

The forestry sector acting as a basis for local and regional entrepreneurial initiative like beekeeping, on the path towards reaching sustainable rural development in Iasi county, Romania

¹Constantin F. Barbir, ^{1,2} Bogdan M. Negrea

¹ University "Stefan cel Mare", Faculty of Forestry, Suceava, Romania; ² University of Liege, Agro-Bio Tech Gembloux, Gembloux, Belgium. Corresponding author: C. F. Barbir, barbirconstantin@yahoo.com

Abstract. As stated in the current Romanian Forestry Code (Law no.46/2008) one of the principles for reaching sustainable forest management is increasing forest contribution to rural development. This seems in theory a difficult target, especially in areas with relatively low forest cover like Iasi county, that can't cover large industrial demand. The shift in forest management from a wood production centered approached and high demand for forest products and services other than wood and a new forest ownership regime represent potential benefit sources for rural communities. Alongside wood production these forests offer entrepreneurs new possibilities for niche goods production that in turn can trigger community development, a reality policy makers must consider. The object of the present paper is to reflect the condition of forest related entrepreneurship regarding a traditional activity in the area (beekeeping) using a qualitative analysis approach.

Key Words: entrepreneurship, rural development, beekeeping, forest management, rural livelihood.

Introduction. Rural regions generate around 53% of the total job offer and 45% of the total gross added value in the EU, but indicators such as per capita income rank them as inferior to non-rural areas from a socio-economical point (EC 2006). Rural development is part of the economic and social cohesion policy in the Maastricht Treaty (1992), fundamental for the UE (Bryden 2002). Traditionally, the two main income generating sectors in Romanian rural areas are agriculture and forestry, each with a certain contribution depending on geographic location. But monthly income levels (average 95 euro/person) are among the lowest in the EU. Combined with lack of employment and infrastructure, the situation led to the migration of the young population, mainly to western EU countries, especially in the N-E region, the poorest of the country and with the highest percentage (56.3%) of rural population (PNDR 2011). This is typical for post-industrial European rural society, as the main generator of income that was primary production can't cover expectations, so new opportunities must be searched by farmers and forest owners (Verbij 2008). In Romania, the post-socialist transition period raised additional challenges due to privatization, land restitution reform (agricultural and forest land) and the market economy. Alongside agriculture, forests are a part of the primary production process, but if considered, the multiple outputs of forestry can substantially contribute to the development of rural areas as underlined by Whiteman (2000). The current Romanian Forest Code (art. 5, letter g) (Anonymous 2008) states that one of the bases for reaching sustainable forest management is "increasing the role of forestry in rural development". Niche products, like the non-wood forest products and services (NWFP & S), play an increasing economic role (Pettanella & Secco 2006) and in the context of growing private forest property can constitute a basis for new entrepreneurial initiatives. The acknowledgement of the forest related positive externalities in an area is faced with a lack of ways (including scientific methodology) to express the total value to

the communities. Unfortunately, these benefits are often not fully recognized until forest cover has been considerably reduced and forest resources have been significantly degraded (Whiteman 2000). Following the Elands & Wiersum (2003) argumentation that wood production should no longer dictate the regional importance of forests, but the forest's rural characteristics should, it is implied the consideration of specific regional contexts and openness to multiple demands. This is the reason for research approach in the present paper that takes into consideration a certain area (Iasi county), mainly a rural area inside the northern Moldavian silvo-steppe with both agricultural (70% of the total county area is arable land) and forestry activities. Forests cover represents 17.7% of the county's total area, a lower percentage, compared to a national average of 26.8% (M.A.D.R. 2011). Total forest area administrated by County forest Administration decreased by 17.2%, from 83 570 ha in 2004 to 69 230 ha in 2011 (all state owned forest), due to property restitution (Barbir 2012). The county's main city is Iasi, the second biggest city in the country from the total population standpoint, with 313 994 inhabitants and growing demands regarding recreational services and niche products. Before going further a few considerations must be presented, regarding Romanian private forest property, sustainable development and entrepreneurship. Roughly half of the total forest area will become private forest property after the (ongoing) restitution process ends, the other half being public forest property, a dramatic percentage drop compared to recent times when up to 90% were public forests (Niskanen et al 2007).

