

# Strengths and weaknesses for the young farmers to abide in the Greek countryside: a triangulation approach

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The abiding of  
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in Greek  
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## Abstract

**Purpose** – This study seeks to identify and highlight the factors that hinder or favor young farmers in the quest to abide in the agricultural profession and to draw policy directions and axes of action to address the problem.

**Design/methodology/approach** – The study used a triangulation research approach with quantitative and qualitative methodologies. In total, 222 structured questionnaires and 9 personal interviews constituted the survey's data collection tools.

**Findings** – The results revealed a distinctive distribution of competencies. On the one hand, personal and entrepreneurial competencies make up the “strengths” of young farmers, and on the other hand, the lack of cooperative organizations and the lack of entrepreneurial education and training combined with a series of situational factors complete the puzzle of “weaknesses” the farmers face in the local daily becoming.

**Research limitations/implications** – The findings of this study have academic and policy implications. Theoretically, this study contributes to the emerging literature that emphasizes the importance of farmers' competencies, collaboration, information and training in understanding the complex and different conditions that young farmers are called upon to manage.

**Originality/value** – The novelty of this study lies in the identification of both strengths and weaknesses that affect the abiding of young farmers in the agricultural profession.

**Keywords** Young farmers, Competencies, triangulation approach, Western Greece

**Paper type** Research paper

## 1. Introduction

Abiding young people in the countryside is a crucial issue at the Greek and European levels as agriculture will need to innovate its production methods to solve the upcoming problems of food quality, safety and environmental protection. Young farmers contribute to the renewal of farms (Gidarakou *et al.*, 2007). In Greece, in particular, the aging of the rural population (only 5.2% of Greek producers are under 35 years, according to Eurostat data) along with a low level of formal education and training are among the most important structural problems of agriculture (Kontogeorgos *et al.*, 2017).

Furthermore, Greek agriculture is characterized by a large number of very small agricultural holdings, fragmentation of agricultural land and diversity of production systems.

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*Ethical compliance:* All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.



The average size of an agricultural holding in Greece is 6.6 hectares, while 90% of holdings are less than 20 hectares in size, which is extremely small for modern production conditions. Notably, only 0.2% of agricultural holdings have a size greater than 100 ha (Pliakoura, 2022). The possession of agricultural land by people practicing non-agricultural professions, often bourgeois, who exploit it through various “remote management” systems (renting, hiring or subcontracting), contributes to the maintenance of micro-agricultural structures. Thus, the exclusively professional farmers, but also the owners of agricultural holdings who live in urban centers and keep active their connection with the place of origin, coexist in a multi-diverse mosaic that composes and depicts the socio-productive profile and dynamics of the Greek farmers (Kasimis and Papadopoulos, 2013). The image of the “European young farmer” reflects a man under the age of 40 who runs a small farm (Chatzitheodoridis and Kontogeorgos, 2020). Small farms operate in a resource-constrained environment, characterized by small plots and limited access to agricultural technology, credit and skills among others (Chapoto *et al.*, 2013; Tindiwensi *et al.*, 2020). In this context, Greek farms face a serious viability problem. Many of the competencies associated with running a successful business are not necessarily the competencies of farmers. In the context of micro-culture, the management function is unclear, given the complex interface between family, farm and business (Tindiwensi *et al.*, 2020). Young farmers are faced with the need to innovate production methods to solve the upcoming problems of quality, food safety and environmental protection, confirming the choice toward sustainable development (FAO, 2014). For farmers, especially young people, the recent socio-economic crisis (due to the COVID-19 pandemic) could be seen as a “crisis within a crisis”, in the sense that it is a familiar field for them of deadlocks, conflicts productive choices and survival strategies (Worku and Ulkü, 2022). The countryside presents many weaknesses and the development of entrepreneurship encounters many obstacles.

From this point of view, is it interesting to examine the weaknesses and potentials of the agricultural sector in Greece with the open research question being simple:

*RQ1.* How will young people abide in the agricultural profession and in the countryside?

However, similar to many simple questions, the answers are much more complex. In Europe, agriculture has faced dramatic pressure to restructure and facilitate farmers’ entrepreneurial competencies, and stronger entrepreneurial orientation in agricultural areas has been hailed as a possible solution to emerging problems (Pyysiäinen *et al.*, 2006). Every attempt to approach this reflection seeks to victual more information about policies to enhance the attractiveness of the countryside and the general socio-economic development of rural areas.

In the present study, the research interest focuses on the way in which young farmers (included or not in a “New Farmers” subsidy program) [1] experience the problems they face in the broader context of socio-cultural and productive reconstruction of rural areas.

That is, how do young people who are active in agriculture shape their sense of “self” through family, professional and other experiences? What socio-economic and political challenges do they face in their daily local becoming? What prerequisites must they possess (competencies, know-how, etc.) for their business strategies to succeed? What needs to change in the agricultural sector and in the policies implemented, so that the agricultural profession and the countryside become more attractive to young people?

In this research, the application of quantitative and qualitative methodologies to research questions (factors affecting the abiding of young farmers in agriculture) is described, and the resultant conclusions from triangulating quantitative and qualitative methodologies are provided. Quantitative and qualitative methodologies are generally associated with structured questionnaires and unstructured interviews, respectively. The goal of a qualitative investigation is a holistic understanding of an attitude or behavior by exploring the experiences of individuals and the subjective meanings that make it up (Mondal and Samaddar, 2021).

Before presenting our data, we discuss the “strengths” and “weaknesses” of young farmers’ entrepreneurial competencies. Entrepreneurial competencies are related to a venture’s creation, survival and growth (Tehseen and Anderson, 2020). According to Tehseen *et al.*, (2019), enterprise growth is hindered by a lack of entrepreneurial competency. Having said that, the aim of this study is to highlight the factors that hinder or favor the sampled young farmers in establishing and subsequently operating their agribusiness and supporting their adoption.

The literature review outlines the context of the conceptual approach of this study. The discussion follows in light of the above arguments and we consider their contribution and implications.

