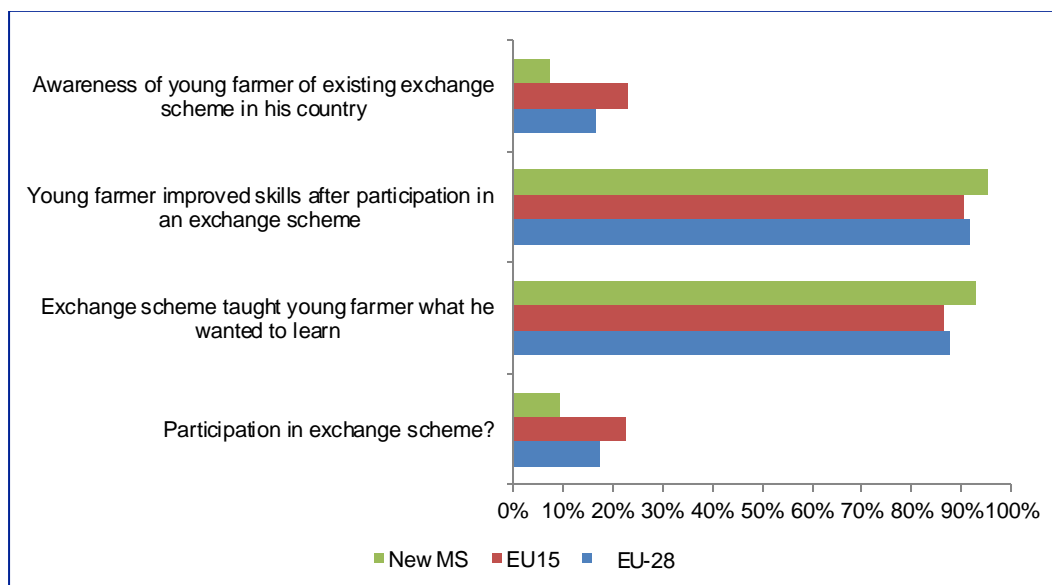
Conclusion

Lack of time is the most important hindrance to obtaining information for all the interviewed young farmers.

4.6. Participation in exchange schemes by young EU farmers

Of the interviewed young farmers, 17.5% had participated in an exchange scheme and 16.8% were aware of an existing exchange scheme in his/her country (Figure 4.19). Compared to EU-28, the interviewed young farmers in EU-15 more often participate in and are aware of the existence of an exchange scheme, and the interviewed young farmers in new MS countries less often (Table 4.6). Most interviewed young farmers who participated in an exchange scheme had learned what they wanted to learn and found that their skills had been improved by participation in an exchange scheme (Figure 4.19; Table 4.6).

Figure 4.19 Percentage of young farmers in the EU that have participated in an exchange scheme and/or are aware of its existence and their opinion about it



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.6 Percentage of young farmers in the EU that have participated in an exchange scheme and/or are aware of its existence and their opinion about it

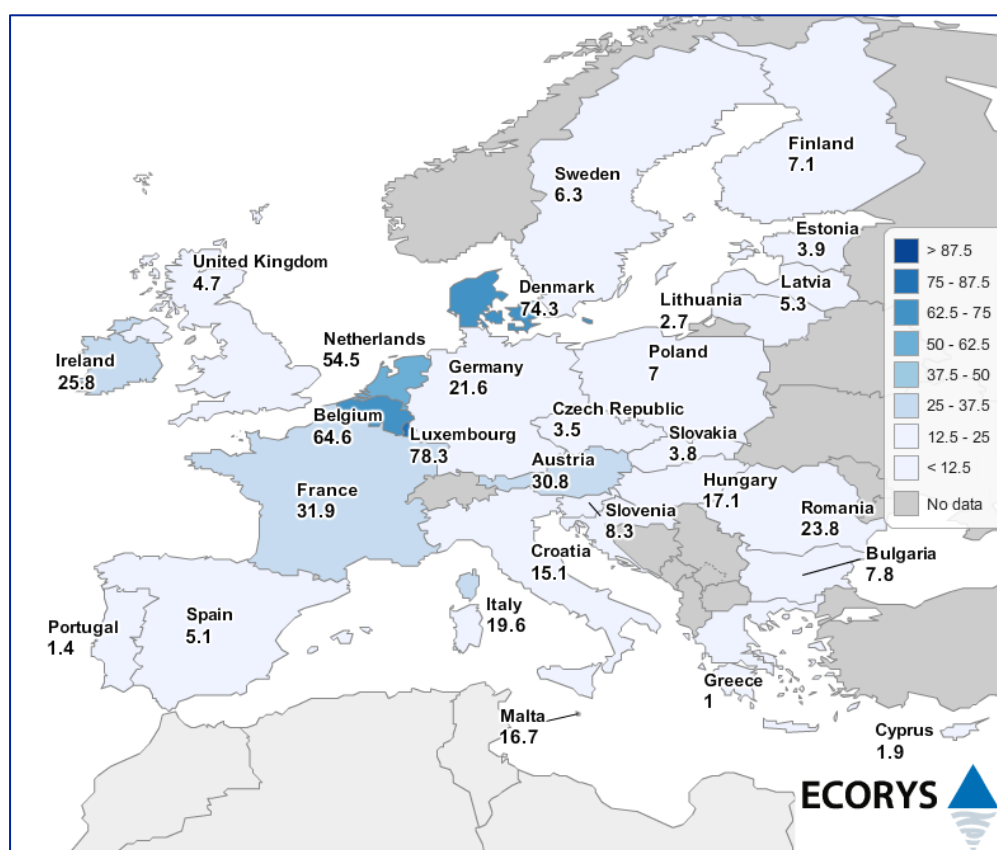
A cell is coloured **red** if the % of farmers who participated in an exchange scheme and/ or are aware of its existence is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher.

	EU-28		EU-15		New MS	
	n	% yes	n	% yes	n	% yes
Participation in exchange scheme?	2205	17.5	1332	22.8	873	9.4
Exchange scheme taught young farmer what he wanted to learn	386	87.8	304	86.5	82	92.7
Young farmer improved skills after participation in an exchange scheme	386	91.5	304	90.5	82	95.1
Awareness of young farmer of existing exchange scheme in his country	2205	16.8	1332	23.0	873	7.3

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Although participation in exchange schemes seems to be low throughout the EU, differences exist between EU countries (Figure 4.20). In Belgium, Denmark, Luxembourg and the Netherlands more than 50% of the interviewed young farmers had participated in an exchange scheme. In some of these countries this can be explained by the sample used or the interpretation of the question. In the Netherlands, the definition of exchange schemes was interpreted differently than in other countries. Interviewed young Dutch farmers who went abroad for an internship on a farm when they were students also interpreted this as 'joining an exchange scheme'. In Belgium, the respondents of the survey were gathered through agricultural schools asking for young farmers who had already joined an exchange scheme. In Luxembourg, there was a bias in the respondents for the same reason, as they were recruited from a group of young farmers who had participated in an internship abroad. According to the Danish interviewed experts, the high percentage of interviewed young farmers in Denmark who had participated in an exchange scheme can be explained by the fact that young farmers in Denmark are encouraged to do so. As such, there is a lot of information provided about exchange schemes through websites. In addition, Danish young farmers get a good salary during their education and therefore have no financial difficulties when it comes to going abroad.

Figure 4.20 Percentage of interviewed young farmers that have participated in an exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

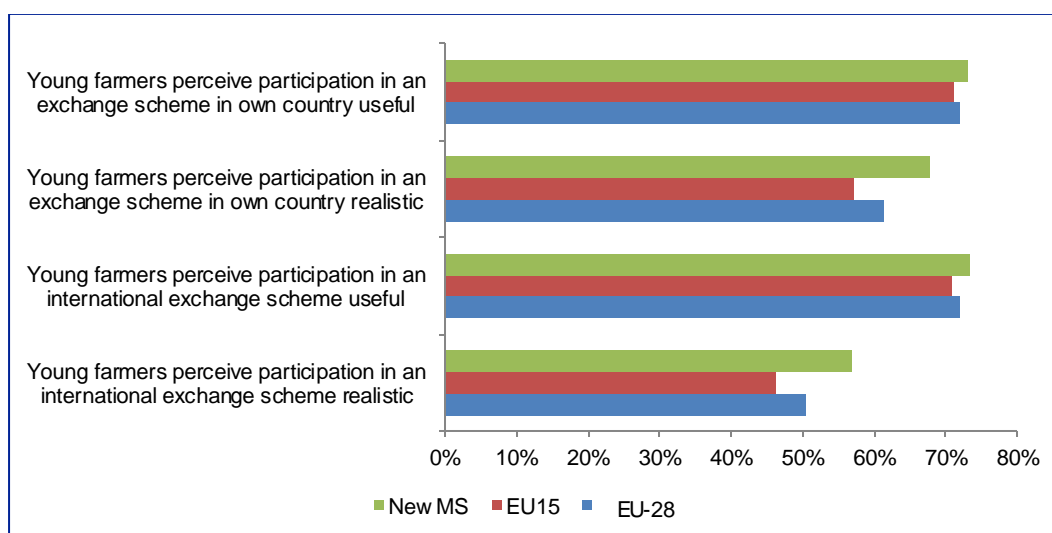
Conclusion

The number of interviewed young farmers that had participated in an exchange scheme was restricted. In EU-15, more interviewed young farmers had participated in an exchange scheme than in the new MS.

4.7. Attitude of young EU farmers to participation in a(n) (inter)national exchange scheme

The attitude of EU young farmers to participation in a(n) (inter)national exchange scheme is presented in Figure 4.21. Looking at EU-28 reveals that the interviewed young farmers perceive participation in a national or international exchange scheme equally often as useful but that they perceive participation in an exchange scheme in their own country more often as realistic (Figure 4.21). In comparison with EU-28, the interviewed young farmers in EU-15 perceive participation in a(n) (inter)national exchange scheme less often as realistic, while the interviewed young farmers in new MS perceived it more often as realistic (Table 4.7).

Figure 4.21 The percentage of interviewed young farmers who have a positive attitude to participation in a(n) (inter)national exchange scheme in EU-28, EU-15 and new MS



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.7 Young farmers' attitude to participation in an exchange scheme (% of respondents)

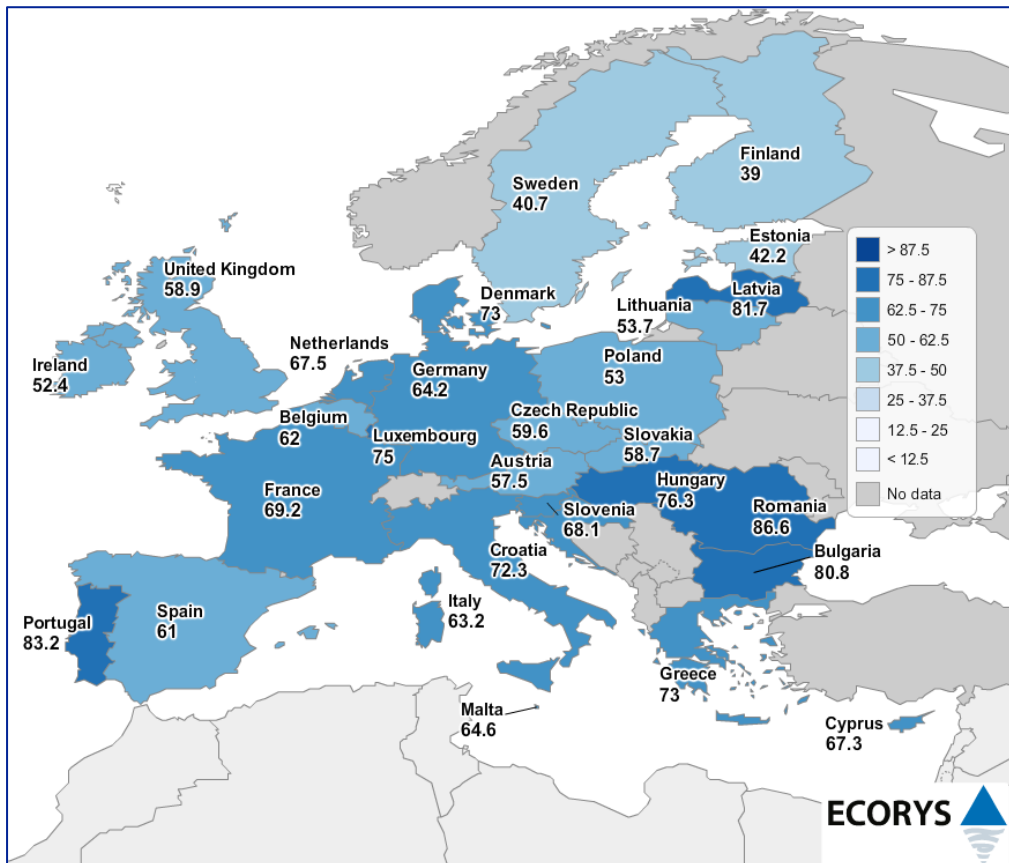
A cell is coloured **red** if the % of interviewed young farmers who perceive participation in an exchange scheme as useful and/or realistic is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher.

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Young farmers perceive participation in an international exchange scheme realistic	50.5	46.2	57.0
Young farmers perceive participation in an international exchange scheme useful	72.0	70.9	73.5
Young farmers perceive participation in an exchange scheme in own country realistic	61.4	57.1	67.9
Young farmers perceive participation in an exchange scheme in own country useful	72.0	71.2	73.1

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at individual countries reveals that the interviewed young farmers have quite a positive attitude to participation in an exchange scheme. Only in Sweden, Finland and Estonia did less than 50% of the interviewed young farmers have a positive attitude to participation in an exchange scheme (Figure 4.22). According to the focus group members in these countries, this is probably related to the long travel distances in these countries, the lack of exchange schemes (Estonia and Finland) and the administrative burden of joining an exchange scheme (Sweden). As in many other countries, lack of time and having no replacement on the farm play a role as well.