Why is the forest propriety regime mentioned? Because property rights means exclusive access to certain goods and services. Abrudan (2007) lists a series of problems regarding Romanian (small-scale) private forest property, like poor management due to lack of specific knowledge and gain of immediate economic benefits, a low degree of forest legislation enforcement and failure to implement the principles of sustainable forest management among forest owners. Although the small-scale owners are rarely referred to as entrepreneurs, due to economic motivation related to the management of their forests, they can be granted with the title of micro-entrepreneur (Niskanen et al 2007).

The development of rural areas must be sustainable, a concept best defined by the WCED (1987) in the Brundtland Report: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

To clarify the concept of "entrepreneurship" Stevenson & Jarillo (1990) cited by Kubeczko & Rametsteiner (2002) conclude that "entrepreneurship is the process by which the individuals target the materialization of certain opportunities, regardless of available resources at a given time". The entrepreneur can also be a inovator, whether by introducing a new product, production method, establishing a new market, implementing a new organisational system. Entrepreneurial initiative must also take into consideration socio-economical national and regional contexts. Figures 1 to 3 briefly portrait a general picture regarding population number, education and cash surplus finances growth and development, encouraging entrepreneurship (Krugman 2013). Education ensures that individuals recognize opportunities. Population number and structure backs demand. The forest related activity considered in the present paper as one with real potential to contribute to sustainable rural development is beekeeping, with a long practice tradition in the area due to specific conditions (Giurescu 1976). A problem with NWFP & S is the the gross of the added value is created outside the rural areas (Whiteman 2000). The characteristics and production process of the result of beekeeping, the honey, allow the producer to add value or keep valuable income inside rural areas.

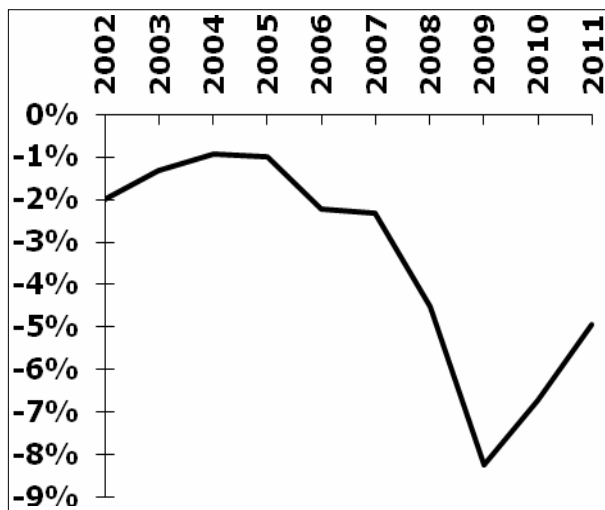


Figure 1. Figure Cash surplus/deficit (% of GDP) for Romania (Source: Federal Reserve Economic Data 2014)

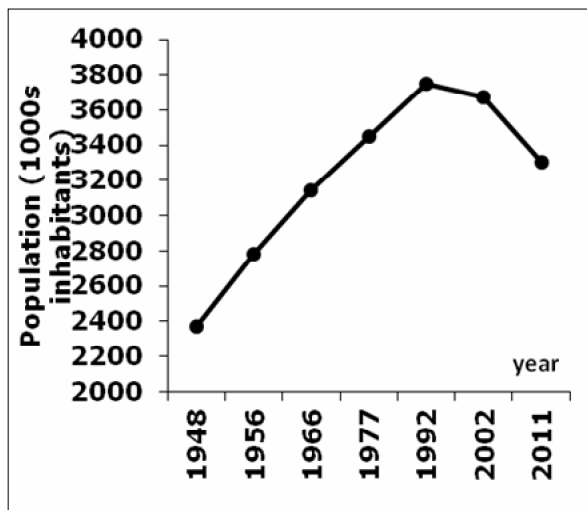


Figure 2. Population in the N-E region between 1948-2011 (Source: INS 2014).