## 2. Literature review

### 2.1 Conceptualizing the context of young farmers

One of the most essential problems of the agricultural sector in Greece and in all the countries of the European Union (EU) seems to be the shortage of young farmers. The European Union, through the Common Agricultural Policy (CAP) (2014–2020), supports the entry of young people into the agricultural sector, aiming to overcome financial and market barriers to entry into agriculture (Kontogeorgos *et al.*, 2017). Given this, in Greece and some other European countries, the way of life and economic crisis led young people to engage in agriculture and return to the countryside (Chatzitheodoridis and Kontogeorgos, 2020). Pysiäinen *et al.* (2006) noted that young farmers’ entrepreneurial actions can be related to situational and personal factors. Young farmers face many challenges as they begin their careers in agriculture (Key and Lyons, 2019). Most of the younger generation stated that the current condition of agriculture is of concern both in food crops and sustainable development (Wiyono *et al.*, 2015). Hence, focusing attention on the new generation of farmers is the surest way to involve farmers in value chain activities (Mabe *et al.*, 2021). Young farmers need to spend much more time and pay much more attention to management decisions, as well as to the process of developing management competencies, compared to their predecessors (Vukelić and Rodić, 2014). Individual characteristics and competencies of farmers, as a very important aspect of management competencies, include motivating factors and incentives that represent their strengths in achieving their goals (Rougoor *et al.*, 1998; Mamun *et al.*, 2018).

According to Kontogeorgos *et al.*, (2017), the main weaknesses of farmers, and especially the young, are access to land, high start-up costs, low profitability, low status associated with farming, limited desirability of rural life, access to information, adoption of information and communication technologies, organization of labor (part-time farming and pluriactivity) and access to the market. On the same wavelength, Stevens and Wu (2022) point out that beginner farmers operate on a smaller scale are younger, rely more on off-farm income and have more debt than their more experienced counterparts.

Entrepreneurial farmers are people who are able to create and develop profitable businesses in a changing business environment (Rosairo and Potts, 2016) and should have the attitudes, motivation and competencies to win in increasingly hostile business environments. According to Wu and Li (2011), the propensity toward entrepreneurship is likely to be a combination of economic, social and personal attributes.

### 2.2 Conceptualizing competencies

Boyatzis (1982, p. 23) define “a competency may be a motive, trait, aspect of the person’s self-image or social role, skill, or a body of knowledge which he or she uses.” There is debate about the link between possessing competencies and results (Mohammed *et al.*, 2017).

Competencies are the ability to complete a task by utilizing resources that improve performance and may thus be especially important for the start-up and sustainable development of a business (Tehseen *et al.*, 2019; Townsend and Noble, 2022). Entrepreneurial competencies are generally recognized as critical to entrepreneurial success (Mitchelmore and Rowley, 2010). Pyysiäinen *et al.* (2006) divide entrepreneurial competencies into three broad categories: *personal competencies* (innovation, initiative, risk-taking, accepting challenges, taking responsibility and seeking opportunities in change); *interpersonal competencies* (interacting with others effectively, communicating effectively, negotiating and influencing) and *process competencies* (ability to plan and organize, analyze, synthesize and evaluate and execute the plan). On the other hand, behavioral attitudes such as self-efficacy, self-confidence, optimism and persistence are not strictly personal competencies, but it is common sense to conceive of them as prerequisites for efficient learning and use of competencies. In addition, social competencies allow entrepreneurs to work with team members effectively by increasing motivation and trust (Lamine *et al.*, 2014), promoting cooperation (Yezza *et al.*, 2021).

### 2.3 Conceptualizing triangulation approach

The term triangulation refers to the application and combination of various research methods to study the same phenomenon (Mondal and Samaddar, 2021), which is gaining importance in the agricultural field as a “new” research method.

According to Ingram *et al.* (2017), the triangulation method allows researchers to use different sources of information or collect data through multiple methods that help overcome the problem of bias and increase the validity and credibility of the research. Mangan *et al.*, (2004) suggest that methodological triangulation approaches the level of rigor sought in various areas of entrepreneurship research and more fully understands the phenomena under investigation. Easterby-Smith *et al.*, (1991) categorized “triangulation” approaches into four distinct types, namely methodological triangulation, data triangulation, investigator triangulation and triangulation of theories.

The present study follows methodological triangulation, in which both quantitative and qualitative techniques are employed to obtain relevant knowledge and achieve a critical understanding of the under-investigation phenomenon.

## 3. Methodology

### 3.1 The research area

The study was conducted in western Greece in the second half of 2019. The selection of the specific agricultural area was made on the basis of the intense agricultural character that is located there and its diverse agro-production systems (plains, semi-mountainous and mountainous zones, extensive cultivation, intensive production systems, agro-industries, etc.). In the research area, there are two main agricultural production zones: (1) the irrigated lowland zone in the south, characterized by the cultivation of industrial plants and trees (cotton, corn, olives and citrus) and the presence of agro-industries, and (2) semi-mountainous and mountainous areas in the north, where cereals and livestock dominate.

The number of young farmers according to the information given to the authors by the services of the Ministry of Agricultural Development and Food – during the period of the survey – did not exceed 5,000. In order to calculate the sample size of young farmers, the sample size calculation technique was used for simple random sampling by Krejcie and Morgan, (1970). According to this, the minimum required sample size amounted to 200 young farmers.

### 3.2 Research methods and context

This study deployed a triangulation methodology. In the context of this methodology, a mixed approach (interviews and scales) was used. The *quantitative study* considered a survey

of 270 young farmers across various demographic characteristics, randomly in the region of western Greece. Data were collected through a survey (structured questionnaire) to probe the respondents. The questionnaire consisted of a list of statement/closed questions. Further data cleansing yielded 222 correct responses, which were analyzed using both descriptive and inferential statistical methods using the statistical tool Superior Performance Software System (SPSS) 20.0.

The *qualitative study* comprises in-depth interviews with nine young farmers, included or not in a “New Farmers” subsidy program. The search and pinpointing of the respondents were done using the avalanche method, with selection criteria for their social-productive profile, entrepreneurial activity and productive dynamics. According to Marshall (1996, p. 523) “the appropriate sample size for a qualitative study is the one that adequately answers the research question.” Triangulation is based on the principle that a single method cannot reflect multidimensional socio-economic agricultural reality (Bujra, 2001). There is a lack of guidance in the relevant literature on how to combine qualitative and quantitative approaches and how to incorporate qualitative and quantitative findings into practice. The two methods were applied sequentially, and the data were processed separately for each method based on the specific principles governing the quantitative and qualitative methods. The following figure (Figure 1) shows the design of the study diagrammatically.