Figure 4.22 The percentage of interviewed young farmers who have a positive attitude to participation in a(n) (inter)national exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

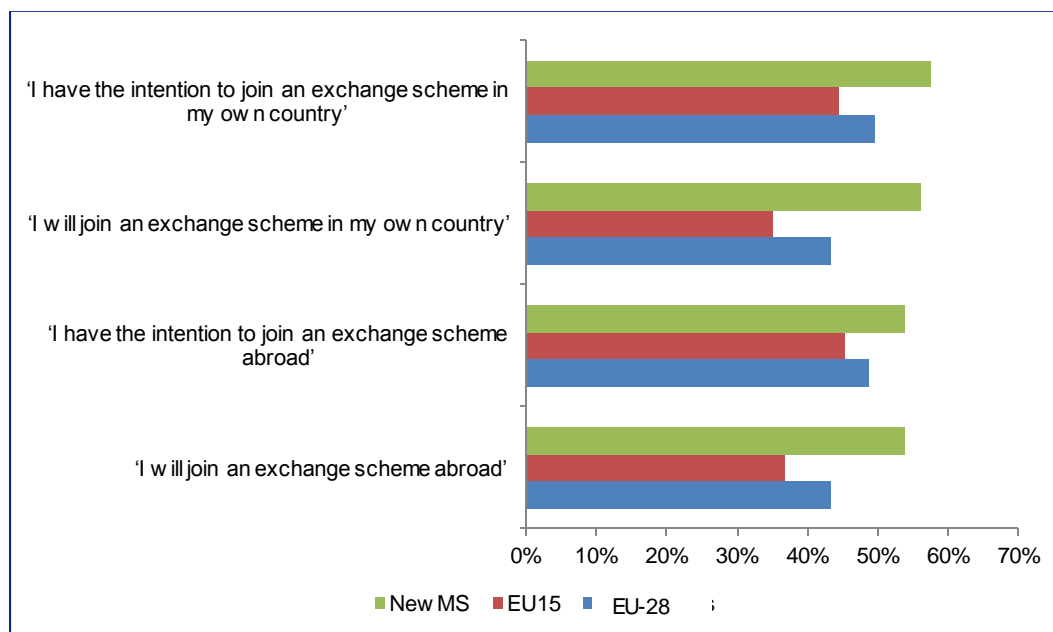
Conclusion

The interviewed young farmers in EU-15 perceive participation in a(n) (inter)national exchange scheme less often as realistic/had a less positive attitude about exchange schemes than the interviewed young farmers in new MS. Looking at separate countries reveals that most interviewed young farmers have a positive attitude to exchange schemes.

4.8. The intention of young EU farmers of joining an exchange scheme

Less than 50% of the interviewed young farmers in EU-28 have the intention of joining a(n) (inter)national exchange scheme (Figure 4.23). Compared to EU-28, the intention is higher in new MS and lower in EU-15 (Table 4.8).

Figure 4.23 Percentage of interviewed young farmers that have the intention of joining a(n) (inter)national exchange scheme in EU-28, EU-15 and new MS



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.8 Intention of young farmers to join an exchange scheme (% of respondents)

A cell is coloured **red** if the intention of the interviewed young farmers of joining a(n) (inter) national exchange scheme is significantly lower in comparison with EU-28 and coloured **green** if this percentage is significantly higher

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
'I will join an exchange scheme abroad'	43.5	36.8	53.8
'I have the intention of joining an exchange scheme abroad'	48.7	45.3	53.8
'I will join an exchange scheme in my own country'	43.4	35.1	56.1
'I have the intention of joining an exchange scheme in my own country'	49.7	44.4	57.7

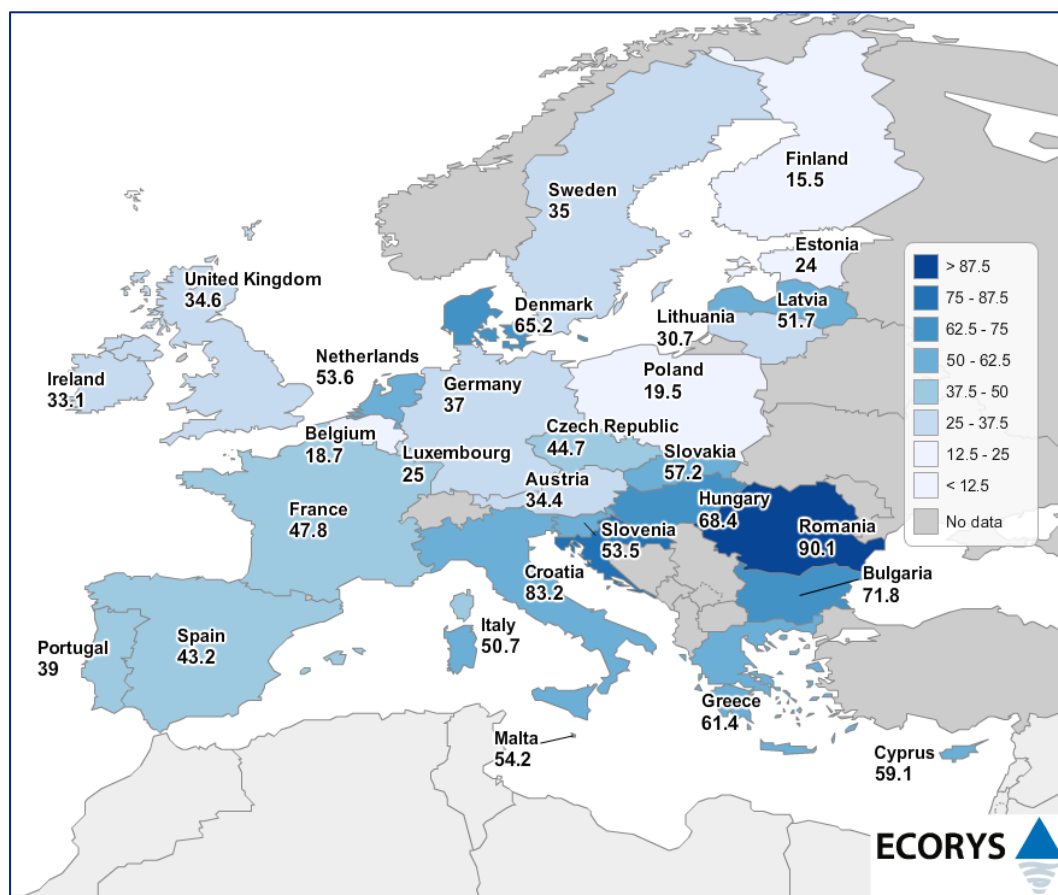
Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at the country level shows that the intention of young farmers of joining a(n) (inter)national exchange scheme differs between countries. In Latvia, Slovakia, Hungary, Slovenia, Croatia, Romania, Bulgaria, Greece, Cyprus, Malta, Italy, the Netherlands and Denmark more than 50% of the interviewed young farmers indicated that they have the intention of joining a(n) (inter)national exchange scheme. In the other EU countries, less than 50% of the interviewed young farmers indicated having the intention of joining a(n) (inter)national exchange scheme (Figure 4.24).

According to the focus group members in these countries (or interviewed experts), possible reasons for this are (besides lack of time and having no replacement on the farm):

- Language barrier (Belgium, Czech Republic, Germany, Poland, Portugal, Spain);
- Young farmers already had practical training abroad when they were students (Austria, Belgium, Luxembourg);
- The transferability of knowledge is limited, for example because of small farms in a country (Austria) or due to different farming conditions in other countries (Ireland);
- The knowledge obtained through an exchange scheme is not always practically applicable for the young farmer or does not entirely fit his/her specific knowledge needs (Poland, United Kingdom);
- Young farmers perceive it as too complex to join an exchange scheme from an organisational perspective, for example with regard to administrative requirements, time needed to prepare applications, costs of living, etc. (Luxembourg, Sweden);
- Young farmers have a job besides the farm and therefore cannot go abroad (Austria);
- Minimum period of stay is too long (Belgium, Portugal);
- Exchange schemes are lacking in certain countries (Estonia, Finland, Poland);
- Travel distances (Estonia, Finland, Sweden);
- Mentality; young farmers are not interested in getting to know other cultures (Poland); (see 3.5).

Figure 4.24 Percentage of interviewed young farmers that have the intention of joining a(n) (inter)national exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

In comparison with EU-28, the interviewed young farmers in EU-15 have a lower intention of joining a(n) (inter)national exchange scheme and the interviewed young farmers in new MS have a higher intention of doing so.

4.9. *Issues that hinder young EU farmers in joining an exchange scheme*

Issues that hinder the interviewed young EU farmers in joining an exchange scheme are presented in Figure 4.25 and Table 4.9. Lack of time is the most important hindrance for the interviewed young farmers in the EU. Having no replacement on the farm was also mentioned quite often as a hindrance, although it was mentioned less often as a hindrance in new MS in comparison with EU-28. A language barrier was mentioned more often by the interviewed young farmers in the new MS (Figure 4.25; Table 4.9).

Figure 4.25 Percentage of interviewed young farmers that perceive the issues below as a hindrance

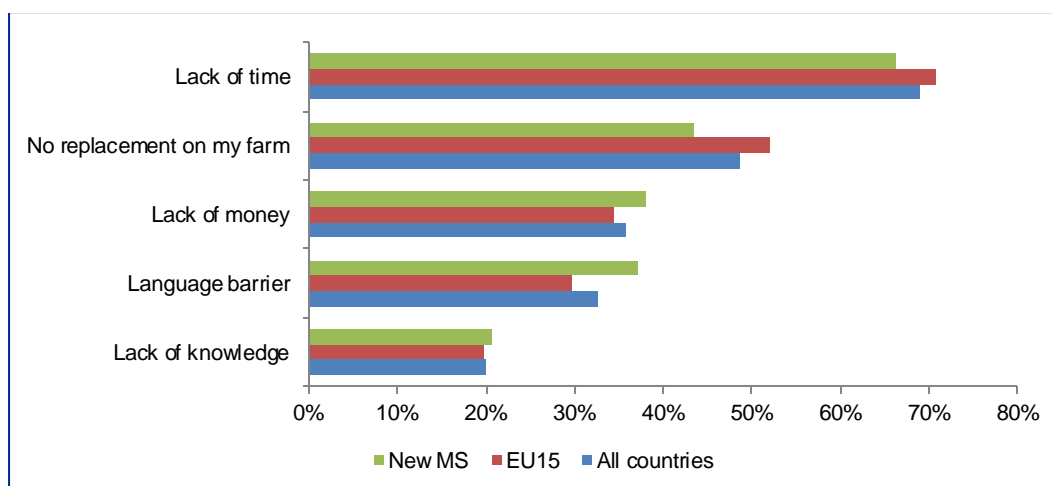


Table 4.9 Issues that hinder young farmers in participating in an exchange scheme (% of respondents);

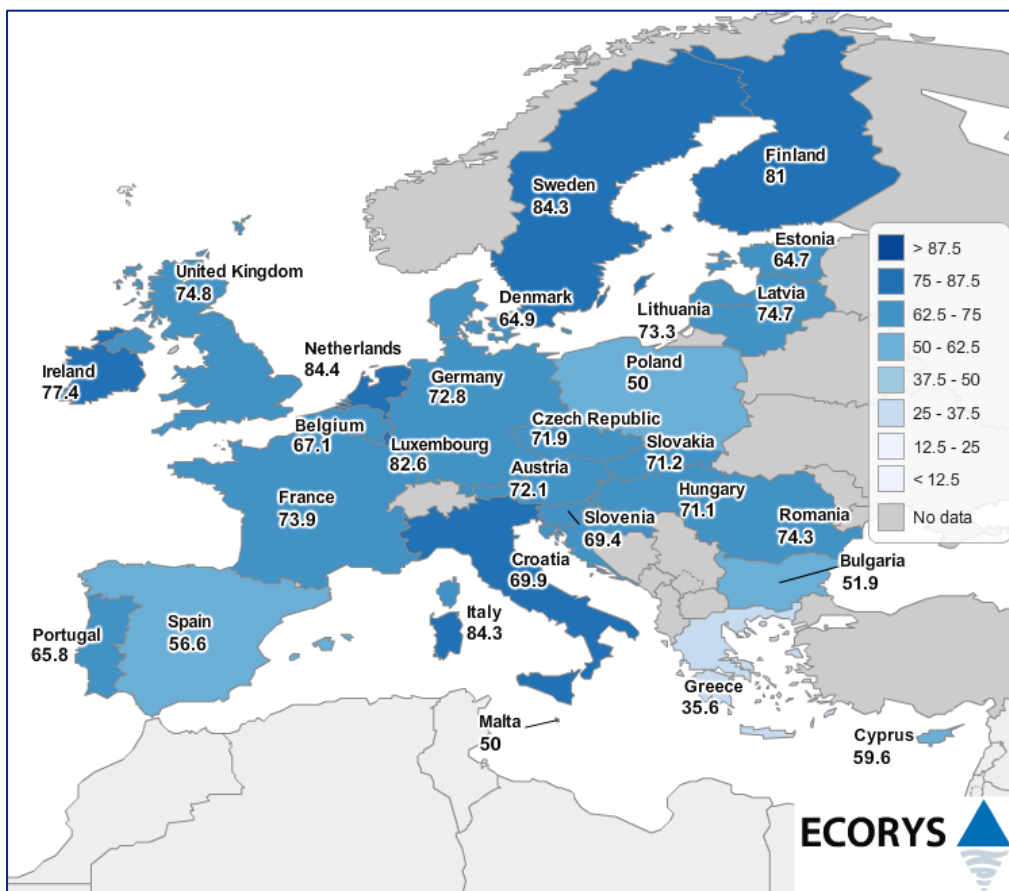
A cell is coloured **red** if the interviewed young farmers perceive an issue significantly more often as a hindrance in comparison with EU-28 and coloured **green** if they perceive it significantly less often as a hindrance.

	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=873)
Lack of knowledge	20.0	19.7	20.6
Lack of money	35.9	34.5	38.1
Lack of time	69.0	70.8	66.3
No replacement on my farm	48.6	52.0	43.4
Language barrier	32.7	29.8	37.1

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

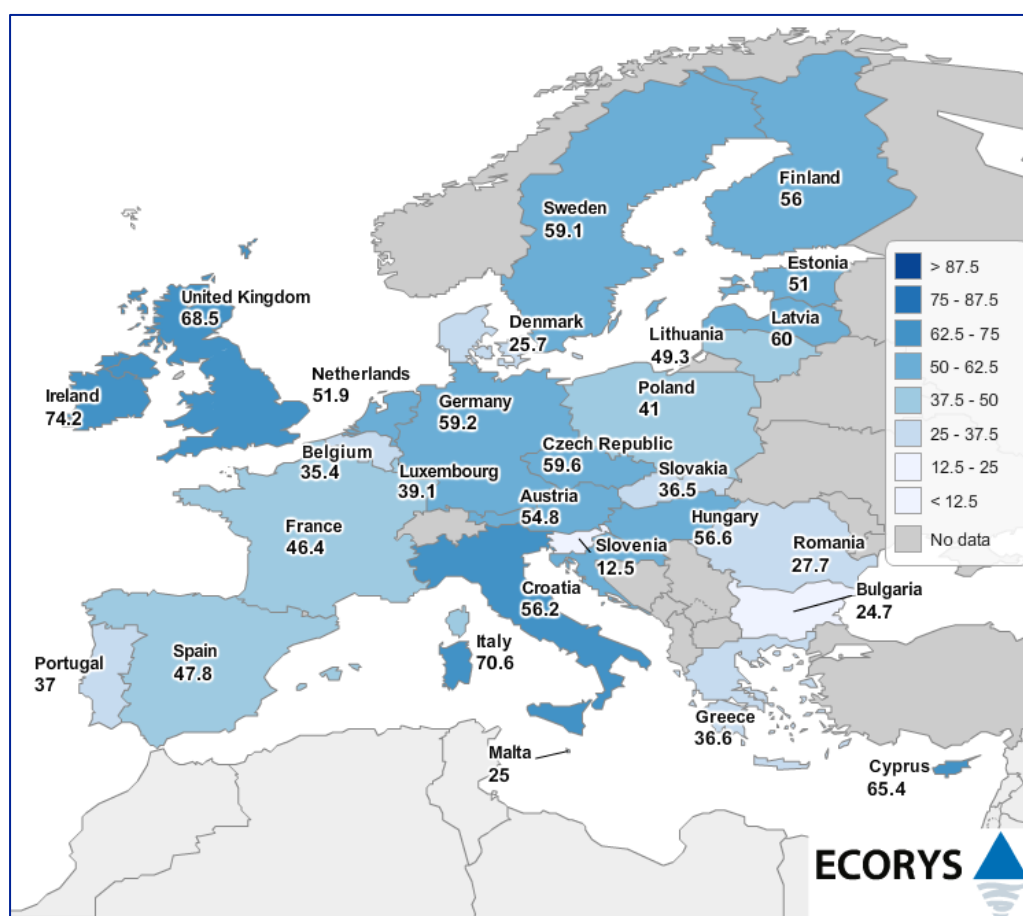
Looking at individual countries reveals that in all EU countries except Greece, 50% or more of the interviewed young farmers perceive lack of time as a hindrance to participating in an exchange scheme (Figure 4.26). The opinions of the interviewed young farmers as to whether having no replacement on the farm is a hindrance to participating in an exchange scheme are divided. More than 50% of the interviewed young farmers perceive this as a hindrance in Sweden, Finland, Estonia, Latvia, Czech Republic, Austria, Croatia, Hungary, Cyprus, Italy, Germany, the Netherlands, Ireland and United Kingdom, and less than 50% of the interviewed young farmers perceive this as a hindrance in the other EU countries (Figure 4.27). These aspects have not been discussed extensively with the focus group members (or with the interviewed experts). In most countries, it was confirmed that lack of time and having no replacement on the farm are the most significant hindrances for young farmers to joining an exchange scheme.