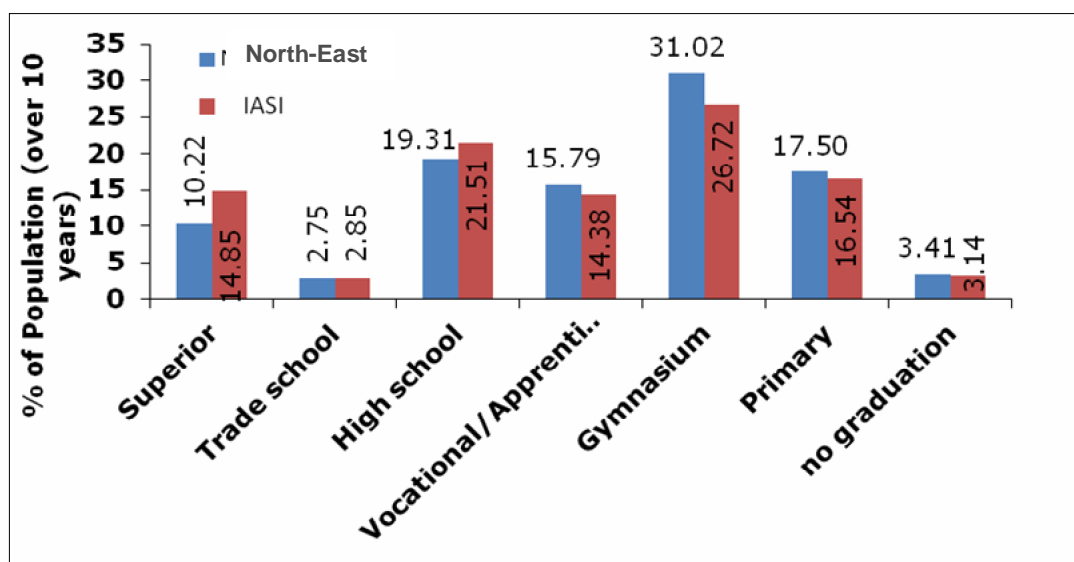


Figure 3. Education levels in the N-E region and Iasi County.

Material and Method. The qualitative approach was chosen for its “rich”, “holistic” character and the potential to reflect and interpret complex situations, outside the reach of other methodologies. Qualitative data is considered by Miles & Huberman (1994) as “well-grounded, rich descriptions and explanations of processes in identifiable local contexts”, the results of qualitative research having “a quality of undeniability”. The qualitative analysis was conducted between July and September 2013 using semi-structured interviews, the questionnaire containing pre-set questions that could not be changed by the interviewer, but with the possibility of answers being formulated with the respondent’s own words. The questionnaire also collected quantitative information, to complement the qualitative data. The sample was constructed targeting respondents that participated in informative campaigns and meetings regarding the EU funding opportunities, in order to reflect the condition of enterprise oriented persons in rural areas and not the average person interested in covering household consumption.

Unlike in quantitative studies, samples for qualitative studies are small and “purposive” partly because “social processes have a logic and a coherence that random sampling can reduce to uninterpretable sawdust” (Miles & Huberman 1994).

Regional and national statistics, data from local forestry district management plans, a consistent bibliography on the topic of “forest and rural development” and author

own observations were also used. Interpretation of questionnaire data was made using SPSS 21.