Although many researchers argue that triangulation can enhance the validity of the results of research (Bryman, 1988; Knafl and Breitmayer, 1989), the application of this method in the field of agricultural research and entrepreneurship has not been sufficiently applied. All interviews that were conducted were utilized during the elaboration of the research material. Selected excerpts are presented in this text to represent all the farmers included in the survey.

#### 4. Result

The characteristics of young farmers underlie a person’s behavior in work situations and other situations. Individual or personal characteristics related to all aspects of life (Anwarudin *et al.*, 2020).

In Table 1, the gender distribution shows that 65.8% of respondents were men. Many studies have pointed out the socially constructed image of the farmer as a man and of agriculture as a man’s world (Gidakou *et al.*, 2007; Pliakoura *et al.*, 2021a). All young farmers have received formal education with 48.2% having finished high school and a large percentage 20% university. Only 5% are elementary level. The level of formal education of young farmers is better than the level of formal education of farmers in general (Pliakoura *et al.*, 2020). According to Leino and Mullola (2014), education works to develop competencies and improve the quality of life and human dignity at both individual and social levels.

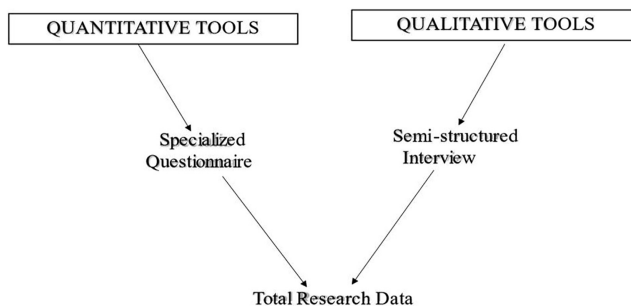


Figure 1. Research planning

**Table 1.**  
Demographic and  
individual  
characteristics of  
young farmers

Characteristics of young farmers	Classification	Frequency	Percentage (%)
Gender	Male	146	65.8
	Female	76	34.2
Age	18–25	6	2.7
	26–34	117	52.7
	35–40	99	44.6
	Average: 33 years		
Education	Elementary school	12	5.4
	Middle school	36	16.2
	High school	107	48.2
	Technical Education	20	9.0
	University	47	21.2
	Modus: High School and University		
Training	Yes	72	32.4
	No	150	67.6
	Modus: without training		
Types of enterprises	Plant production	123	55.4
	Animal production	40	15.0
	Mixed production	59	26.6
	Modus: Plant production		

**Source(s):** Processed Primary Data

Training is a non-formal education. Only one-third (32.4%) of the young farmers who participated in this study attended training courses in agricultural entrepreneurship. In cultivation fields, young farmers tend to pursue plant production.

#### 4.1 Quantitative study

*4.1.1 Determinants of young farmers' strengths.* Explanatory factor analysis (EFA) of the 15-item scale was conducted to explore the “Strengths” of young farmers answering the question: Which competencies helped in the establishment and subsequent operation of your agricultural enterprise (Table 2).

Young farmers' strengths are indicators of innovation, personal leadership, entrepreneurial administrative competencies, social competencies and the ability to collaborate. The research instrument passed the instrument test, with valid and reliable results.

Factor analysis isolated five factors with eigenvalues greater than one (>1). These factors account for 66.03% of the variance.

The first factor (*f1*) included the issues related to “innovativeness competencies”. Interest in new investment programs, new cultivation techniques, utilization of renewable energy sources and, in general, for what is new characterizes young farmers with these competencies. The second factor (*f2*) related to “digital competencies”, represents young farmers with knowledge of technology and is friendly to the use of mobile agricultural apps. This generation is most interested in information technology and social media (Anwarudin and Haryanto, 2018). The third factor (*f3*) refers to the “personal competencies” and explains the sample farmers who perceive themselves as optimistic with confidence and personal control in their entrepreneurial activities. The fourth factor (*f4*) with issues that have to do with “process competencies”, namely encompasses the young farmers who have the ability to design, organize and execute a business idea or a business plan, and finally, the fifth factor (*f5*) include items of “interpersonal competencies”. This factor includes the social farmers in the sample with the ability to communicate effectively and interact with others.

Component	Mean value/ Std. Dev.	Factor loadings <sup>a</sup>				
		<i>f1</i>	<i>f2</i>	<i>f3</i>	<i>f4</i>	<i>f5</i>
Interest in new investment programs	3.85/1.064	0.789				
Interest in new cultivation techniques/pesticides/fertilizers	3.89/0.893	0.717				
Interest of natural resource-energy utilization (photovoltaic, wind turbines, etc.)	3.61/0.934	0.610				
Interest for new things (innovation)	3.80/0.996	0.494				
Interest in new machinery and equipment	3.88/0.899	0.732				
Knowledge of Information and Communication Technology (ICT) (Internet, computer, mail, television, telephone, etc.)	3.74/1.056		0.857			
Knowledge of the use of new technologies in the management of agricultural enterprises (mobile apps, etc.)	3.38/1.131		0.826			
Knowledge of the 'course of things'	3.91/0.968			0.642		
Ambition and perseverance	3.83/0.981			0.777		
Self-confidence	3.86/0.999			0.784		
Personal work	4.20/1.023			0.504		
Social/economic contacts and connections	3.33/1.131					0.697
Ability to communicate with others	4.16/0.945					0.752
Ability to execute business ideas	3.64/1.010				0.622	
Administrative and organizational competency	3.89/1.049				0.821	
<i>Cranach's Alpha</i>		0.788	0.899	0.841	0.777	0.801
<i>Initial Eigenvalues</i>		4.29	1.92	1.39	1.25	1.04
<i>percent of Total Variance(after rotation)</i>		15.48	13.44	13.29	12.65	11.12
<i>Total Variance</i>				66.03		

**Note(s):** <sup>a</sup> Factor loadings <0.4 are suppressed; Extraction method: principal component analysis; Rotation method: Varimax with Kaiser Normalization. KMO 0.764, Bartlett's test of Sphericity sig, 0.00, df 105 and chi-square 997.211

**Table 2.** Factor loading to investigate the strengths of young farmers

4.1.2 *Determinants of young farmers' weaknesses.* EFA of the 12-item scale (Table 3) was conducted to explore the "Weaknesses" of young farmers answering the question: What were the biggest weaknesses and the most important problems you faced in the beginning as farmer entrepreneurs?