Figure 4.26 Percentage of interviewed young farmers that perceive lack of time as a hindrance to participating in an exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Figure 4.27 Percentage of interviewed young farmers that perceive having no replacement on the farm as a hindrance to participating in an exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

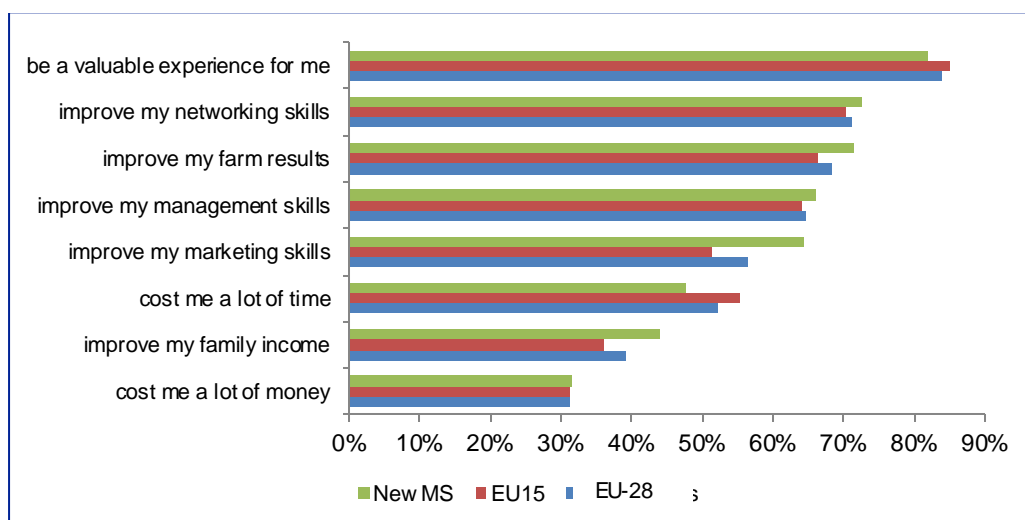
Conclusion

Lack of time is the most important hindrance for the interviewed young farmers to joining an exchange scheme, followed by having no replacement on the farm.

4.10. *Expectations of young EU farmers about participation in an exchange scheme*

Figure 4.28 shows what the interviewed young farmers in the EU think about participation in an exchange scheme. In general, the percentage of interviewed young farmers that have positive expectations about participation in an exchange scheme is rather high. Only their expectations with regards how an exchange scheme would improve the family income seem to be lower. However, more than 60% of the interviewed young farmers in EU-28 expect that taking part in an exchange scheme will be a valuable experience for them and will improve their networking and management skills and their farm results. Looking at EU-15 and new MS reveals that, in comparison with EU-28, the interviewed young farmers in new MS more often expect that their marketing skills and their family income will improve, and the interviewed young farmers in EU-15 less often expect that their marketing skills will improve (Table 4.10).

Figure 4.28 Expectations of the interviewed young farmers about participation in an exchange scheme (% of respondents who said that it was likely that a certain expectation would be realised)



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Table 4.10 Expectations (behavioural beliefs) of young EU farmers about participation in an exchange scheme (% of respondents)

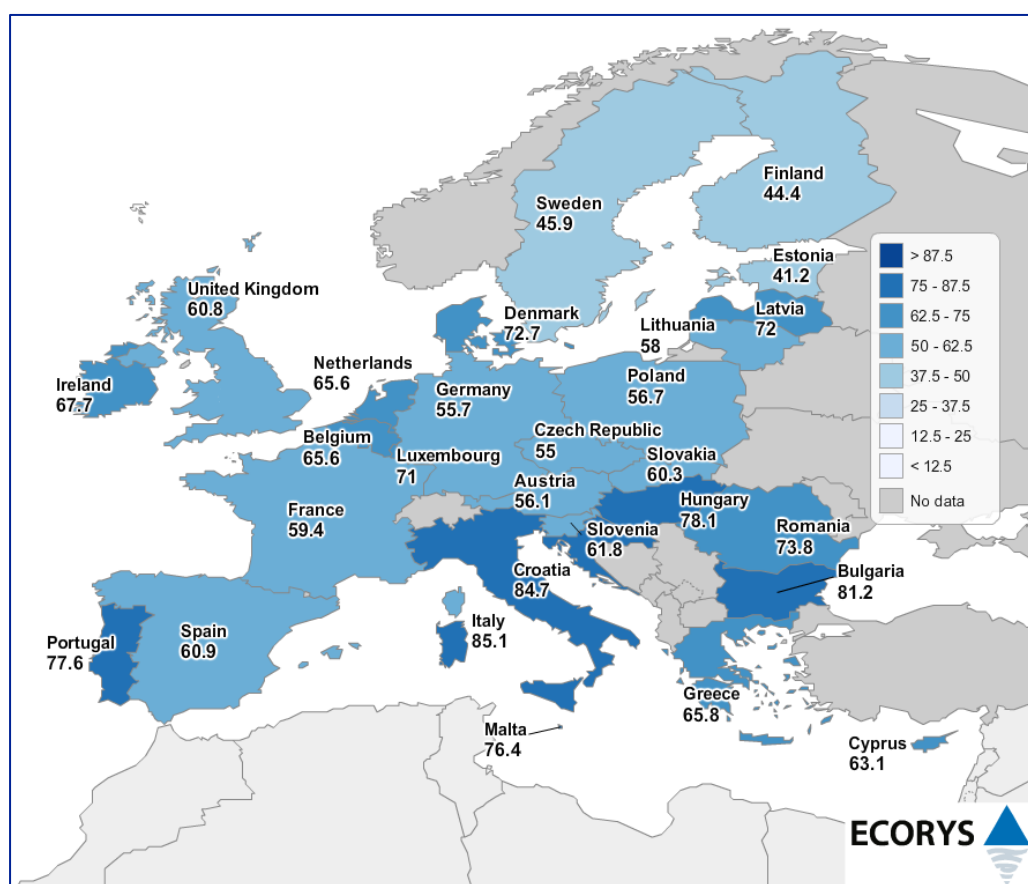
A cell is coloured **red** if the interviewed young farmers have significantly lower expectations about participation in an exchange scheme in comparison with EU-28 and coloured **green** if they have significantly higher expectations.

Participation in an exchange scheme will..	EU-28 (n=2205)	EU-15 (n=1322)	New MS (n=873)
improve my farm results	68.3	66.3	71.4
cost me a lot of money	31.3	31.2	31.6
improve my management skills	64.8	64.0	66.0
improve my family income	39.2	36.0	44.1
cost me a lot of time	52.3	55.3	47.8
be a valuable experience for me	83.9	85.1	82.1
improve my networking skills	71.2	70.3	72.5
improve my marketing skills	56.5	51.4	64.3

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Looking at the country level confirms that in all EU countries, except Sweden, Finland and Estonia, more than 50% of the interviewed young farmers have positive expectations about what participation in an exchange scheme will bring them (Figure 4.29). Possible reasons for this are travel distances in these countries, the lack of exchange schemes in Estonia and Finland, the administrative burden of joining an exchange scheme perceived by the Swedish young farmers and, as in many other countries, lack of time and having no replacement on the farm.

Figure 4.29 Percentage of interviewed young farmers that has positive expectations about participation in an exchange scheme



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

In general, the interviewed young farmers have positive expectations about participation in an exchange scheme.

4.11. *Distribution of agricultural sectors over EU regions*

In

Table 4.11, we can see how the different agricultural sectors mentioned as main economic activities by the interviewed young farmers are divided over EU-15 and the new Member States. The distribution by country is presented in Annex I.29.

In EU-15, the interviewed young farmers relatively often mention grazing livestock as their main economic activity and they relatively seldom mention field crops in comparison with EU-28. In the new MS, the opposite was found (

Table 4.11).

Table 4.11 Main economic activities of the young farmers who participated in the survey (% of respondents)

Respondents could mention more than one main activity but only if both activities were a substantial part of the economic activities at the farm. If a sector is found relatively infrequently in a country compared to EU-28, a cell is coloured **green** and if a sector is found relatively often in a country, a cell is coloured **blue**.

	N	Field crops	Permanent crops	Grazing livestock	Horticulture	Granivores	Mixed crops	Mixed livestock	Mixed crops/livestock
EU-15	1282	20.8	10.1	32.0	2.6	3.4	6.0	3.0	22.0
New MS	810	32.3	6.9	21.2	2.0	2.7	9.3	2.7	22.8
Total EU-28	2092	25.3	8.9	27.8	2.3	3.2	7.3	2.9	22.3

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

The main activities of the interviewed young farmers are not distributed evenly over EU-15 and the new MS. Field crops are found more often in new MS and grazing livestock is found more often in EU-15.

4.12. Needs of young farmers in different agricultural sectors

In Annex I.29 an overview of the survey results in different agricultural sectors is given. It is obvious that the main economic activities (sectors) of the interviewed young farmers affect their needs. In some cases, this is easy to understand:

- Interviewed young farmers with permanent crops have a relatively low need for land to buy or rent and a relatively high need for seasonal workers when compared with all interviewed young farmers together (irrespective of the sector). An explanation is that not so much land is needed for growing permanent crops and it is an intensive sector with high labour peaks. Interviewed young farmers with grazing livestock have a relatively low need for qualified labour and seasonal workers because it is quite an extensive sector in many countries;
- Interviewed young farmers with permanent crops or horticulture have a relatively high need for insurance (weather sensitive sector) and interviewed young farmers with grazing livestock have a relatively low need for insurance (not such a weather sensitive sector);
- Interviewed young farmers with field crops, permanent crops and mixed crops have a low interest in developing skills related to the improvement of animal welfare and they seldom use a veterinarian as an information source, while interviewed young farmers with grazing livestock, granivores, mixed livestock or mixed crops and livestock have a relatively high interest in developing these skills and relatively often use a veterinarian as an information source.

However, in most cases, it is not so clear why a certain need, hindrance or opinion about exchange schemes is higher or lower in a certain sector. The interviewed young farmers with permanent crops for example stand out because they deviate quite often when compared with all interviewed young farmers together (irrespective of the sector and besides the already mentioned topics):

- They perceive the availability of useful trainings more often as problematic;
- They perceive it as more likely that they will develop marketing, financial, communication and networking skills and skills related to foreign languages;
- They more often use discussions on the internet, online training and e-learning and workshops or seminars as sources to obtain knowledge;
- They more often perceive participation in an international exchange scheme as useful;
- They more often indicate that they have the intention of joining an exchange scheme abroad or in their own country and they appeared to have participated in an exchange scheme less often;
- They expect more often that participation in an exchange scheme will improve their farm results, their family income and their marketing skills.

The interviewed young farmers in other sectors sometimes deviate as well when compared with all interviewed young farmers together (irrespective of the sector and besides the already mentioned topics):

- Young farmers with field crops perceive it as less likely that they will develop management skills, they less often perceive a missing or bad internet connection as a hindrance to obtaining knowledge and they less often were aware of an existing exchange scheme in their country;
- Young farmers with grazing livestock less often perceive the availability of extension services and useful trainings or workshops as problematic, they perceive it less often as likely that they will develop skills related to foreign languages, they less often used online training or e-learning as sources to obtain knowledge, they more often used banks as information sources, they more often mentioned 'lack of money' as a hindrance to participating in an exchange scheme and they more often had participated in an exchange scheme;
- Young farmers working in horticulture more often perceive lack of interest and costs as a hindrance to obtaining knowledge and they more often said that they have the intention of joining an exchange scheme abroad;
- Young farmers with granivores (pigs and/or poultry) more often use political parties as information sources, they more often indicate that they will join a(n) (inter)national exchange scheme and they more often had participated in an exchange scheme or were aware of its existence in their country;
- Young farmers with mixed crops more often perceive the availability of credit, machinery, seasonal workers, advice of extension services and new and useful knowledge and other legal issues as problematic, they less often use input suppliers, schools and training institutes and banks as information sources, they more often perceive language as a hindrance to obtaining knowledge and they more often perceive lack of knowledge and language as a hindrance to joining an exchange scheme;
- Young farmers with mixed livestock more often perceive a missing or bad internet connection as a hindrance to obtaining knowledge.

Conclusion

It is obvious that the main economic activities of the interviewed young farmers in the different countries also affect their general needs, knowledge needs, use of knowledge and information sources as well as their participation in, attitude to and perception of exchange schemes.

4.13. *The influence of the education level of the interviewed young farmers*

Whether or not the level of education of the interviewed young farmers affected their answers in the survey was also looked at. A distinction was made between farmers with a high level of education (BSc, MSc or PhD) and farmers with a lower level of education. Of all the interviewed young farmers in EU-28, 43.9% had a high level of education and 56.1% a lower level of education. The percentage of interviewed young farmers with a higher or lower level of education in EU-15 and new MS did not deviate from EU-28 (Table 4.12).