Results. Regarding location, 46.7% of respondents reside in Iasi County, 33.3% in Neamt County and 20% in Vaslui County. The residence area of the respondents was 96.7% rural and only 3.3% urban, confirming the strong rural character of this type of activity. Concerning the location of the apiary 76.7% are found in rural areas or in the proximity of rural settlements, and only 23.3% in a peri-urban area. From an economic stand point 63.3% of apiary owners practice this activity as a business, with a legal entity status, for 33.3% of them is a single occupation and income source, and only 3.3 % use beekeeping as a secondary occupation generating additional income and products for household consumption. This last category that produce honey for household consumption is largely represented in the area, but through sampling the target was to only consider those with entrepreneurial spirit. The 3.3% that use beekeeping as a secondary occupation are in fact beginners gaining momentum, wishing to grow as they acquire more experience and capital. Regarding the number of hives, only 6.7% of respondents have between 101 and 200 families, and 20% under 25 hives. Equal percentage categories 36.7% are represented by those with 25 to 50 hives and 51-100 families.

Table 1

Correlations aspects between different variables

		Stationary/ Pastoral beekeeping	Willingness to pay for planting melliferous woody species	Melliferous source- quantity standpoint	Melliferous - source income standpoint
Number of hives	Kendall coefficient	0.459**	0.07	-0.023	-0.003
	Significance	0.005	0.966	0.887	0.983
Beekeeping - economic standpoint	Kendall coefficient		0.376*		0.068
	Significance		0.033		0.692
Forest access obstacles	Kendall coefficient		-0.076	0.07	0.1
	Significance		0.656	0.667	0.544

Only 20% of apiary owners have stationary hives, the rest practice pastoral beekeeping with temporary stands (26.7%) and mobile pavilions (53.3%) (Photos 1 and 2). Pastoral beekeeping is the most lucrative and ensures the highest profits, as it allows the production of different honey assortments in larger quantities (depending on apiary size). Building a business requires capital and subsidies offered by state assistance represent an additional motivation for entrepreneurs. Only 3.3% of respondents didn't access beekeeping funding programs (state and EU funds), 90% are already beneficiaries and 6.7% in the process of receiving the funding.

From the production standpoint (quantity) crops and meadow plants are the most important source for over 70% of respondents. Lime (*Tilia platyphyllos* Mill.) and acacia (*Robinia pseudoacacia* L.) represent the main production sources for only close to 30% of beekeepers. From the income standpoint crops and meadows are the source for the largest part of the income for more than 70% apiary owners, and only 26.6% of beekeepers have lime and acacia as main income generating sources. When it came to choosing the obstacles that impede on beekeepers to access forest areas during acacia and lime seasons 56.7% respondents indicated the obligation to pay bribes to the foresters, other 10% also blaming foresters for abusive behavior, 10% invoked the high level of access taxation, 13.3% named as obstacles different restrictions stated in the access papers issued by the forest district.

A percentage of 63.3% of respondents agree with the planting of melliferous woody species but only 50% are willing to pay for it, the "refuse to pay" category representing 40% of the sample. Some beekeepers (20%) do not see as necessary the

creation of new woody species melliferous plantations and 16.7% have no interest in the matter.



Photo 1. Pastoral beekeeping using temporary stands (in an acacia forest-Iasi County).



Photo 2. Pastoral beekeeping using mobile pavilions and temporary stands in a forest area (Iasi County).

When it comes to promoting beekeeping in their own residence areas only 23.3% of apiary owners encourage other people to take up this activity and offer assistance, considering that this great potential must be harnessed. A larger percentage, 50% of respondents only give general information in the case they're asked, and the rest of 26.7% do not encourage others or don't promote beekeeping, for different reasons like fear of competition or simply think other entities should do that. In Table 1 a series of

correlation analysis results are presented, using the Kendall coefficient. Significant correlation were found between the type of beekeeping (from a economic standpoint) and willingness to pay for planting melliferous woody species for production growth purposes. Also a significant correlation exists between the number of hives and type of beekeeping (from a mobility standpoint) - more hives means the beekeeper sees mobility as the choice to harness production potential in different areas. It is well known from informal discussions that forest access obstacles (bribes, high taxation, abusive behaviour from the authorities) influence beekeeper's activity, but the correlation analysis indicates the opposite, a fact that leads to the thought that beekeepers have a reserved attitude when it comes to very delicate issues and chose to hide the truth.