Factor analysis isolated five factors with eigenvalues greater than one (>1). These factors explain 66.1% of the variation and can, therefore, be considered to provide a satisfactory representation of beliefs.

The first factor (*f1*) "economic and state context" refers to the unstable tax environment, economic crisis and lack of an available labor force. The second factor (*f2*) "lack of knowledge" indicates the lack of know-how in both the cultivation and trade of agricultural products, as well as in the management of the holding. The third factor (*f3*) "lack of funding" refers to the weaknesses arising from the difficulty in accessing financial programs to start-up and support agricultural enterprises. The fourth factor (*f4*) "lack of organization" refers to the lack of cooperative organization and the issue of finding qualified staff when needed and the fifth factor (*f5*) "competitiveness framework" where it explains the weaknesses due to competition and high production costs.

#### 4.2 Qualitative study

A qualitative study involved in-depth interviews with nine young farmers who stand out for their performance and submit their thoughts and suggestions on what needs to be changed in

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**Table 3.**  
Factor loading to  
investigate the  
weaknesses of young  
farmers

Component	Mean value/ Std. Dev.	Factor loadings <sup>a</sup>				
		f1	f2	f3	f4	f5
Lack of technical and cultural knowledge	3.86/1.045		0.790			
Lack of experience and knowledge in business management	3.54/1.106		0.838			
Lack of experience and knowledge in product promotion	3.69/0.963		0.641			
State bureaucracy	4.12/0.999	0.589				
Tax policy (changes in tax rates)	3.64/1.083	0.823				
The poor general financial situation	4.00/0.984	0.748				
Workforce availability when needed	3.23/0.981				0.660	
Lack of cooperative organization	3.41/1.133				0.842	
The difficulty in accessing initial funds	4.14/1.002			0.838		
Lack of adequate funding (banks, government agencies)	3.89/1.079			0.675		
High input costs (fuel, fertilizers . . .)	4.30/0.893					0.520
Competitive environment	3.42/1.142					0.879
<i>Cranach's Alpha</i>		0.823	0.761	0.712	0.698	0.710
<i>Initial Eigenvalues</i>		2.52	2.02	1.30	1.06	1.01
<i>percent of Total Variance(after rotation)</i>		16.53	14.76	12.69	12.11	10.00
<i>Total Variance</i>				66.10		

**Note(s):** <sup>a</sup> Factor loadings <0.4 are suppressed; extraction method: principal component analysis; rotation method: Varimax with Kaiser Normalization. KMO 0.64, Bartlett's test of Sphericity sig, 0.00, df 66 and chi-square 714.325

the agricultural sector and in the policies implemented so that the agricultural profession and the countryside become more attractive to young people. The discussion revolved around the question of "how young people abide in the agricultural profession and in the countryside". All interviewees expressed their desire to remain in the countryside and be a component of development through a contemporary production model.

George, a breeder, and grower of livestock plants, referred to a channel of communication and contact between young farmers. "The creation of a contemporary model of cooperation is necessary for the viability of small and isolated producers, due to the increased production costs from cultivation to the final product". Anna, an olive grower, moved in the same spirit. "... Through new forms of collectivity, we can fill the gap left by the lack of agricultural education and training". Moreover, she supports the use of new technology as it can play an important role in agricultural development.

Zois, leaving the problems of succession (transfer of land) in the background, refers to the multifunctional role of the farmer, which enables young people to take advantage of more opportunities. "It's not just the primary sector. We must turn to the other links of the production chain, to gain part of the added value".

Simos talks about the need to acquire competencies and management skills and suggests that the local government should play this role. "In order to be able to create sustainable crops, to overcome problems we encounter in the field, but also in the promotion of the products we produce, we must have knowledge that to date many of us have not acquired".

Manos, a livestock breeder and producer of fodder and olives, emphasizes infrastructure/ services and the role of cooperatives in information. "Nowadays, when developments are moving fast, young farmers must be well informed in order to face the problems of their industry and to support their production". Dimitris invokes local governments to solve problems through more organized structures and also touching upon the problems of integration of refugees and immigrants "... they know the problems of the place and through these to be given solutions".



Among his concerns for agricultural and social infrastructure, Tasos, a kiwi grower, said, among other things, “... we need to strengthen producer groups and other collective formations in order to 'break' the old mentality in this sector”.

A holistic approach to what the young farmers surveyed expressed is presented in the table below (Table 4).