Table 4.12 The percentage of interviewed young farmers with a higher or lower level of education in the EU

Education level	EU- 28 (n=2205)	EU- 15 (n=1332)	New MS (n=973)
High (BSc, MSc or PhD)	43.9	44.8	42.5
Lower	56.1	55.2	57.5

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

In some cases, education affected the way the interviewed young farmers answered the questions of the survey. In comparison with EU-28 (Figure 4.30):

- Highly educated young farmers perceive advice of extension services more often as problematic; less educated young farmers perceived this as less problematic;
- Highly educated young farmers more often perceive it as likely that they would develop skills related to foreign languages;
- Highly educated young farmers more often participated in workshops and seminars or joined a study group or network to obtain knowledge; less educated young farmers less often;
- Highly educated young farmers less often make use of the national government, research institutes and accountants as information sources –for less educated farmers, it was more often;
- Highly educated young farmers less often and less educated young farmers more often perceive language and 'not knowing where to find it' as a hindrance to obtaining information. Highly educated young farmers perceive lack of time more often as a hindrance;
- Highly educated young farmers more often and less educated young farmers less often perceive participation in an international exchange as realistic;
- Highly educated young farmers also participated more often and less educated young farmers participated less often in an exchange scheme;
- Highly educated young farmers perceive lack of money and a language barrier less often and less educated farmers perceived this more often as a hindrance to participating in an exchange scheme.

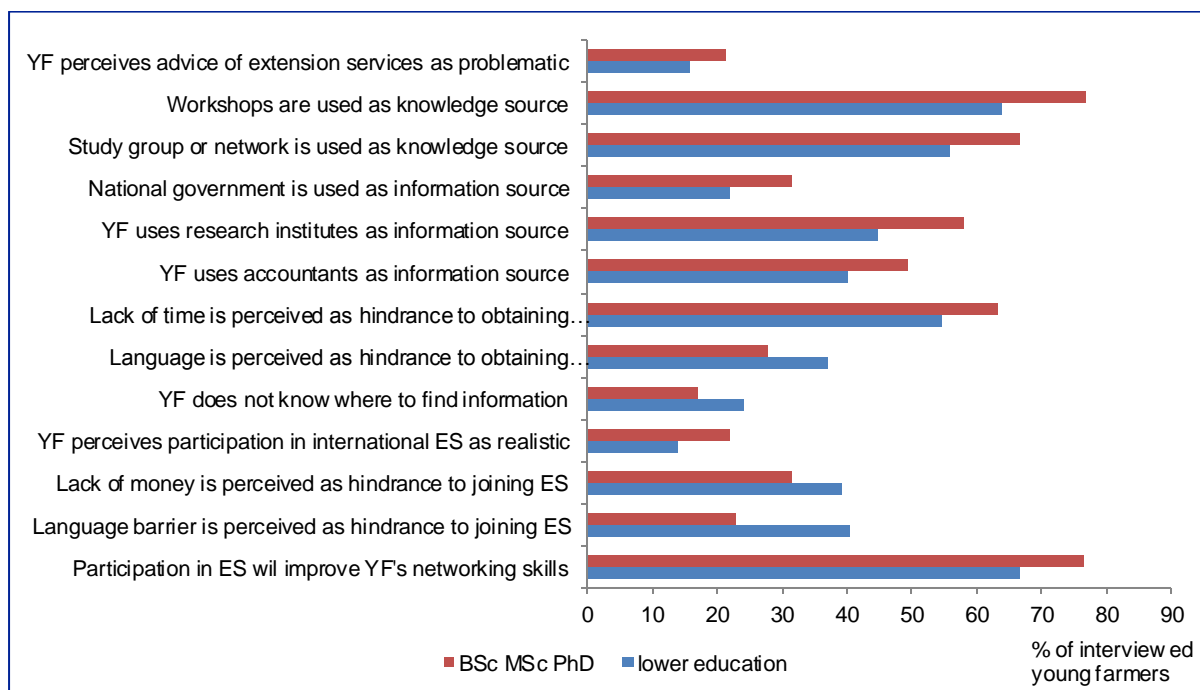
The corresponding numbers are presented in Annex I.29

Conclusion

A few indications were found that the education level of the interviewed young farmers affects their knowledge needs. The interviewed young farmers with a higher level of education are more eager to develop different kinds of skills, they perceive less hindrances to obtaining information or to joining an exchange scheme (although they

perceive lack of time as more of a hindrance than less educated young farmers), they have a more positive attitude to exchange schemes and also participated more often in an exchange scheme than less educated interviewed young farmers.

Figure 4.30 The influence of education level on the issues indicated in the figure (% of interviewed young farmers)



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

4.14. *The influence of the farm situation*

The farm situation of the interviewed young farmers differed. Of the 2 064 (of 2 205) interviewed young farmers for whom the farm situation was known, 969 (46.9%) were the owners of the farm, 387 (18.8%) had a partnership with their parents or with others, 138 (6.7%) were employees on a farm and 570 (27.6%) were employees on their parents' farm. In EU-15 the percentage of interviewed young farmers who were owners of the farm was lower in comparison with EU-28 and the percentage of interviewed young farmers who had a partnership with their parents was higher. In new MS, the reverse was found (Table 4.13).

Table 4.13 The percentage of interviewed young farmers who own the farm, have a partnership with their parents or others or are employees on a farm or on their parents' farm

If a farm situation is found relatively rarely in a country compared to EU-28, a cell is coloured **green** and if a situation is found relatively often in a country, a cell is coloured **blue**.

Farm situation	EU-28 (n=2064)	EU-15 (n=1208)	New MS (n=856)
Owner of the farm	46.9	41.2	55.0
Partnership with parents or others	18.8	22.5	13.4
Employee on a farm	6.7	7.5	5.5
Employee on parents' farm	27.6	28.7	26.1

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

The farm situation appears to have some influence on the answers given by the interviewed young farmers. When compared with all the answers given by the interviewed young farmers for whom the farm situation was known, it appears that farm owners less often answer 'neutral' and more often answered in a negative way. Farmers who work as employees on their parents' farm more often answer 'neutral' or 'no answer' and less often answer in a positive or a negative way (Table 4.14). Farm owners thus seem to be more certain of their answers, while farmers who worked as an employee on their parents' farm were less certain. This is probably related to the age of the interviewed young farmers with different farm situations. The farm owners appear to be the oldest group (32.6 ± 4.6 years of age), the farmers who had a partnership with their parents the second oldest (30.0 ± 4.6), the farmers who worked on a farm the third oldest (26.1 ± 5.4) and the farmers who worked on their parents' farm the youngest (24.3 ± 5.1). All groups differed significantly in age.

Table 4.14 The effect of the farm situation on the way farmers answered the questions in the questionnaire

Percentage of (79) questions answered with a certain answer more or less often than could be expected if the farm situation would not have affected the type of answer given

	Owner (n=969)	Partnership (n=386)	Employee on a farm (n=138)	Employee on parents' farm (n=570)
% of questions answered more often with 'neutral'	0	1.3	1.3	26.6
% of questions answered less often with 'neutral'	20.3	1.3	1.3	0
% of questions answered more often in a positive way*	6.3	2.5	5.1	5.1
% of questions answered less often in a positive way	5.1	1.3	0	15.2
% of questions answered more often in a negative way**	20.3	3.8	2.5	2.5
% of questions answered less often in a negative way	2.5	6.3	7.6	21.5
% of questions answered more often with 'no answer'	3.8	0	3.8	11.4
% of questions answered less often with 'no answer'	2.5	3.8	0	3.8

*positive answers are: 'yes', 'likely', 'agree', 'realistic' and 'useful'.

**negative answers are: 'no', 'unlikely', 'disagree', 'not realistic'.

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Some striking results were that, in comparison with EU-28:

- Interviewed young farmers who are owners of the farm relatively often indicate that some general issues (land to buy or rent, access to credit, the national inheritance law, other legal issues and interventions of parents or other persons) are not problematic for them. They also answer relatively often that it is unlikely that they will develop certain skills (financial, communication, networking, and management skills, skills to develop a farm strategy, skills related to resource and nature and environment management and skills related to the improvement of animal welfare) perhaps because they (think that they) already have these skills;
- Interviewed young farmers who are owners of the farm relatively often indicate that they use discussions on the internet and online training or e-learning through the internet, while interviewed young farmers who are employees on their parents' farm relatively rarely indicate this;

- Interviewed young farmers who are owners of the farm relatively often indicate that joining a(n) (inter)national exchange scheme is unrealistic, while interviewed young farmers who are employees on their parents' farm relatively rarely indicate this;
- Interviewed young farmers who own the farm relatively seldom indicate that they had participated in an exchange scheme or that they are aware of it, and interviewed young farmers who have a partnership with their parents or others relatively often said that they had participated in an exchange scheme or were aware of it;
- Interviewed young farmers who are employees on their parents' farm relatively often answered 'neutral' or 'no answer' on the questions regarding their intention of joining an exchange scheme;
- Interviewed young farmers who have a partnership with their parents more often have a higher education level and less often have a lower education level, and interviewed young farmers who are employees on their parents' farm less often have a higher education level and more often have a lower education.

The corresponding numbers are presented in Annex I.29.

Conclusion

The farm situation affected the answers of the interviewed young farmers. Interviewed young farmers who are the owner of the farm seem to be more sure of themselves. They perceive fewer general needs when compared with all the interviewed young farmers, but they also are less eager to develop different kinds of skills. This could be because they (think that they) already have these skills. They also perceive it relatively often as unrealistic that they will join a(n) (inter)national exchange scheme. However, no indications were found that the interviewed young farmers who are the owners of the farm perceive more hindrances to obtaining information or to joining an exchange scheme when compared with all interviewed young farmers. They are older though.

4.15. *The influence of the type of area*

Of the 2 205 interviewed young farmers, 1 069 (48.5%) lived in a favourable or flat area, 1 010 (45.8%) lived in a less favourable, hilly, mountainous or NATURA2000 area and 126 (5.7%) indicated that they did not know in what kind of area they lived. The type of area in which the interviewed young farmers lived did not affect the way they answered most of the questions. However, a few striking results were that, when compared with all the answers given by the interviewed young farmers:

- Young farmers who said that they did not know in what kind of area they lived quite often answered the questions with 'neutral' (19.0% of the answers on 79 questions) or 'no answer' (21.5% of the answers on 79 questions);
- Young farmers who live in favourable areas relatively often indicate that the availability of machinery was not problematic for them and relatively few said this issue was problematic for them. For the interviewed young farmers who lived in less favourable areas, the reverse was found;
- Interviewed young farmers who live in favourable areas relatively often indicate that lack of time is not a hindrance for them to obtaining information, while interviewed young farmers who live in less favourable areas said relatively often that this was a hindrance for them;
- Interviewed young farmers who live in favourable areas relatively often indicate that they had participated in an exchange scheme and that they are aware of an existing exchange scheme in their country, while interviewed young farmers who live in less favourable areas indicate this relatively less often;

- Interviewed young farmers who are owners of the farm less often indicate that they do not know in what kind of area they live and interviewed young farmers who worked as an employee on a farm more often indicate this;
- Interviewed young farmers with field crops or granivores more often live in favourable areas and less often live in less favourable areas. Interviewed young farmers with grazing livestock less often live in favourable areas and interviewed young farmers with mixed livestock more often live in less favourable areas.

The kind of area in which the interviewed young farmers lived appeared to be distributed more or less evenly over EU-15 and new MS (Table 4.15) and no clear relationship existed between type of area and education level.

Table 4.15 The percentage of interviewed young farmers living in different types of areas (flat/ favourable, hilly/mountainous/NATURA2000) in the EU

Type of area	EU-28 (n=2205)	EU-15 (n=1332)	New MS (n=973)
Favourable/flat	48.5	47.4	50.2
Mountainous/ hilly/ NATURA2000	45.8	46.2	45.2
Don't know	5.7	6.5	4.6

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

A few indications were found that – in comparison with all interviewed young farmers – it is more difficult for the interviewed young farmers who live in less favourable areas to obtain knowledge or join an exchange scheme.

4.16. *The influence of the type of farm (conventional or organic)*

Of the 2 204 (of 2 205) interviewed young farmers for whom the farm type was known, 1 899 (86.2%) had a conventional farm and 305 (13.8%) had an organic farm. Only in a few cases did the type of farm affect the way the interviewed young farmers answered the questions. In comparison with all the answers given by the interviewed young farmers:

- Organic young farmers more often indicate that the availability of qualified labour is problematic for them;
- Conventional young farmers less often indicate that they do not use input suppliers as an information source and organic young farmers indicate this more often. Organic young farmers also indicate less often that they use input suppliers as an information source;
- Organic young farmers more often indicate that lack of time is a hindrance for them to obtaining information;
- Young farmers who are employees on a farm more often work on an organic farm and young farmers who are employees on their parents' farm less often work on an organic farm;
- Young farmers with field crops less often have an organic farm and young farmers with permanent crops or horticulture more often have an organic farm;
- The type of farm of the interviewed young farmers was distributed more or less evenly over EU-15 and new MS (Table 4.16). The education level of the interviewed young farmers did not seem to be related with the type of farming either.

Table 4.16 The percentage of interviewed young farmers having a conventional or organic farm

Type of farm	EU-28 (n=2205)	EU-15 (n=1331)	New MS (n=973)
Conventional	86.2	84.8	88.2
Organic	13.8	15.2	11.8

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

The type of farm did not seem to affect the way the interviewed young farmers answered the survey questions very much. Only lack of time seems to be a more important hindrance for organic farmers to obtaining information when compared with all the interviewed young farmers.

4.17. *High and low intenders for joining an exchange scheme*

Table 4.17 shows (only) the significant differences between interviewed young farmers with a relatively high or a relatively low intention of joining an exchange scheme (referred to as high and low intenders respectively). The analysis is based on the mean scores of the interviewed young farmers on combined variables (constructs) and on separate variables if they did not 'fit' in a construct according to the factor analysis and the reliability analysis (see Annex I.30). In comparison with low intenders, high intenders:

- Perceive the availability of land as less problematic and the availability of credit and insurance as more problematic;
- Perceive it as more likely that they will develop entrepreneurial skills, technical and managerial skills and skills related to foreign languages;
- Make more use of the internet; both passive (looking and reading for information) and active (participation in discussions on the internet, e-learning or online training and social media);
- Make more use of interactive knowledge sources to obtain knowledge;
- Perceive lack of interest and too many sources as less of a hindrance to obtaining information;
- Perceive lack of time, having no replacement on the farm and language as less of a hindrance to joining an exchange scheme;
- Have higher expectations of and a more positive attitude about exchange schemes and thought to a lesser extent that joining an exchange scheme costs a lot of time.