Conclusions. Over 50% of the Romanian population lives in rural areas, the percentage for Iasi County coming close to 60%. The development of these areas is a major task for policy makers, from both national and European levels. No matter how great the amount of legislative and financial support is, if people with entrepreneurial spirit and the right means don't get involved to harness the potential, nothing will be accomplished. Using qualitative analysis the present paper tries to reflect the state of beekeeping entrepreneurship in relation to forest related production potential. Almost all beekeepers were from rural areas (96.7%) and also the location of the apiary was in 76.7% of the cases in rural areas or in the proximity of rural settlements. For 63.3% of apiary owners this activity is a business (legal entity status). Regarding the number of hives, only 6.7% of respondents have between 101 and 200 families, the majority (over 70%) is represented by those with 25 to 50 hives and 51-100 families. Close to 80% of apiary owners practice pastoral beekeeping with temporary stands or mobile pavilions. Pastoral beekeeping is the most lucrative, ensures the highest profits and is the only method that can use forest melliferous potential. Only 3.3% of respondents didn't access beekeeping funding programs (state and EU funds), 90% are already beneficiaries and 6.7% in the process of receiving the funding. When we reach the production topic crops and meadow plants are the most important source of honey production for over 70% of respondents. Lime and acacia represent the main production sources for only close to 30% of beekeepers. If we analyze data from only one of the 5 forest districts that constitute the County Forest Administration, from a total area of 10080 ha administrated by Podu Iloaiei Forest District 18% is lime part of mixed stands and 7% acacia. Apiary associations mention production levels (per hectare) for acacia of 700-1500 kg ha⁻¹ and for lime 1200 kg ha⁻¹.

This is clearly an indication that the potential of the area is not fully harnessed. From the income standpoint crops and meadows are the source for the largest part of the income for more than 70 % apiary owners, and only 26.6 of beekeepers have lime and acacia as main income generating sources. The obstacles that impede on apiary owners to access forest areas during acacia and lime seasons are the obligation to pay bribes to the foresters for 56.7% of respondents, other 10% also blame foresters for abusive behavior, 10% invoke the high level of access taxation and 13.3% name different restrictions stated in the access papers issued by the forest district. The majority of respondents agree with the planting of melliferous woody species, but only 50% are willing to pay for it. Promoting beekeeping as an income generating activity in rural areas is practiced by only 23.3% of apiary owners, that also offer assistance, and 50% stick to just giving general information only if asked.

National afforestation campaigns should be initiated and target areas with forest cover below the national average considering beekeepers production interests and the demands for other type of non-wood forest products and services. Due to the high percentage of pastoral beekeeping funding should be channeled for afforestation using melliferous species like acacia that have additional functions like wind-belts or shelter belts.

Beekeeping is only one way to profit from forest products and services, so an integrated approach must be used to identify (at regional or local levels) and harness all forest linked entrepreneurial possibilities so to increase the contribution to the sustainable development of rural areas.

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Received: 17 July 2014. Accepted: 14 September 2014. Published online: 15 September 2014.

Authors:

Constantin Florin Barbir, Faculty of Forestry, University "Stefan cel Mare" Suceava, University Street no. 13, 720229, Suceava, Romania, e-mail: barbirconstantin@yahoo.com

Bogdan Mihai Negrea, Faculty of Forestry, University "Stefan cel Mare" Suceava, University Street no. 13, 720229, Suceava, Romania; University of Liege, Agro-Bio Tech Gembloux, Gembloux 5030, Bat G1, Passages des Deportes 2, Belgium, e-mail: bogdannm@yahoo.com

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How to cite this article:

Barbir C. F., Negrea B. M., 2014 The forestry sector acting as a basis for local and regional entrepreneurial initiative like beekeeping, on the path towards reaching sustainable rural development in Iasi county, Romania. *AES Bioflux* 6(3): 235-242.