The abiding of young farmers in Greek countryside

name	year	Type of holding	Approach	Suggestions
George	34	Animal production	<ul style="list-style-type: none"> <li>- Unorganized animal husbandry</li> <li>- Channel of communication between young farmers</li> </ul>	<ul style="list-style-type: none"> <li>- Contemporary model of cooperation</li> <li>- Educational seminars</li> </ul>
Nikos	30	Plant production	<ul style="list-style-type: none"> <li>- Immediate and better information</li> <li>- Strengthening collective forms</li> <li>- Adoption of new technologies</li> </ul>	<ul style="list-style-type: none"> <li>- Additional subsidies to cooperating farmers</li> <li>- Awakening due to a pandemic</li> </ul>
Anna	32	Plant production	<ul style="list-style-type: none"> <li>- New forms of collectivity</li> <li>- Use of new technology</li> <li>- Synergies with research centers and Universities</li> </ul>	<ul style="list-style-type: none"> <li>- Education of young people</li> <li>- Creation of an olive growing direction in the agricultural school already located in the study area</li> </ul>
Zois	40	Plant production	<ul style="list-style-type: none"> <li>- Modernization of farms to meet the challenges of the future</li> <li>- Adoption of innovations</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthening young farmers through development programs</li> <li>- Competitive products/labeling</li> <li>- Vertical integration of production</li> </ul>
Simos	25	Plant production	<ul style="list-style-type: none"> <li>- Consulting in a new plan</li> <li>- Ensuring the quality and identity of agricultural products (PDO, PGI, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- Reduction of bureaucracy</li> <li>- Financing tools</li> <li>- Improvement plans of agricultural holdings</li> </ul>
Manos	34	Mixed production	<ul style="list-style-type: none"> <li>- Effective information</li> <li>- Emphasis on infrastructure/services</li> </ul>	<ul style="list-style-type: none"> <li>- The role of cooperatives in informing their members is important</li> <li>- Provincial road network for transporting products</li> <li>- Health services</li> </ul>
Dimitris	38	Plant production	<ul style="list-style-type: none"> <li>- Integration problems refugees and immigrants</li> <li>- Lack of education</li> </ul>	<ul style="list-style-type: none"> <li>- Social integration of refugees/their employment in agriculture</li> <li>- Education starts from school for the transition to a new agriculture</li> </ul>
Tasos	40	Plant production	<ul style="list-style-type: none"> <li>- Lack of entrepreneurship in rural areas</li> <li>- The income does not stay in the countryside</li> <li>- Suspicion of farmers towards collectives shapes</li> </ul>	<ul style="list-style-type: none"> <li>- Planning actions to simultaneously strengthen entrepreneurship and quality of life</li> <li>- Strengthening producer groups</li> </ul>
Helen	36	Mixed production	<ul style="list-style-type: none"> <li>- Generation gap in the countryside</li> <li>- Desertification of villages</li> <li>- Succession (possession and transfer of land, etc.)</li> <li>- Small land holdings</li> </ul>	<ul style="list-style-type: none"> <li>- Incentives for young people: finances, security</li> <li>- National strategic plan for population redistribution</li> <li>- Diversification of production</li> </ul>

Source(s): Processed Primary Data

**Table 4.** Key approaches from in-depth interviews of young farmers

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In essence, qualitative research has clarified the validity of the results of quantitative research – particularly, those factors that make it difficult for young farmers to abide in the agricultural profession by providing policy guidelines and action lines for sustainable farming entrepreneurship.

## 5. Discussion

The results of the quantitative study indicate that different kinds of entrepreneurial competencies compose the “strengths” that the farmers needed according to the farmers themselves. Defining and stipulating which competencies are necessary for farmers to effectively compete and survive is necessary because farmers must deal with many situational factors and challenges. Some researchers (Mokbel Al Koliby *et al.*, 2022; Pysiäinen *et al.*, 2006) conclude that entrepreneurial competencies refer to those activities or practical know-how that is needed to establish and successfully run an enterprise. The results showed that the young farmers in the sample had a high level of formal education, most had not yet received entrepreneurial training, knowledge of Information and Communication Technology (ICT), interest in new investment programs, new farming techniques, utilization of renewable energy sources, ability to communicate with others effectively and management competencies.

Previous studies (Anwarudin *et al.*, 2019; Khatib *et al.*, 2013) argue that the formal education a young farmer receives is very important for improving knowledge, attitudes and developing competencies. The results of this study also support previous research showing that young farmers require entrepreneurship training (Pliakoura *et al.*, 2020; Latopa and Rashid, 2015). It is common in many agricultural areas for agricultural knowledge and agricultural know-how to be provided on an informal basis (passed down from parents to children) rather than in a coordinated and effective manner (PAFPNet, 2010; Chatzitheodoridis and Kontogeorgos, 2020).

This study also found that the use of ICT aroused the interest of young farmers. This generation is very interested in information technology and social media (Anwarudin and Haryanto, 2018). Knowledge and adoption of technology can make rural society more attractive for permanent residence and work (Pliakoura *et al.*, 2021b). For a young farmer, knowledge, a positive attitude and high competencies can enable him to find solutions to the agricultural problems he faces, to be more adaptable to changing agricultural conditions and to be able to deal with issues and to evaluate them properly (Anwarudin *et al.*, 2020; Khatib *et al.*, 2013).

On the other, various socio-economic factors like economic recession, bureaucracy, high input costs, along with lack of cooperative organization and insufficient funding compose the landscape of “weaknesses” which make it difficult for young to abide in the agricultural profession.

These findings support the findings described by Koomson *et al.*, (2020) that augmentation of access to finance and facilitation of economic integration has become the key to achieving sustainable goals. Policies and programs aimed at improving access to finance can help young people start or expand their businesses and create further employment opportunities (Hinton *et al.*, 2022). Also the results are consistent with previous researchers (Soukioroglou *et al.*, 2010; Kontogeorgos *et al.*, 2017) who declare that more than one-third of “young farmers” (38.5%) believe their participation in agricultural cooperatives offers multiple benefits for members. The most important benefits of robust agricultural cooperatives in the market stem from the existence of countervailing power, economies of size, risk reduction, minimization of asymmetric information and sustainable farming (Pliakoura *et al.*, 2022). The adoption of sustainable practices in agriculture has various benefits and is an important aspect of agricultural policy in several countries (Foguesatto and Machado, 2022). In addition, bureaucracy is a serious problem, related to policy implementation, especially in the countries

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of Southern Europe (Chatzitheodoridis and Kontogeorgos, 2020; Krisane and Pilvere, 2016; Schimmenti *et al.*, 2014).

The analysis of the qualitative data revealed data that were not mentioned in the questionnaires, such as the issue of vertical integration of production, land ownership, lack of infrastructure and the need for effective information and advice in a new plan. Knowledge should be constantly passed on to the farmer because everything is changing, and he is not always able to monitor these changes, the most certain thing is that he will be informed when it is too late. According to Townsend and Noble (2022), advice to support farmers' decision-making is provided not by traditional advisory services but by representatives of commercial companies selling technological products, often alongside chemical inputs that they have been selling for many years. The information must be multifaceted, timely, correct, continuous and from any available source. Thus, informed farmers are more efficient. Access to both information and education is crucial for young people to successfully participate in the agricultural sector. In addition to knowledge of agricultural production and processing techniques and relative know-how, young farmers need access to information about finance, land, markets and so on.