Table 4.17 Mean scores and standard deviation of interviewed young farmers who have a relatively low or high intention of joining an exchange scheme; only significant differences are shown

	Low intenders			High intenders			p
	Mean	N	Std. Deviation	Mean	N	Std. Deviation	
General needs (a higher score means that a respondent perceives the availability of these issues as less problematic)							
Land	0.6	848	0.7	0.7	1198	0.8	p<0.05
Credits	1.1	820	0.8	1.0	1182	0.9	p<0.01
Insurance	1.5	827	0.7	1.4	1177	0.8	p<0.01
Skills (a higher score means that a respondent perceives it as more likely that he/ she will develop these skills)							
Entrepreneurial skills	1.2	847	0.6	1.4	1207	0.6	p<0.001
Technical and managerial skills	1.3	848	0.5	1.5	1208	0.5	p<0.001
Skills related to foreign languages	0.9	839	0.9	1.2	1192	0.9	p<0.001
Sources to obtain knowledge (a higher score means that a respondent uses these knowledge sources more often)							
Making passive use of internet	1.7	854	0.6	1.8	1202	0.5	p<0.01
Making active use of internet	0.9	854	0.6	1.1	1203	0.7	p<0.001
Interactive knowledge sources	1.5	856	0.5	1.7	1209	0.4	p<0.001
Hindrances to obtaining information (a higher score means that a respondent perceives this hindrance as less problematic)							
Lack of interest	1.5	850	0.7	1.6	1197	0.7	p<0.001
Too many sources	1.0	850	0.8	1.1	1198	0.9	p<0.05
Hindrances to joining an exchange scheme (a higher score means that a respondent perceives this hindrance as less problematic)							
No time	0.3	844	0.6	0.5	1208	0.8	p<0.001
No replacement	0.6	844	0.8	0.9	1204	0.9	p<0.001
Language barrier	1.0	844	0.9	1.2	1203	0.9	p<0.01
Expectations of exchange schemes (a higher score means that a respondent perceives it as more likely that an exchange scheme (ES) will have a certain effect)							
ES has positive effect	1.4	837	0.5	1.7	1206	0.3	p<0.001
ES costs a lot of time	1.5	830	0.6	1.4	1181	0.7	p<0.001
Attitude (a higher score means that a respondent has a more positive attitude towards exchange schemes)							
Attitude	1.3	838	0.6	1.8	1202	0.4	p<0.001

Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

High and low intenders were not distributed evenly over EU-15 and the new MS, education level, farm situation and sector. In comparison with all the interviewed young farmers in EU-28:

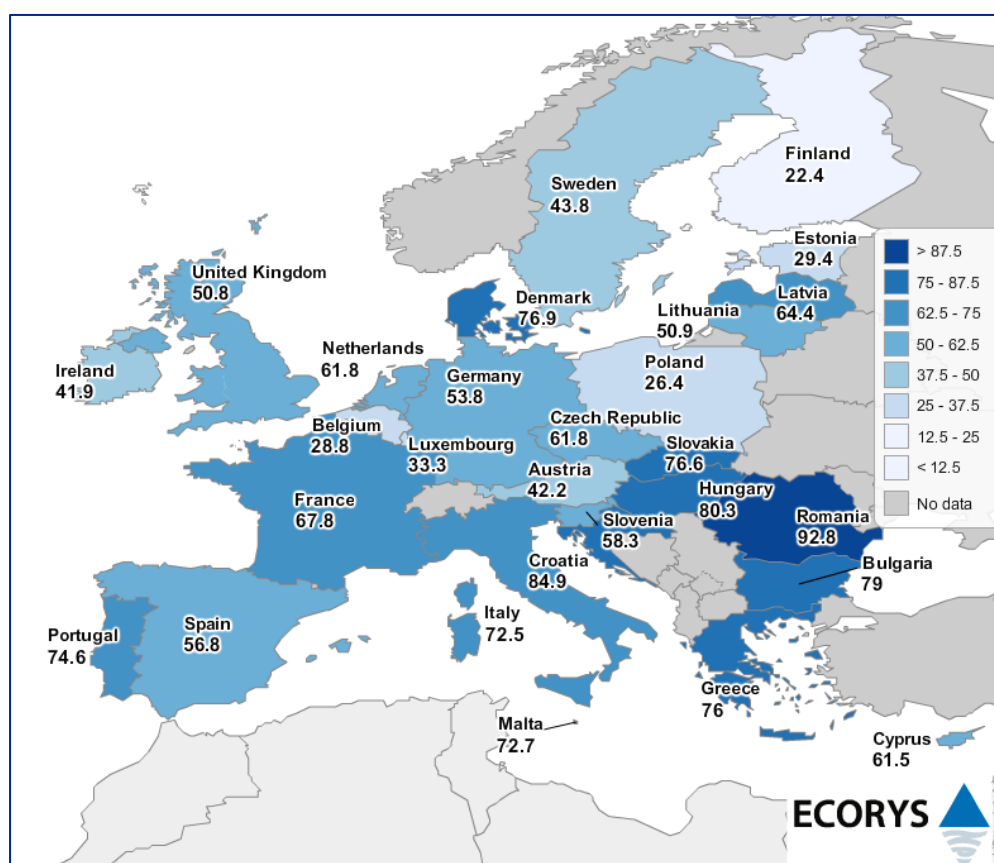
- High intenders are found more often in new MS states and less often in EU-15 and the reverse was found for low intenders;
- High intenders more often have permanent crops and low intenders less often have permanent crops or horticulture;
- Low intenders less often have a higher educational level;
- Interviewed young farmers who work as employees on their parents' farm more often are low intenders and less often are high intenders.

Looking at individual countries shows that more than 50% of the interviewed young farmers are high intenders in Latvia, Lithuania, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Slovenia, Croatia, Cyprus, Greece, Malta, Italy, Spain, Portugal, France, the United Kingdom, the Netherlands, Germany and Denmark (Figure 4.31).

In the eight remaining countries – Sweden, Finland, Estonia, Poland, Austria, Luxembourg, Belgium and Ireland – more than 50% of the interviewed young farmers are low intenders. Reasons for this are:

- Language barriers (Belgium, Poland);
- Young farmers already had practical training abroad when they were students (Austria, Belgium);
- The transferability of knowledge is limited, for example because of small farms in a country (Austria) or due to different farming conditions in other countries (Ireland);
- The knowledge obtained through an exchange scheme is not always practically applicable for the young farmer or does not fit his/her specific knowledge needs entirely (Poland);
- Young farmers perceive it as too complex to join an exchange scheme from an organisational perspective, for example with regard to administrative requirements, time needed to prepare applications, costs of living, etc. (Luxembourg, Sweden);
- Young farmers have a job besides the farm and therefore cannot go abroad (Austria),
- Minimum period of stay is too long (Belgium);
- There is a lack of exchange schemes in a country (Estonia, Finland, Poland),
- Travel distances (Estonia, Finland, Sweden);
- Mentality; young farmers are not interested in getting to know other cultures (Poland).

Figure 4.31 Percentage of interviewed young farmers being 'high intenders' (of joining an exchange scheme)

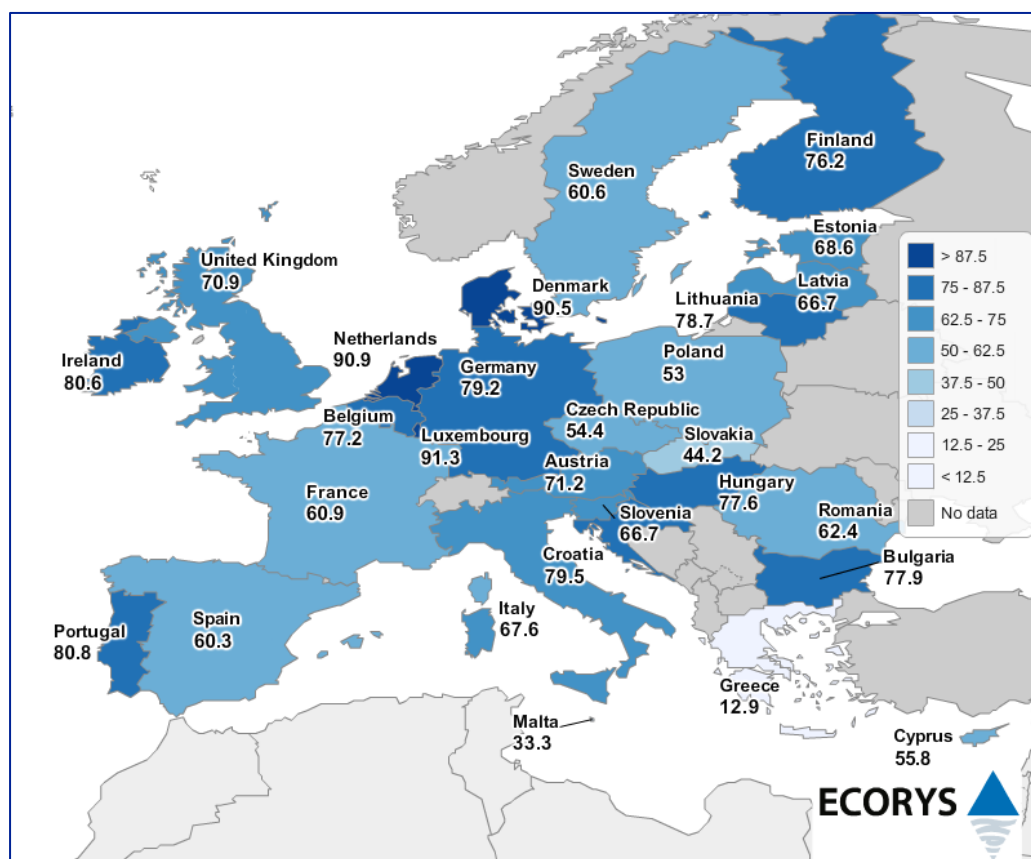


Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

High intenders (of joining an exchange scheme) have fewer general needs, are more eager to develop different kinds of skills, use more sources to obtain knowledge, perceive less hindrances to obtaining information or to joining an exchange scheme and have a more positive attitude to and higher expectations of exchange schemes than low intenders. Besides this, in comparison with EU-28, high intenders more often come from new MS, less often have a lower level of education and more often have permanent crops or horticulture.

Figure 4.32 Percentage of young farmers using agricultural advisors and consultants as an information source



Source: Ecorys in cooperation with LEI and Aequator Groen & Ruimte, 2015.

Conclusion

Other farmers are the most important information source for all interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors.

4.18. *Hindrances for young farmers to obtaining information*

The most important issue that hinders the interviewed young farmers in obtaining information is lack of time (Figure 4.17). Looking at the interviewed young farmers in EU-15 and the new MS reveals that, in comparison with EU-28, the interviewed young EU-15 farmers perceived language as less of a hindrance and the interviewed young new MS farmers perceived language as more of a hindrance (Table 4.5).

5. Reflection on the results of the survey

5.1. *General and knowledge needs of young farmers and their intention of joining an exchange scheme*

5.1.1. *General needs*

Looking at EU-28, land (to buy or rent) is the most important general need for the interviewed young farmers, followed by subsidies, credit and qualified labour.

In an Italian study among young people aged between 17 and 20 in nine European countries (Italy, France, the Netherlands, Belgium, Finland, Sweden, Poland, Latvia and Malta), it appeared that the more young people know about rural areas, the more they like them and think of agriculture as a possible life and career choice. The lack of resources for investment, inadequate income to meet family needs and the availability of land are seen as the main difficulties when starting an agricultural business (Italian Ministry of Agriculture, Food and Fisheries, 2013). Earlier, Sotte (2003) stated that access to land, agricultural business and founding capital are central elements for the generational turnover in agriculture. For that reason 'the introduction of new tools of financing and security, especially aimed at supporting new agricultural enterprises is crucial.' By the same token, the European Council of Young Farmers (CEJA) reports in its 'Recommendations for enhancing youth employment in agriculture for a more sustainable Europe' that access to land and access to credit are the main barriers faced by young people attempting to enter the agricultural sector (CEJA, 2013). With regard to the access to land (among other things), the organisation therefore recommends promoting new models of collaboration between generations through partnership, share-farming, long-term leasing and other contractual arrangements, as well as promoting the concept of retirement planning. This is (partly) in line with findings of an Austrian study among 910 young farmers that pointed to the fact that a more gradual transfer of the farm and fiscal advantages would be helpful for young farmers to take over the farm (Quendler, 2011).

5.1.2. *Knowledge needs*

The interviewed young farmers are eager to develop all kinds of knowledge skills as more than 50% of them perceive it as likely that they will develop all kinds of entrepreneurial and managerial skills such as marketing, financial, communication, networking and management skills and skills related to resource and environmental management, to the improvement of animal welfare and to applying for subsidies. In addition, more than 60% of them perceive it as likely that they will develop skills related to the development of a farm strategy, which is also related to the development of entrepreneurship. This indicates that the young farmers are aware of the importance of entrepreneurship to keep their farm viable. This is important in the present farm context in which farmers have to adapt their businesses to the structural changes in the environment (Vesala and Pyysiäinen, 2008; McElwee, 2008). However, they also have a technological focus as more than 60% of the interviewed farmers also perceived it as likely that they would develop technological knowledge necessary for the farm. Other studies also show that many farmers still have a 'productivist' mindset – meaning that farmers still focus on primary agricultural production such as growing crops, milking cows, raising pigs, etc. – and wish to maintain an agricultural focus (Walford 2003, Chaplin et al. 2004, Burton and Wilson 2006, Gorton et al. 2008).

The interviewed young farmers also like to use all kinds of knowledge sources. More than 70% of the respondents like to use the internet to read and look for information, attend field days or excursions, take individual advice, go to fairs or exhibitions, take part in (agricultural) trainings or courses and look at farmers' journals. Workshops and joining a study group or network were slightly less popular. These knowledge sources are used by more than 60% of the respondents. Participation in exchange schemes, using social

media, participation in discussions on the internet and online trainings or e-learning are used the least by the interviewed young farmers (by respectively 54.5%, 40.1%, 35.9% and 31.7% of them). This is striking, as online trainings, e-learning and social media are mentioned quite often as important knowledge sources for young farmers (besides direct contact). The findings are only partly in line with the findings of Niewolny and Lillard (2010) that farmers need an alternative knowledge system that incorporates community-based learning, participatory and experimental learning, social media and new approaches to establish, retain and expand sustainable agriculture concepts that reduce the amount of lectures and other forms of direct instruction.

Other farmers appear to be the most important information source for the interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors. These information sources are mentioned by 86%, 67.5% and 67.3% of the interviewed young farmers respectively.

Trede and Whitaker (2000), who studied educational needs and perceptions of 286 beginning farmers in Iowa, found that beginning farmers showed preferences towards experiential learning, problem-solving and critical thinking skills. They felt that lifelong learning and continuing education were important in the development of their farming careers. Also, they preferred on-site educational instruction, single meetings on a specific topic and consulting public institutions for unbiased information. Besides, the beginning farmers in the study of Trede and Whitaker (2000) indicated that radio, information services, marketing services, and newspapers are likely to be important educational media in the future. At the time (2000), beginning farmers were not so interested in modern information technology such as the internet, fibre optic networks or satellite dishes – an appetite that could well have changed by 2015. Already in 2004, Lans et al. (2004) stated that technology, IT and enterprising competencies will become increasingly important in the future. In a study among 1 030 dairy (not specifically young) farmers in Poland, Slovenia and Lithuania, it appeared that these farmers perceived internet, ICT applications, technical developments and advisory services as a moderate to big opportunity (De Lauwere et al., 2014). Although this study did not focus on young farmers, the findings fit the CEJA recommendation on vocational education and training for young farmers that a European training network consisting of trainers and trainees, which is accessible to all young people wishing to establish careers in agriculture, should be created online and through IT materials. This network should be complemented with the possibility for young farmers to take part in an exchange programme in the EU. Information on how to access these knowledge transfer tools should be made available to all young farmers across the EU. With regard to the functioning of advisory services, CEJA recommended that farm advisory services should be equally available for all young farmers across the EU, that these should be free of charge for the first 5 years after installation. They also recommended that the services should be tailored to the needs of young farmers in particular to include business management, finance and protection of the environment and biodiversity, and that they should include information on succession planning (CEJA, 2013). According to CEJA, this will encourage young farmers to embrace agriculture as a sector for their future profession and will help to reverse the damaging demographic trend in agriculture. Besides, it will contribute to job creation, productivity enhancement, better sustainability and increased efficiency in the EU agricultural sector.

5.1.3. Perceived hindrances to obtaining information

Lack of time appears to be the most important hindrance to obtaining information for the interviewed young farmers (mentioned by 58.4% of the respondents). This is also the most important hindrance to joining an exchange scheme (mentioned by 69.0% of the respondents), followed by having no replacement on the farm (mentioned by 48.6% of the respondents). The hindrances perceived by the interviewed young farmers to joining an exchange scheme may be an explanation for their relative low intention of joining a(n) (inter)national exchange scheme (less than 50% of the respondents). This is despite the interest of the young farmers in developing entrepreneurial and technological skills, using knowledge and information sources, and their positive attitude to and expectations of

exchange schemes. The percentage of interviewed young farmers that indeed participated in an exchange scheme was even lower: only 17.5% of the interviewed young farmers in EU-28. The farmers who did join an exchange scheme however were positive about it. Finding ways to compensate young farmers for their lack of time or having no replacement on the farm may be helpful to encourage more young farmers to join an exchange scheme.

5.2. ***Differences between EU-15 and new MS***

Young farmers in different EU regions seem to have different general needs and knowledge needs. In general, the interviewed young farmers in EU-15 had fewer general needs than the interviewed farmers in new MS, and they also were less interested in different kinds of sources to obtain knowledge.

Looking at the young farmers in new MS reveals that they have more general needs than other farmers in the EU and that they are more eager to develop all kinds of skills and obtain knowledge from different sources. In comparison with young farmers in EU-15, they also have more intention of joining an exchange scheme and a more positive attitude to exchange schemes – perceiving them more often as useful or realistic. Their expectations of exchange schemes were also higher. On the other hand, young farmers in EU-15 more often had already participated in an exchange scheme, which may also be an explanation for their lower intention of joining one.

It is obvious that the moment of accession to the EU and historical context are potential explanations for the differences between EU-15 and new MS. Farmers from new MS perceive their general needs as greater than those of young farmers in EU-15. They seem to be more eager to develop a range of skills and obtain more knowledge.

For young farmers in EU-15, this may be less important because they have a lot of knowledge already (or they think they have). In EU-15 there has also been more emphasis on developing entrepreneurship. This also may have helped to make them more aware of their own and their farm's potential (Bergevoet, 2005; De Lauwere, 2005; Pyysiäinen et al., 2006; Rudman, 2008; Lans, 2009).

For the EU, this could mean that different strategies should be followed for young farmers in new MS and in EU-15 to encourage them to stay in the agricultural sector. A striking difference between EU-15 and new MS for example was that the interviewed young farmers in new MS are more interested in discussions on the internet and online training or e-learning, while the interviewed young farmers in EU-15 are less interested in these knowledge sources. Training programmes for young farmers in EU-15 and in new MS thus should have different focuses. This is in line with findings of other authors mentioned in the introduction that state that agricultural training programmes should be fine-tuned to the needs of farmers (Brent and Adams, 1999; Duram and Larson, 2001; Obaa et al., 2005) and that an understanding of social issues and the social nature of farming is needed if agricultural extension is to be effective (Vanclay, 2004).

5.3. *Other factors affecting the needs of young farmers in the EU*

The moment of accession to the EU is not the only factor that has contributed to the differences in the needs of young farmers throughout the EU. The sector or main economic activity of the interviewed young farmers also affected their needs. This should be taken into account when designing training programmes or exchange schemes for young farmers. A clear example that was found in the survey is that the interviewed young farmers in plant sectors were not interested in developing skills related to the improvement of animal welfare, while the interviewed young farmers in the animal sector were. A striking result in the survey was that the interviewed young farmers with permanent crops were eager to develop a wide range of skills and to obtain knowledge from various sources (for example through discussions on the internet, e-learning and online training). They also had high expectations of exchange schemes and had more intention of joining them. A possible explanation may be that growing permanent crops is a rather specialist job, for which a lot of craftsmanship is needed. At the same time, due to its specialised nature, there is not so much knowledge available as there is in other sectors.

Besides the main economic activities of the interviewed young farmers, the needs of the young farmers were also affected by their education level, farm situation and type of area in which their farm was located.

The interviewed young farmers with a higher level of education (BSc, MSc, PhD) were more eager to develop different skills, perceived less hindrances to obtaining information or joining an exchange scheme (although they seem to perceive lack of time as more of a hindrance than less educated young farmers), had a more positive attitude to exchange schemes and also participated more often in exchange schemes than the less educated interviewed young farmers. On the other hand, they made less use of different information sources (especially national government, research institutes and accountants), possibly because (they thought that) they did not need these information sources. These results imply that exchange schemes or other programmes should be different depending on young farmers' levels of education so that they better fit their needs.

The farm situation affected the answers of the interviewed young farmers as well. Interviewed young farmers who were the owner of the farm seem to be more self-confident. They perceived fewer general needs when compared with all the interviewed young farmers but they also were less eager to develop different kind of skills. This could be because they (think that they) already have these skills. They also perceive it relatively often as unrealistic that they will join a(n) (inter)national exchange scheme, maybe in part because they feel more responsible for their farm and therefore it is more difficult for them to leave. On the other hand, no indication was found that the interviewed young farmers who were the owners of the farm perceived more hindrances to obtaining information or joining an exchange scheme when compared with all the interviewed young farmers. They appeared to be older though which increases the chance of them having a family and therefore would make it more difficult for them to leave the farm to join an exchange scheme. Young farmers who were the owners of the farm, however, relatively often said that they used discussions on the internet and online trainings and e-learning to obtain knowledge. Although the general results showed that these knowledge sources were not that popular among young farmers, this seems to be different for farm owners. For them, such knowledge sources offer a solution as they enable them to develop skills and obtain knowledge without having to leave their farm.

A few indications were found that it might be more difficult for the interviewed young farmers who live in less favourable areas to obtain knowledge or join an exchange scheme. This should also be taken into account when designing exchange schemes or training programmes for young farmers in less favourable areas. However, no clear indications were found that young farmers in less favourable areas had different knowledge needs.

The type of farm (conventional or organic) did not seem to affect the needs of the interviewed young farmers very much, although lack of time was a more important hindrance for the interviewed young organic farmers to obtaining knowledge.

5.4. *High intenders and low intenders*

In a final step of the analysis, a distinction was made between high and low intenders or farmers with a relatively high or low intention of joining an exchange scheme. In comparison with all the interviewed young farmers, those who had a relatively high intention of joining an exchange scheme had fewer general needs, were more eager to develop different kinds of skills and use more sources to obtain knowledge, perceived less hindrances to obtaining information or joining an exchange scheme and had a more positive attitude to and higher expectations of exchange schemes. Besides this, they more often have a higher level of education and more often lived in one of the new Member States. These differences between high and low intenders should be taken into account when designing training programmes or exchange schemes. A study of Jansen et al. (2010) in which reducing mastitis was the central focus revealed that a peripheral and a central route of communication could be distinguished. A peripheral route of communication was for dairy farmers who were not motivated (or internally driven) to reduce mastitis on their farms and a central route was for dairy farmers who were. For the first group it was important that concerns were taken away and tailor-made solutions were offered to reduce mastitis, while for the second group it was important that the dairy farmers were actively involved in the plans to reduce mastitis. Therefore, low intenders may need tailor-made solutions which make it easier for them to join an exchange scheme or obtain knowledge, whereas for high intenders this may be less necessary. These tailor-made solutions could also be helpful for high intenders, especially taking into account that high intenders often live in new Member States where a catch-up effort is needed to increase their level of knowledge and where exchange schemes should be made as accessible for young farmers as they are in EU-15.

5.5. *Some conclusions based on the survey*

The survey results lead to the following conclusions:

- Land to buy or rent is the most important general need of all the interviewed young farmers in the EU; Subsidies, credit and qualified labour also are important general needs;
- The interviewed young farmers in the EU are most interested in obtaining specific technological knowledge necessary for the farm and obtaining knowledge to develop a farm strategy. However, they are also eager to obtain entrepreneurial skills (marketing, networking, communication and financial skills) and managerial skills;
- Reading and looking for information on the internet, field days or excursions, individual advice, fairs or exhibitions, (agricultural) trainings or courses, farmers' journals and workshops, seminars or conferences are the most important knowledge sources for the interviewed young farmers. It is striking that participation in discussions on the internet, online training, e-learning and social media appeared are not very popular among the interviewed young farmers;
- Other farmers are the most important information source for the interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors;
- Lack of time is the most important hindrance for the interviewed young farmers to obtaining information;
- The number of interviewed young farmers that has participated in an exchange scheme is rather low. However, the interviewed young farmers who did participate in an exchange scheme were content about it;

- Most interviewed farmers have a positive attitude to and positive expectations about exchange schemes;
- Lack of time and having no replacement on the farm are the most important hindrances for the interviewed young farmers to joining an exchange scheme;
- In general, young farmers in new MS seem to have more general needs than young farmers in EU-15, they seem to be more eager to develop all kinds of skills and obtain knowledge from different sources and they have more intention of joining an exchange scheme and a more positive attitude to exchange schemes;
- The general and knowledge needs of young farmers and their attitude to and expectations and intention of joining an exchange scheme also are affected by agricultural sector, education level, farm situation (whether the young farmer is the owner of the farm or not) and – to a lesser extent – the kind of area in which the young farmers live:
 - Land seems to be a less important need for interviewed young farmers in more intensive, specialist sectors and insurance and knowledge seem to be more important;
 - Interviewed young farmers with a higher level of education are more eager to develop different kinds of skills, they perceive less hindrances to obtaining information or joining an exchange scheme, they have a more positive attitude to exchange schemes and also participated more often in an exchange scheme than less educated interviewed young farmers;
 - Interviewed young farmers who are the owner of the farm seem to be more self-assured. They perceive fewer general needs when compared with all the interviewed young farmers but they also are less eager to develop different kinds of skills and perceive it relatively often as unrealistic that they will join a(n) (inter)national exchange scheme;
 - It is more difficult for the interviewed young farmers who live in less favourable areas to obtain knowledge or join an exchange scheme;
 - Compared to all interviewed young farmers, those who have a relatively high intention of joining an exchange scheme have fewer general needs, are more eager to develop different kind of skills, use more sources to obtain knowledge, perceive less hindrances to obtaining information or joining an exchange scheme and have a more positive attitude to and higher expectations of exchange schemes. Besides this, they more often have a higher level of education and more often live in one of the new Member States.

These conclusions make clear that young farmers have different needs, depending on the region in which they live (new MS or EU-15), the agricultural sector in which they work (intensive, specific), their education level, their farm situation (owner of the farm or not) and the kind of area in which they live (favourable or not). This indicates that exchange schemes should be tailor-made and adapted to their specific needs.

Explanations of the results presented in this chapter also came up in the focus group discussions. These results will be presented in the following chapter.

6. Needs of young farmers assessed by focus groups

6.1. *General*

Focus groups were organised in almost all EU countries (one focus group per country). Besides young farmers, the focus groups were attended by representatives of young farmers' organisations and other agricultural organisations (see the country reports in Annex I.1-I.28 for the list of participants in each country). In the countries in which focus groups could not be organised, interviews were carried out with various stakeholders.

In general, the participants of the focus groups (or interviewed experts) endorsed the results of the survey.

6.2. *Needs*

6.2.1. *General needs*

As shown in the survey, land appeared to be the most important need in most countries. In some focus groups, the focus group members (or interviewed experts) mentioned several reasons for this:

- Spatial planning; governments turn agricultural land into nature, industrial or residential areas (Belgium, Germany);
- Agricultural land is used for non-agricultural activities such as diversification activities, gardens, or horse keeping (Belgium, Poland, Romania);
- Legislation which discourages land owners or land users from renting their land to farmers or which makes renting land complicated (Belgium, Slovakia, Spain);
- (Retired) farmers keeping their land to get income support (Belgium, Czech Republic, Greece, Ireland, United Kingdom) or because they are emotionally attached to their land (Belgium, Germany, Ireland, Slovenia, Sweden, United Kingdom);
- The land is expensive (Cyprus, Germany, Latvia, Luxembourg, Poland, Romania, Sweden) and sometimes harder to get for young farmers than for older farmers because young farmers cannot pay the prices that large- and medium-sized producers can (Estonia);
- Young farmers have to pay more rent for the land than older farmers (Finland), or land owners prefer to rent their land to neighbouring farmers or more experienced farmers (France);
- The land is very fragmented (Poland, Slovakia, Slovenia);
- Land does not enter the market very often because it is usually passed down through inheritance (Ireland);
- A farmer divides his land into smaller parcels for his children, leaving each successor with a smaller piece of land than his parents (Cyprus);
- The majority of land is still owned by cooperatives that were established in past regimes (Czech Republic);
- Legislation and bureaucracy: permit procedures (Estonia, Finland), national inheritance law (France), legal and policy issues (Cyprus, Hungary, Italy, Lithuania, Luxembourg, Poland, Portugal, Sweden, the Netherlands), property rights and national legislation (Greece);
- Inheritance issues which make the transfer of land between generations complex and time-consuming (Malta, Poland, Portugal, United Kingdom);

- Land is available but 'good' land is expensive and 'affordable' land is of poor quality and is available only in regions with poor infrastructure, far from the markets (Latvia, United Kingdom – especially Scotland);
- Poor quality of the soil (Estonia, Ireland, Latvia) and/or a large amount of less favourable areas in a country (Greece, Malta).

6.2.2. Knowledge needs

In the focus groups, the survey findings on the knowledge needs of young farmers were mostly endorsed. In general, focus group members perceive greater knowledge needs for young farmers in their countries if:

- Their education level is lower (Bulgaria, Croatia, Czech Republic, Greece);
- It is not so easy to get the independent advice of agricultural extension services or access useful trainings because the knowledge infrastructure or the education system for farmers is badly organised or barely exists (Bulgaria, Croatia, Czech Republic, Hungary, Italy, Latvia, Malta, Portugal, Romania, and Slovakia).