As far as young farmers are concerned, the interviews revealed their desire to abide in the countryside and be an integral part of agricultural development through a modern production model. Most of them are concerned about the collective actions of rural youth. As already mentioned, the formation of producer groups and the participation of young farmers in cooperatives is a major issue in both research on enterprise viability and cooperation policies promoted in agricultural areas.

Another important issue brought to the surface by qualitative research, which prevents young farmers from entering smoothly and surviving in the agricultural profession, is the occupation and transfer of land by their predecessors. Zagata *et al.*, (2017) pointed out the absence of a sufficient replacement rate, in terms of the transition of holdings from one generation to the next. Access to land is extremely important for young people trying to earn a livelihood in agricultural and rural areas. In short, many practices that young novice farmers and ranchers are likely to adopt require a firm expectation of possession of land (Stevens and Wu, 2022).

Also a key challenge of the research is the integration of refugees and immigrants into the labor market and their employment in agriculture, thus supporting the agricultural sector in Greece. Interest is focused on improving the skills of agriculture immigrant workers or increasing their employment opportunities while promoting local integration and social cohesion (Barth and Zalkat, 2021; Manou *et al.*, 2021).

Last, but definitely not least, is the infrastructure problem in agricultural areas. The majority of young farmers consider that the absence of agricultural and social infrastructure in many rural areas results in the inability to meet their needs, and therefore, short-term abiding in their place of residence. Infrastructure (physical infrastructure, e.g. roads, social or soft, e.g. health and education, institutional, e.g. farmers' cooperatives and agricultural institutions but also public and private service providers) are particularly important as they affect an area's ability to attract and retain people as well as enterprises (Mazibuko *et al.*, 2020). Agricultural infrastructure has the potential to transform traditional agriculture or subsistence farming into modern, commercial and dynamic farming systems. Surveys of agricultural areas in Britain have concluded that the "desire for a rural environment" and an "ideal family environment" are the most important reasons for setting up enterprises (Townroe and Mallalieu, 1993).

## 6. Conclusion

In the current socio-economic situation, the stay of young people in the countryside is a popular topic in public discourse. As a complex phenomenon, it is equally difficult for

academia and policymakers to understand, conceptualize strategies, adapt and implement aspects of sustainable rural entrepreneurship.

The results of this study have implications for both research and politics. The study contributes to the existing literature by introducing new ideas in how young farmers perceive their abidance in the agricultural profession. On the other the findings of the research can be used to solve a chronic problem related to the human resources of the primary sector of many European countries but also to formulate appropriate policies. The fact that from 2023 the redesign is progressing, with a view to strengthening productive directions and supporting targeted important production sectors that face competitiveness and sustainability problems, makes the results of this study valuable for policy makers in order to evaluate and implement financial instruments that are co-financed by the European Agricultural Fund for Rural Development during the programming period of the new CAP 2021–2027.

Through a triangulation study and qualitative content analysis, this study discusses the issues and challenges related to the abiding of young people in the countryside. Moreover, it seeks possible ways to achieve the sustainable development of Greek agriculture. The innovation of this study lies in identifying the significant strengths and weaknesses that young farmers themselves point out.

Young farmers in the sample perceive themselves as growth-oriented, social, innovative, and optimistic and have personal control over their business activities.

In other words, people who “do business” understand very well and are able to recognize the deeper temperamental and personal characteristics that constitute what we call entrepreneurship.

According to the research questions in the introductory section, this research suggests that a major challenge for the agricultural sector is to enable farmers to develop their entrepreneurial and management competencies. In practice, different competencies are prioritized. Hence, those who encourage entrepreneurship should consider these differences. This may require increased financial support and greater emphasis on agricultural entrepreneurship education and training.

Through triangulation of results, this research has begun to contribute to a more comprehensive understanding of the factors that could enhance the abiding of young people in the countryside, but it is clear that more work needs to be done in this important area of research. This study intends to guide future researchers and policymakers to bridge the gap between how young farmers perceive their prospects for abiding in the profession and how agricultural agents apply. Policymakers need to act seriously, and this study provides them with several opportunities to take appropriate policy guidelines and create an environment for the next generation to survive and prosper.

Future research should be directed at sharing knowledge among stakeholders (including policy makers) to set an agenda to empower and encourage existing and potential new farmers. In addition, more research is needed in this area both to improve the arguments and strengthen the evidence presented in this article and to expand the research in different regions of Greece and the European south in general, a fact that constitutes the most limitation of this research and does not allow generalization of the results.

#### Note

1. The program “New farmers” is based on Chap. II, article 8, Reg. 1257/99 and operates through the Community Support Frameworks implemented by the Ministry of Rural Development and Food.