There are exceptions though. Denmark has a well-organised knowledge infrastructure for farmers and the education level is high, but still young farmers are eager to obtain new knowledge because the education system in their country encourages them to do so. Other focus groups also mention that young farmers are eager to learn in their country (Romania, Sweden).

In some countries the reasons for a lack of knowledge needs are rather specific. In Bulgaria, the lack of knowledge and experience in the management of plant growing and/or animal breeding farms is explained by the fact that private companies could not be established between 1944 and 1989 and private ownership of land was prohibited by law. As a result, the accumulated knowledge and experience that is traditionally passed on in well-established farmer families between generations does not exist yet. This lack of 'multi-generational farming' is also mentioned in the Czech Republic, Hungary and Italy (because increasingly often young farmers in Italy are returning to the farming properties of their grandparents).

Cultural aspects may affect knowledge needs as well. In Bulgaria, the focus group members mention a general unwillingness to exchange knowledge and experience due to fear of competition. They also mention a general mistrust in state institutions and fear of unfair competition. A comparable fear of association and lack of trust is mentioned by the Polish focus group. This focus group states that 'these types of attitudes were shaped by the political and social situation of Poland in the past 200 years.' The focus group members in France mention that French farmers are rather 'individualistic' and therefore prefer to work on their own rather than cooperate with other farmers. According to a French focus group member, the capacity of young farmers to work with others should therefore be improved. The interviewed experts in the United Kingdom state that the (young) farmers in their country are often too independent and their views are coloured by their own experience ('they can be their own barrier').

Focus group members perceive low knowledge needs in their country if:

- The young farmers generally have a high education level (Austria, Estonia, Finland, Ireland, the Netherlands);
- It is quite easy to obtain knowledge and information because the knowledge infrastructure for farmers is well-organised in their country (Austria, Estonia, Finland, Ireland, the Netherlands) or they can easily obtain information from other sources, such as input suppliers (Greece);

- Young farmers do not see that they use specific knowledge, for example for marketing and communication because they live 'in the middle of nowhere', far from consumers (Finland) or because they do not tend to engage with consumers directly because the sale of their products is well-organised in their countries, for example by cooperatives (Hungary, Ireland, The Netherlands);
- Young farmers are not aware that they need specific knowledge to run their farm (Greece, Hungary, Poland, Spain, Slovenia, Sweden with regard to entrepreneurial skills);
- Agricultural knowledge is available free of charge (Austria, Estonia);
- Farmers are farmers 'by tradition' and do not see why they need additional knowledge, especially because their farms are small and relatively easy to manage, have little law enforcement and no requirements for quality standards (Cyprus).

In some countries, focus group members (or interviewed experts) emphasised the importance of entrepreneurial knowledge for their young farmers (Belgium, Estonia, Finland, Hungary, Spain, Sweden, and the Netherlands). In some countries, they focused on the importance of technological knowledge (Croatia, Czech Republic, and Ireland) and in others they highlighted the importance of both entrepreneurial and technological knowledge (Denmark, Latvia, Luxembourg, Malta, Poland, and Romania).

6.2.3. Participation in exchange schemes

Although – according to the survey results – most interviewed young farmers seem to have a positive attitude to exchange schemes and – especially in new MS and SAPS countries – a significant intention of joining one, the percentage of interviewed young farmers that have participated in an exchange scheme is low. According to the survey results, lack of time and having no replacement on the farm are the main reasons for this in most countries, followed by high costs. A language barrier is also mentioned as an important reason in several countries (Belgium, Bulgaria, Cyprus, Czech Republic, Germany, Hungary, Latvia, Poland, Portugal, Romania, and Spain). This is confirmed by the focus groups (or interviewed experts). Other reasons for the low participation in exchange schemes mentioned by the focus group members (or interviewed experts) of different countries, are:

- Young farmers already had practical training abroad when they were students (Austria, Denmark, Belgium, Luxembourg);
- The transferability of knowledge is limited, for example because of small farms in a country (Austria) or due to different farming conditions in other countries (Cyprus, Ireland);
- The knowledge obtained through an exchange scheme is not always practically applicable for the young farmer or does not fit his/her knowledge needs entirely (Bulgaria, Cyprus, Croatia, Poland);
- Young farmers perceive it as too complex to join an exchange scheme from an organisational perspective, for example with regard to administrative requirements, time needed to prepare applications, costs of living, etc. (Italy, Luxembourg, Sweden);
- Young farmers have a job besides the farm and therefore cannot go abroad (Austria);
- The minimum period of stay is too long (Belgium, Greece, Portugal, Romania);
- Exchange schemes are lacking in a country (Estonia, Finland, Poland);
- Travel distances (Estonia, Finland, Sweden);
- Mentality; young farmers are not interested in getting to know other cultures (Poland).

According to the survey results, participation in an exchange scheme is not low in each EU country. In Belgium, Denmark, Luxembourg and the Netherlands more than 50% of the interviewed young farmers participated in an exchange scheme. In the Netherlands, this is due to the fact that the definition of exchange schemes was interpreted differently than in other countries. Interviewed young Dutch farmers who went abroad for a teaching practice on a farm when they were students also interpreted this as 'joining an exchange scheme'. In Belgium, the respondents of the survey were gathered via agricultural schools who asked for young farmers who had already joined an exchange scheme, and in Luxembourg, there was a bias in the respondents for the same reason as they were recruited from a group of young farmers who had participated in an internship abroad. According to the Danish interviewed experts, In Denmark the high percentage of interviewed young farmers who had participated in an exchange scheme can be explained by the fact that young farmers in Denmark are encouraged to participate in such schemes and there is therefore a lot of information provided about such schemes through websites. In addition, Danish young farmers get a good salary during their education and have no financial difficulties regarding travelling abroad.

Possible solutions mentioned by the focus groups (or interviewed experts) for improving the participation in exchange schemes are:

- Exchange schemes should combine theoretical and practical training but should be focused on practical training and the acquisition of hands-on experience (Cyprus, Croatia, Greece);
- Exchange programmes should have a clear focus on how to turn theory into practice (Denmark, Greece);
- The 'destination' countries/areas should have similar climate conditions and farm structures to those in the country from which the young farmer comes (Cyprus, Ireland, Latvia);
- Young farmers should have the opportunity of arranging their exchanges themselves to ensure it fits their specific knowledge needs (Bulgaria);
- Exchange schemes should provide knowledge which is practically applicable for the young farmer and which suits his/her specific knowledge needs (Estonia, Finland, Germany, Greece, Malta, Romania, Slovenia, United Kingdom);
- Exchange schemes should offer young farmers the chance to expand their horizons, to get to know other cultures and to build their character (Denmark, Finland, Germany, Italy, Latvia, Malta, Poland);
- Better availability of replacement on the farm, for example by a reliable farmer relief service or replacement service (Czech Republic, Finland, France, Hungary);
- Availability of interpreters to overcome language problems (Czech Republic);
- Financial support (Czech Republic, France, Greece, Hungary, Italy);
- Clear communication/advertisements about exchange schemes is important to make young farmers aware of the existing exchange schemes they can join (Denmark, France);
- If travelling distances are too big within a country, knowledge of exchange schemes should be made available in another way, for example through mentors (Estonia);
- Taking part in an exchange scheme should be made easier, for example by 'brokers' or 'matchmakers' who can help to find the right match between the exchange student and the farmer offering the exchange (Finland);
- The administrative 'burden' of joining an exchange scheme, such as preparing a detailed business plan and filling in forms should be reduced (Italy);
- Agricultural schools or education programmes should encourage young farmers to take part in international exchange schemes (Finland, Greece, Latvia);

- Exchange programmes should be specifically tailored to the time and financial constraints of those interested in participating (Belgium, Cyprus, France, Greece, Italy, Portugal, Romania);
- Make it possible for young farmers to join an international exchange scheme after they have left school and before they start working at their (family's) farm (France, Germany).

6.3. **Communication**

Within the focus group discussions, the theme of communication took on less importance than the other themes. The focus groups thereby served in particular as a means of verifying or falsifying the survey findings and attempting to explain outliers or unexpected results in specific Member States.

6.3.1. **Sources of information and knowledge**

The results of the survey have shown that other farmers are the most important information source for many of the interviewed young farmers. This is confirmed by the focus group members. Young farmers prefer to gain knowledge from personal contacts; especially in countries in which agriculture has a small structure because there is always 'someone who knows someone with knowledge' (quote of Estonian focus group) (Cyprus, Estonia), or in countries in which the knowledge infrastructure for farmers is not well developed (Hungary, Italy). A low level of trust is also mentioned as a reason for preferring informal groups over professional groups or networks (Poland). Also important for obtaining information, according to the focus groups, is the use of the internet in various forms (websites, social media).

6.3.2. **Hindrances to getting information**

According to the survey, lack of time is the main hindrance for young farmers to obtaining information or knowledge. This is supported by the focus group members (or interviewed experts) in most countries.

Lack of interest is also mentioned several times by the focus group members (or interviewed experts) (Bulgaria, Cyprus, Estonia) and in some countries the lack of trust as to whether the information is correct (Estonia, Germany, Hungary) or suitable (practically applicable, to the point, fits the target group) (Bulgaria, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Spain). Also, selecting the right and trustworthy information and knowledge sources in a time-efficient manner can be a hindrance according to the focus group members (or interviewed experts) in several countries (Austria, Bulgaria, Cyprus, France, Germany, Hungary, Latvia, Luxembourg, the Netherlands, United Kingdom).

According to the focus group members (or interviewed experts) in several countries, a missing or bad (too slow, not easy accessible) internet connection can be a hindrance for their young farmers to obtaining knowledge or information especially in specific regions (for example in mountainous or remote areas) (Austria, Finland, France, Germany, Ireland, Italy, Romania, Spain, Sweden, United Kingdom). In some countries, the lack of skills on how to use the internet are also mentioned (Bulgaria, Cyprus, Malta). The Dutch focus group mentioned that Dutch young farmers do not like to use the internet because it is time-consuming and does not deliver the correct and specific answers. For them it is easier to find information in different ways; potentially because the knowledge infrastructure works very well in the Netherlands.

Other hindrances mentioned in the focus group (or by the interviewed experts) concerned long distances (Finland, Latvia, Sweden, United Kingdom) or being an island (parts of Greece, Malta, United Kingdom).

6.3.3. Hindrances to participating in exchange schemes

The most relevant issue perceived as being a hindrance to participating in exchange schemes that was mentioned in several focus groups is a lack of awareness of the existence of such schemes. In some cases this might be driven by the fact that no or only a small number of exchange schemes exist, in others it may be the result of the lack of communication. Further details concerning the hindrances to participating in exchange schemes are mentioned above.

6.4. Exchange schemes

According to most of the focus groups, the vast majority of farmers that participated in an exchange scheme improved their skills and mostly learned what they wanted to learn. They also expected it to improve their farm results and family income (e.g. Denmark). An exception seems to be Estonia.

Participation in a national exchange scheme is considered less useful than an international scheme, with the exception of respondents in Austria, Ireland, Malta and to a lesser extent Latvia, Sweden and the United Kingdom. The motivation to take part in international schemes lies in improving language skills and acquiring a 'once in a life time experience'. For Austria and New Zealand, the transferability of knowledge is the determining factor in participating in an exchange scheme.

Hindrances to participating in most countries are, according to the focus groups, lack of time, costs and replacement problems at the home farm. Other hindrances are the long minimum period of stay, the low age limit needed to participate and language and administrative barriers (such as driving licences).

In some countries, only few young farmers seem to be aware of the existence of exchange schemes, e.g. Croatia and Slovenia. Countries where this awareness is high are Denmark (although this awareness is mainly related to type 7 schemes) and the Netherlands. According to the focus groups, no schemes seem to exist at all (except for type 7 and 8 schemes) in Estonia, Luxemburg, Malta and Hungary, or they seem to 'come and go' (Ireland).

Focus groups in some countries call for specific schemes in which applications of technological improvements are practised (Croatia). A similar call for schemes that are focused on how to turn theory into practice was made by the Danish focus group. In Estonia and Malta, developing (collective) marketing/distribution skills was mentioned as an important goal.

The focus groups often remarked that the five-year period that is a criteria in the Erasmus exchange programme is too short and that age should not play a role in eligibility. Focus groups argue that it is not necessary that the European Commission develops a new scheme at EU level. They would rather existing exchanges be improved to better fit farmers' needs. An EC-hosted website was however suggested by various focus groups as a way of addressing these needs.

Other focus groups argue that exchange schemes should also allow young farmers during their 'pre-installation' period. Schemes should ideally have very few criteria for participation, be flexible in terms of exchange periods, allow for individual as well group participation, have (financial) incentives, be open to different actors (young farmers 'starting-up', more experienced farmers with concrete business cases, local actors involved in agribusiness) and have a national and even local publicity and communication strategy.

The Greek focus group specifically mentioned the need for an exchange scheme that covered the entire production and supply chain (of olive oil). Here, international cooperation among groups of farmers was also mentioned as a result of exchange schemes. Similar suggestions were made in Malta and Romania.

Some other interesting suggestions from the focus groups are the assignment of 'mentors' (Poland), although such exchange schemes already exist (type 4 and 5). Other ideas are awarding a certificate or diploma upon the completion of a successful exchange (with clearer benefits to participants, such as easier access to financial support to start a farm) and more emphasis on sharing the acquired skills and knowledge after returning home.

7. Conclusions and recommendations on the basis of the needs analysis and the focus group discussions

7.1. *Most important needs of young farmers*

Knowledge needs are not the most urgent general needs of young farmers within the EU. The availability of land to buy or to rent is the most important general need followed by subsidies, access to credit and qualified labour.

Easier access to land would be helpful for young farmers within the EU to stay in business. Sometimes this is difficult due to legislative issues, issues related to inheritance, land prices, institutional issues, etc.

7.2. *Knowledge*

The knowledge infrastructure/educational system and – related to that – the education level, the possibility to get 'real' independent advice and the quality of the knowledge available are important factors that have an impact on the needs of young farmers within the EU.

Knowledge should be tailor-made. In some countries, the need for technological skills and skills related to the development of a farm strategy are emphasised, in other countries, the need for entrepreneurial skills is mentioned and in others still, the need for both kinds of skills is highlighted.

Young farmers have different needs, depending on the region in which they live (new MS or EU-15), the agricultural sector in which they work (intensive, specific), their level of education, their farm situation (owner of the farm or not) and the kind of area in which they live (favourable or not):

- In general, young farmers in new MS seem to have more knowledge needs than other young farmers in the EU. They seem to be more eager to develop all kinds of skills, obtain knowledge from different sources, have more intention of joining an exchange scheme and a more positive attitude to exchange schemes. This might be related to the knowledge infrastructure in those countries;
- Young farmers working in an intensive, specialist sector (for example, olive orchards) seem to have greater knowledge needs than young farmers working in more extensive or 'common known' sector such as dairy farming or arable farming; possibly because not so much knowledge is available in these specialist sectors;
- Interviewed young farmers with a high level of education are more eager to develop different kinds of skills, they perceive less hindrances to obtaining information or joining an exchange scheme, they have a more positive attitude to exchange schemes and also participated more often in an exchange scheme than less educated interviewed young farmers;
- Interviewed young farmers who are the owners of their farm seem to be more sure of themselves. They perceive fewer general needs when compared with all the interviewed young farmers but they also are less eager to develop different kinds of skills and perceive it relatively often as unrealistic that they will join a(n) (inter)national exchange scheme;
- It is more difficult for the interviewed young farmers who live in less favourable areas to obtain knowledge or join an exchange scheme.

This supports the statement mentioned above that knowledge should be tailored to the specific needs of young farmers living in different regions and types of area, working in different sectors, with different levels of education and having different farm situations.

However, it should be taken into account that young farmers need technological skills and skills to develop a farm strategy, as well as entrepreneurial skills – such as marketing, networking, communication and financial skills – to keep their farm viable. They are not always aware that they need all these different kinds of skills. Many farmers are used to managing their farm in a traditional way and do not see the need to change. Efforts should be therefore made within the EU to raise awareness of these needs.

7.3. **Information sources**

Reading and looking for information on the internet, attending field days or excursions, getting individual advice, going to fairs or exhibitions, taking part in (agricultural) trainings or courses, workshops, seminars or conferences and consulting farmers' journals are the most important knowledge sources for the interviewed young farmers. It is noteworthy that taking part in discussions on the internet, online training, e-learning and using social media appeared to not be very popular among the interviewed young farmers. In some countries this might be due to a lack of (fast) internet access. However, interest in using the internet for e-learning among other things differs between young farmers. 'Older' young farmers who own their farms more often use discussions on the internet, online training, e-learning and social media to obtain information; possibly because it is difficult for them to leave the farm for long periods of time.

Other farmers are the most important information source for the interviewed young farmers, followed by farmers' associations and agricultural consultants and advisors. This might especially be the case in countries where the knowledge infrastructure is not so well-organised.

7.4. **Exchange schemes**

Most of the interviewed young farmers seem to have a positive attitude to exchange schemes and a high intention of joining one; especially in new MS. However, the percentage of interviewed young farmers that have participated in an exchange scheme is low. According to the survey results, lack of time and having no replacement on the farm are the main reasons for this in most countries, followed by high costs. A language barrier is also mentioned as an important reason in several countries. Other reasons for the low participation in exchange schemes mentioned in different countries relate to the low transferability of knowledge, the practical applicability of knowledge, the high administrative burden of joining an exchange scheme, the minimum duration of an exchange (many young farmers cannot leave their farm for long periods), long travel distances and mindset (young farmers are sometimes not interested in getting to know other cultures).

One important issue to increase the participation in exchange schemes concerns the kind of knowledge offered. It is important that young farmers have the opportunity to organise their exchanges themselves so that they fit their specific knowledge needs. For some farmers this means that:

- Exchange schemes should combine theoretical and practical training but should be focused on practical training and the acquisition of hands-on experience;
- Exchange programmes should have a clear focus on how to turn theory into practice;
- The 'destination' countries/areas should present similar climate conditions and farm structures to those in the country from which the young farmer comes;
- Exchange schemes should provide knowledge which is practically applicable for the young farmer and which suits his/her specific knowledge needs.

However, for other young farmers it is important that exchange schemes should offer young farmers the chance to expand their horizons, to get to know other cultures and to build their character.

Other more 'practical' solutions which make it easier for young farmers to join an exchange scheme are:

- Availability of replacement on the farm, for example by a reliable farmer relief service or farm replacement service;
- Availability of an interpreter to overcome language problems;
- Financial support;
- Clear communication/advertisement about exchange schemes to make young farmers aware of the existing exchange schemes they can join;
- Making knowledge of exchange schemes available in another way if travelling long distances is not possible, for example by using mentors;
- Making the choice of a 'suitable' exchange scheme for example by deploying 'brokers' or 'matchmakers' who can help find the right match between the exchange student and the farmer offering the exchange;
- Reducing the administrative 'burden' of joining an exchange scheme, for example preparing a detailed business plan and filling in forms;
- Encouraging young farmers to take part in international exchange schemes offered by agricultural schools or as education programmes;
- Tailoring exchange programmes specifically to the time and financial constraints of those interested in participating;
- Enabling young farmers to join an international exchange scheme after they have left school and before they start working at their (family's) farm.

Literature

Alsos, G.A., S. Carter, 2008. Multiple business ownership in the Norwegian farm sector: resource transfer and performance consequences. *Journal of Rural Studies* 22, 13-22.

Batterink, M. Wubben, E., Omta, S., 2006. Factors related to innovative output in the Dutch agrifood industry. *Journal on Chain and Network Science* 6 (1), 31-44.

Bergevoet, R.H.M., 2005. Entrepreneurship of Dutch dairy farmers. PhD thesis, Wageningen University, Wageningen.

Brent, K.J., G.R.B. Adams, 1999. Extension, research and farm competitiveness in Central and Eastern Europe. Sustainable Development Department (SD), Food and Agricultural Organization of the United Nations (FAO), November 1999. <http://www.fao.org/sd/exdirect/EXan0037.htm>.

Burton, R. J. F. and Wilson, G.A., 2006. Injecting social psychology theory into conceptualisations of agricultural agency: Towards a post-productivist farmer self-identity? *Journal of Rural Studies* 22(1), 95-115.

CEJA, 2013. Enhancing youth employment in agriculture for a more sustainable Europe. Recommendations resulting from CEJA round table discussion on social dialogue held in Brussels on 27.2.13.

Chaplin, H., Davidora, S. and Gorton, M., 2004. Agricultural adjustment and the diversification of farm households and corporate farms in Central Europe. *Journal of Rural Studies* 20(1), 61-77.

Chase, L.E., O.L. Ely, M.F. Hutjens, 2006. Major advances in extension education programs in dairy production. *J. Dairy Science* 89, 1147-1154.

Dellapasqua, C., 2010. Young farmers and the EU's rural development policy. CEJA Conference on Multifunctional Agriculture, 15 December 2010.

DG AGRI, Tender No AGRI-2012-Eval-03. Pilot project: exchange programme for young farmers. Tender specifications.

Duram, L.A., K.L. Larson, 2001. Agricultural research and alternative farmers' information needs. *The professional geographer* 53 (1), 84-96.

European Commission, 2013. Overview of CAP Reform 2014-2020. Agricultural Policy perspectives Brief No. 5, December 2013.

Fuller-Love, N. 2006. Management development in smaller firms. *International Journal of Management Reviews* 8 (3), 395-404.

Gorton, M., Douarin, E., Davidova, S. and Latruffe, L., 2008. Attitudes to agricultural policy and farming futures in the context of the 2003 CAP reform: A comparison of farmers in selected established and new Member States. *Journal of Rural Studies* 24(3), 322-336.

Hawkins, R.P., M. Kreuter, K. Resnicow, M. Fishbein, A. Dijkstra, 2008. Understanding tailoring in communication about health. *Health Education Research* 23, 454-466.

Herck, van, K., 2009 Deliverable 7.4: A Comparative Analysis of Rural Labour Markets, SCARLED project, Available online at: http://www.scarled.eu/uploads/media/SCARLED_D7.4_finalfinal_01.pdf.

Italian Ministry of Agriculture, Food and Fisheries, 2013. I Giovani imprenditori e la formazione: un'analisi delle esperienze e delle attese.

Jansen, J., 2010. Mastitis and farmer mindset. Towards effective communication strategies to improve udder health management on Dutch dairy farms. PhD thesis, Wageningen University, Wageningen.

Jansen, J., R.J. Renes and T.G.J.M. Lam, 2010. Evaluation of two communication strategies to improve udder health management. *Journal of Dairy Science* 93, 604-612.

Klair K.S., A. Boggio, D.W. Richardson, 1998. The changing information needs of farmers in the U.S. and Europe. Proc. Of the 6th Joint Conference on Agriculture, Food and the Environment. 31 August – 2 September 1998, Minneapolis, Minnesota. <http://ageconsearch.umn.edu/bitstream/14496/1/c6klai01.pdf>.

Lans, T., R. Wesselink, H.J.A. Biemans, M. Mulder, 2004. Work-related lifelong learning for entrepreneurs in the agri-food sector. *Int. Journal of training and Development* 8 (1), 73-89.

Lans, T., 2009. Entrepreneurial competence in agriculture. Characterization, identification, development and the role of the work environment. PhD thesis. LEI, Wageningen.

Lauwere, C.C. de, 2005. The role of agricultural entrepreneurship in Dutch agriculture of today. *Agricultural Economics* 33, 229-238.

Lauwere, C. de, A. Malak-Rawlikowska, A. Stalgiene, M. Klopčič, A. Kuipers, 2014. Competencies and agricultural entrepreneurship of dairy farmers in Poland, Lithuania and Slovenia. In: A. Kuipers, A. Rozstalnyy, G. Keane (Eds.), *Cattle husbandry in Eastern Europe and China*. EAAP publication No. 135, Wageningen Academic Publishers, pp. 15-124.

Man, T.W.Y., T. Lau, K.F. Chan, 2002. The competitiveness of small and medium enterprises – a conceptualization with focus on entrepreneurial competences. *Journal of Business Venturing* 17, 123-142.

Mante, J., B. Gerowitt, 2009. Learning from farmers' needs: identifying obstacles to the successful implementation of field margin measures in intensive arable regions. *Landscape and Urban Planning* 93, 229-237.

Martin, R.A., 1987. Analysis of needs: educational programs for young and adult farmers. *Journal of the American Association of Teacher Education Educators in Agriculture* 28 (1), 56-64.

McElwee, G., 2008. A taxonomy of entrepreneurial farmers. *International Journal of Entrepreneurship and Small Business* 6 (3), 465-478.

Nederlof, E.S., R. Tossou, O. Sakyi-Oawson, O.K. Kossou, 2004. Grounding agricultural research in resource-poor farmers' needs: a comparative analysis of diagnostic studies in Ghana and Benin. *NJAS – Wageningen Journal of Life Sciences* 52 (3-4), 421-442.

Niewolny, K.L., P.T. Lillard, 2010. Expanding the boundaries of beginning farmer training and program development: a review of contemporary initiatives to cultivate a new generation of American farmers. *Journal of Agriculture, food systems and community development* 1 (1), 65-88.

Noar, S.M., C.N. Benac, M.S. Harris, 2007. Does tailoring matter? Meta-analytic review of tailored print health behaviour change interventions. *Psychological Bulletin* 133, 673-693.

Nuthall, P.L., 2006. Determining the important management skill competencies: the case of family farm business in New Zealand, *Agricultural Systems* 88, 429-450.

Obaa, B., J. Mutimba, A.R. Semana, 2005. Prioritising farmers' extension needs in a publicity-funded contract system of extension: a case study from Mukono District, Uganda. *Agricultural Research & Extension Network, Network Paper No. 147*, July 2005.

Pyysiäinen, J., Anderson, A., McElwee, G. and Vesala, K., 2006. Developing the entrepreneurial skills of farmers: some myths explored. *International journal of entrepreneurial behaviour and research* 12(1), 21-39.

Quendler, E., 2011. Zukunftsvorstellungen von JunglandwirtInnen in einer Zeit des agrarpolitischen Wandels – Ergebnisse einer Repräsentativbefragung in Österreich. *Bundesanstalt für Agrarwirtschaft, Wien*, 2011.

Rudman, C. (Ed.), 2008. Entrepreneurial skills and their role in enhancing the relative independence of farmers. Results and recommendations from the research project 'Developing Entrepreneurial Skills of Farmers. Verlag die Werkstatt, Göttingen.

Sotte, F., 2003. Young people, agriculture and entrepreneurship: key-points for a long-term strategy. The future of young farmers, Preparatory meeting for the European Conference, Roma, 24-25 January 2003.

Trede, L.D., B.S. Whitaker, 2000. Educational needs and perceptions of Iowa beginning farmers toward their education. *Journal of Agricultural Education* 41 (1), 39-48.

Vanclay, F., 2004. Social principles for agriculture extension to assist in the promotion of natural resource management. *Australian Journal of Experimental Agriculture* 44, 213-222.

Verstegen, J.A.A.M., R.B.M. Huirne, 2001. The impact of farm management on value of management information systems. *Computer and electronics in agriculture* 30 (1), 51-69.

Vesala K.M. and Pyysiäinen, J., 2008. Understanding entrepreneurial skills in the farm context. Final report on the main study of the EU-funded project *Developing Entrepreneurial Skills of Farmers*. Verlag die Werkstatt, Göttingen.

Walford, N., 2003. Productivism is allegedly dead, long live productivism. Evidence of continued productivist attitudes and decision-making in South-East England. *Journal of Rural Studies* 19(4), 491-502.

Annexes

There are several Annexes to this report. These Annexes can be found on the DG AGRI website: http://ec.europa.eu/agriculture/external-studies/index_en.htm.

Annex I.1 – I.28 Country reports

For each Member State a report has been drafted on the needs of young farmers based on the results of the survey and the focus group discussions. These are included in Annex I.1 – I.28:

Annex I.1 Country report for Austria;
Annex I.2 Country report for Belgium;
Annex I.3 Country report for Bulgaria;
Annex I.4 Country report for Croatia;
Annex I.5 Country report for Cyprus;
Annex I.6 Country report for Czech Republic;
Annex I.7 Country report for Denmark;
Annex I.8 Country report for Estonia;
Annex I.9 Country report for Finland;
Annex I.10 Country report for France;
Annex I.11 Country report for Germany;
Annex I.12 Country report for Greece;
Annex I.13 Country report for Hungary;
Annex I.14 Country report for Ireland;
Annex I.15 Country report for Italy;
Annex I.16 Country report for Latvia;
Annex I.17 Country report for Lithuania;
Annex I.18 Country report for Luxembourg;
Annex I.19 Country report for Malta;
Annex I.20 Country report for Poland;
Annex I.21 Country report for Portugal;
Annex I.22 Country report for Romania;
Annex I.23 Country report for Slovakia;
Annex I.24 Country report for Slovenia;
Annex I.25 Country report for Spain;
Annex I.26 Country report for Sweden;
Annex I.27 Country report for the Netherlands;
Annex I.28 Country report for United Kingdom.

Annex I.29 Survey results in more detail

The survey provided results on several topics. These are all included in Annex I.29:

- Needs of young farmers per country;
- Main activities/ agricultural sectors per country;
- Needs of young farmers per agricultural sector;
- Needs of young farmers with different education levels;
- Needs of young farmers in different farm situations.

Annex I.30 Questionnaire and data analysis of the results of the survey

This main report provides a description of the methodology used. In the Annex I.30, the following is included:

- The full questionnaire used for the interviews with the 2 205 young farmers;
- Approach used for the data analysis.