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**References**

- Anwarudin, O. and Haryanto, Y. (2018), "The role of farmer-to-farmer extension as a motivator for the agriculture young generation", *International Journal of Social Science & Economic Research*, Vol. 3 No. 1, pp. 428-437.
- Anwarudin, O., Sumardjo, S., Satria, A. and Fatchiya, A. (2019), "Factors influencing the entrepreneurial capacity of young farmers for farmer succession", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 9 No. 1, pp. 1008-1014.
- Anwarudin, O., Sumardjo, S., Satria, A. and Fatchiya, A. (2020), "The entrepreneurial capacity of young farmers on agribusiness activities in West Java", *Jurnal Penyuluhan*, Vol. 16 No. 2, pp. 267-276.
- Barth, H. and Zalkat, G. (2021), "Refugee entrepreneurship in the agri-food industry: the Swedish experience", *Journal of Rural Studies*, Vol. 86 No. 1, pp. 189-197.
- Boyatzis, R.E. (1982), *The Competent Manager: A Model for Effective Performance*, John Wiley & Sons, New York, NY.
- Bryman, A. (1988), *Quality in Social Research*, Unwin Hyman, New York.
- Bujra, J. (2001), *Research Workshop Handout*, Graduate School, University of Bradford, Bradford.
- Chapoto, A., Mabiso, A. and Bonsu, A. (2013), "Agricultural commercialization, land expansion, and homegrown large-scale farmers: insights from Ghana", IFPRI Discussion Paper 01286, available at: <https://ssrn.com/abstract=2343154>.
- Chatzitheodoridis, F. and Kontogeorgos, A. (2020), "New entrants' policy into agriculture: researching new farmers' satisfaction", *Revista de Economia e Sociologia Rural*, Vol. 58 No. 1, pp. 1-20.
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (1991), *Management Research: An Introduction*, Sage Publications, London.
- FAO (Food and Agriculture Organization of the United Nations) (2014), "Youth and agriculture: key challenges and concrete solutions", available at: <file:///E:/young%20farmers/Youth%20and%20agriculture>.
- Foguesatto, C.R. and Machado, J.A.D. (2022), "Adoption of sustainable agricultural practices in Brazil: understanding the influence of socioeconomic and psychological factors", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 12 No. 2, pp. 204-222.
- Gidakou, I., Kazakopoulos, L. and Koutsouris, A. (2007), "Tracking empowerment and participation of young women farmers in Greece", in Asztalos Morell, I. and Bock, B.B. (Eds), *Gender Regimes, Citizen Participation and Rural Restructuring (Research in Rural Sociology and Development)*, Emerald Group Publishing, Bingley, Vol. 13, pp. 143-165.
- Hinton, J., Schouten, C., Stimpson, K. and Lloyd, D. (2022), "Financial support services for beekeepers: a case study of development interventions in Fiji's Northern Division", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 12 No. 2, pp. 304-319.
- Ingram, C., Caruana, R. and McCabe, S. (2017), "Participative inquiry for tourist experience", *Annals of Tourism Research*, Vol. 65, pp. 13-24.
- Kasimis, C. and Papadopoulos, A. (2013), "Rural transformations and family farming in contemporary Greece", *Research in Rural Sociology and Development*, Vol. 19, pp. 263-329.
- Key, N. and Lyons, G. (2019), *An Overview of Beginning Farms and Farmers, EBN-29*, Economic Research Service of the United States Department of Agriculture, Washington, DC.
- Khatib, M., Sarem, S.N. and Hamidi, H. (2013), "Humanistic education: concerns, implications and applications", *Journal of Language Teaching and Research*, Vol. 4 No. 1, pp. 45-51.
- Knafelz, K.A. and Breitmayer, B.J. (1989), "Triangulation in qualitative research: issues of conceptual clarity and purpose", in Morse, J.M. (Ed.), *Qualitative Nursing Research: A Contemporary Dialogue*, Aspen, Rockville, MD, pp. 226-239.

- Kontogeorgos, A., Sergaki, P. and Chatzitheodoridis, F. (2017), "An assessment of new farmers' perceptions about agricultural cooperatives", *Journal of Developmental Entrepreneurship*, Vol. 22 No. 1, pp. 1-13.
- Koomson, I., Villano, R. and Hadley, D. (2020), "Effect of financial inclusion on poverty and vulnerability to poverty: evidence using a multi-dimensional measure of financial inclusion", NESRA/WP/20/001, available at: <https://ssrn.com/abstract=3518908>.
- Krejcie, V.R. and Morgan, D.W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 30 No. 1, pp. 607-610.
- Krisane, I. and Pilvere, I. (2016), "Young farmer support policy in Latvia: the example of Latgale Region", *Proceedings of the International Conference, Jelgava, 2016. Economic Science for Rural Development*, N. 41, LLU ESAF, pp. 85-95.
- Lamine, W., Mian, S. and Fayolle, A. (2014), "How do social skills enable nascent entrepreneurs to enact perseverance strategies in the face of challenges? A comparative case study of success and failure", *International Journal of Entrepreneurial Behavior and Research*, Vol. 20 No. 6, pp. 517-541.
- Latopa, A.L.A. and Rashid, N.S.A.A. (2015), "The impacts of integrated youth training farm as a capacity building center for youth agricultural empowerment in Kwara State, Nigeria", *Mediterranean Journal of Social Sciences*, Vol. 6 No. 5, pp. 524-532.
- Leino, M. and Mullaola, S. (2014), "Temperament-conscious humanistic pedagogy", *Psychology*, Vol. 5 No. 7, pp. 753-761.
- Mabe, F.N., Danso-Abbeam, G., Azumah, S.B., Amoh Boateng, N., Mensah, K.B. and Boateng, E. (2021), "Drivers of youth in cocoa value chain activities in Ghana", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 11 No. 4, pp. 366-378.
- Mamun, A.A., Nawi, N.B.C., Permarupan, P.Y. and Muniady, R. (2018), "Sources of competitive advantage for Malaysian micro-enterprises", *Journal of Entrepreneurship in Emerging Economies*, Vol. 10 No. 2, pp. 191-126.
- Mangan, J., Lalwani, C. and Gardner, B. (2004), "Combining quantitative and qualitative methodologies in logistics research", *International Journal of Physical Distribution and Logistics Management*, Vol. 34 No. 7, pp. 565-578.
- Manou, D., Blouchoutzi, A. and Papatthanasiou, J. (2021), "The socioeconomic integration of people in need of international protection: a spatial approach in the case of Greece", *Social Sciences*, Vol. 10 No. 12, pp. 1-19.
- Marshall, M.N. (1996), "Sampling for qualitative research", *Family Practice*, Vol. 13 No. 6, pp. 522-526.
- Mazibuko, N., Antwi, M. and Rubhara, T. (2020), "Agricultural infrastructure as the driver of emerging farmers' income in South Africa. A stochastic Frontier approach", *Agronomia Colombiana*, Vol. 38 No. 2, pp. 261-271.
- Mitchelmore, S. and Rowley, J. (2010), "Entrepreneurial competencies: a literature review and development agenda", *International Journal of Entrepreneurial Behavior and Research*, Vol. 16 No. 2, pp. 92-111.
- Mohammed, K., Ibrahim, H.I. and Shah, K.A.M. (2017), "Empirical evidence of entrepreneurial competencies and firm performance: a study of women entrepreneurs of Nigeria", *International Journal of Entrepreneurial Knowledge*, Vol. 5 No. 1, pp. 49-61.
- Mokbel Al Koliby, I.S., Abdullah, H.H. and Mohd Suki, N. (2022), "Linking entrepreneurial competencies, innovation and sustainable performance of manufacturing SMEs", *Asia-Pacific Journal of Business Administration*, Vol. ahead-of-print No. ahead-of-print, doi: [10.1108/APJBA-09-2021-0480](https://doi.org/10.1108/APJBA-09-2021-0480).
- Mondal, S. and Samaddar, K. (2021), "Issues and challenges in implementing sharing economy in tourism: a triangulation study", *Management of Environmental Quality*, Vol. 32 No. 1, pp. 64-81.

- PAFPNet (Pacific Agricultural and Forestry Policy Network) (2010), "Youth in agriculture strategy 2011-2015: echoing the voices of pacific youth. Compiled by pacific agricultural and forestry policy network, secretariat of the pacific community land resources division".
- Pliakoura, A. (2022), "Accepting the challenges of agricultural entrepreneurship and management development research: a viewpoint", *CES Working Papers*, Vol. 13, Centre for European Studies, 4, pp. 418-436.
- Pliakoura, A., Beligiannis, G. and Kontogeorgos, A. (2020), "Education in agricultural entrepreneurship: training needs and learning practices", *Education + Training*, Vol. 62 Nos 7/8, pp. 723-739.
- Pliakoura, A., Beligiannis, G., Kontogeorgos, A. and Chatzitheodoridis, F. (2021a), "The impact of locus of control and motivations in predicting entrepreneurial intentions among farmers: a field research", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 12 No. 2, pp. 183-203.
- Pliakoura, A., Beligiannis, G. and Kontogeorgos, A. (2021b), "Enhancing agricultural entrepreneurship through mobile applications in Greece: the case of a 'farm management' application", In book, *Opportunities and Strategic Use of Agribusiness Information Systems*, Chapter 9, IGI Global Publisher, New York, pp. 151-173.
- Pliakoura, A.P., Beligiannis, G. and Kontogeorgos, A. (2022), "Significant barriers to the adoption of the agricultural cooperative model of entrepreneurship: a literature review", *International Journal of Social Economics*, Vol. 49 No. 1, pp. 1-20.
- Pyysiäinen, J., Anderson, A., McElwee, G. and Vesala, K. (2006), "Developing the entrepreneurial skills of farmers: some myths explored", *International Journal of Entrepreneurial Behavior and Research*, Vol. 12 No. 1, pp. 21-39.
- Rosairo, R.H.S. and Potts, D.J. (2016), "A study on entrepreneurial attitudes of upcountry vegetable farmers in Sri Lanka", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 6 No. 1, pp. 39-58.
- Rougour, C.W., Trip, G., Huirne, R.B.M. and Renkema, J.A. (1998), "How to define and study farmers' management capacity: theory and use in agricultural economics", *Agricultural Economics*, Vol. 18 No. 3, pp. 261-272.
- Schimmenti, E., Borsellino, V., Ferreri, A., Di Gesaro, M. and D'Acquisto, M. (2014), "Implementation and prospects of the rural development policy in Sicily", *Rivista di Economia Agraria*, Vol. LXIX No. 1, pp. 31-42.
- Soukioroglou, I., Iakovidou, O. and Menexes, G. (2010), "An investigation on the profile of the 'young farmers' program' beneficiaries", *110 Panhellenic Congress of Agricultural Economy*, 26-27 November 2010, Agri cultural University of Athens, Athens.
- Stevens, A.W. and Wu, K. (2022), "Land tenure and profitability among young farmers and ranchers", *Agricultural Finance Review*, Vol. 82 No. 3, pp. 486-504.
- Tehseen, S. and Anderson, A.R. (2020), "Cultures and entrepreneurial competencies; ethnic propensities and performance in Malaysia", *Journal of Entrepreneurship in Emerging Economies*, Vol. 12 No. 5, pp. 643-666.
- Tehseen, S., Ahmed, F.U., Qureshi, Z.H. and Uddin, M.J. (2019), "Entrepreneurial competencies and SMEs' growth: the mediating role of network competence", *Asia-Pacific Journal of Business Administration*, Vol. 11 No. 1, pp. 2-29.
- Tindiwensi, C.K., Munene, J.C., Sserwanga, A., Abaho, E. and Namatovu-Dawa, R. (2020), "Farm management skills, entrepreneurial bricolage and market orientation", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 10 No. 5, pp. 717-730.
- Townroe, P. and Mallalieu, K. (1993), "Founding a new business in the countryside", in Curran, J. and Storey, D.J. (Eds), *Small Firms in Urban and Rural Locations*, Routledge, London, pp. 17-53.
- Townsend, T.C. and Noble, C. (2022), "Variable rate precision farming and advisory services in Scotland: supporting responsible digital innovation?", *Sociologia Ruralis*, Vol. 62 No. 2, pp. 212-230.

- 
- Vukelić, N. and Rodić, V. (2014), "Farmers' management capacities as a success factor in agriculture: a review", *Economics of Agriculture*, Vol. 61 No. 3, pp. 805-814.
- Wiyono, S., Sangaji, M., Ulil, A. and Abdullah, S. (2015), *Regenerasi Petani, Faktor-Faktor Yang Mempengaruhi Minat Menjadi Petani Pada keluarga Petani Padi Dan hortikultura*, Lap. Kaji. Koalisi Rakyat untuk Ketahanan Pangan, Bogor, pp. 1-46.
- Worku, A. and Ülkü, M.A. (2022), "Analyzing the impact of the COVID-19 pandemic on vegetable market supply in Northwestern Ethiopia", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. 12 No. 3, pp. 371-385.
- Wu, L. and Li, J. (2011), "Perceived value of entrepreneurship: a study of the cognitive process of entrepreneurial career decision", *Journal of Chinese Entrepreneurship*, Vol. 3 No. 2, pp. 134-146.
- Yezza, H., Chabaud, D., Dana, L.P. and Maalaoui, A. (2021), "The Impact of bridging social capital in the family firms' performance: exploring the mediation role of the followers's social skills", *International Journal of Entrepreneurial Behavior and Research*, Vol. 27 No. 8, pp. 2009-2027.
- Zagata, L., Hrabak, J., Lostak, M., Ratinger, T., Sutherland, L.A., Mckee, A. and Bavorova, M. (2017), *Research for AGRI Committee – Young Farmers - Policy implementation after the 2013 CAP Reform*, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

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