



Article

Agritourism-A Sustainable Development Factor for Improving the 'Health' of Rural Settlements. Case Study Apuseni Mountains Area

Ramona Ciolac ¹, Tabita Adamov ^{1,*}, Tiberiu Iancu ¹, Gabriela Popescu ¹, Ramona Lile ², Ciprian Rujescu ¹ and Diana Marin ¹

- Faculty of Management and Rural Tourism, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania", Calea Aradului no.119, 300645 Timisoara, Romania; ramonamarianaciolac@usab-tm.ro (R.C.); tiberiuiancu@usab-tm.ro (T.I.); gabrielapopescu@usab-tm.ro (G.P.); rujescu@usab-tm.ro (C.R.); dianamarin@usab-tm.ro (D.M.)
- ² Faculty of Economics, Aurel Vlaicu University, Bd. Revolutiei no.77, 310130 Arad, Romania; ramona.lile@uav.ro

Received: 22 January 2019; Accepted: 27 February 2019; Published: 9 March 2019



Abstract: Agritourism is a complex activity, a chance maybe today to ensure both human health and the "health" of the environment and rural settlements in order to achieve a most wanted desideratum, the sustainability of the rural environment. The idea of this paper starts from the trend of the current period, meaning the strong emphasis on natural, organic, bio, in all human activities, health and environment, in a word, sustainability. The necessity of implementing the sustainability of activities, health and environment in rural areas, taking into account the agritourism field, was a subject pursued in the study, taking as area of study the mountainous rural environment, the reason of this choice deriving from the fact that the mountain area offers great opportunities for agritourism development, the practice of which is even necessary in the current period. The sustainability of agritourism on rural health and environment cannot be dissociated from the economic, social and cultural life of the community in which it manifests itself, and has a multiplier effect on all the domains with which it interacts. So the purpose of the paper is to follow the development of the agritourism field and, based on some present information, to make a future forecast for some specific indicators, to highlight the representative aspects related to the development and capitalization of guesthouses from a rural mountain environment through agritourism and to come up with a forecast for future transformations that need to take place in the studied area in order to support the sustainable development of the human environment through agritourism.

Keywords: agritourism; sustainable development; the "health" of rural settlements; Apuseni mountains; forecast through a logistic model

1. Introduction

Most European countries, and beyond, have to see rural development as a chance to fight poverty, to ensure the sustainability [1,2] of the rural environment, so each industry is encouraged to find a solution for sustainability in its own field [3]. Sustainability puts its accent on values and principles, which have as their main purpose to guide actions, in a responsible and harmonious way, taking into consideration the environmental and societal consequences, as well as economic purposes [4].

Agritourism is an activity that links the economic, social and environmental components of sustainability, strongly related to local communities and their attitudes towards tourism [5], so one of the solutions for rural areas can undoubtedly be agritourism. Agritourism can be seen as an innovative and diversifying strategy for farms, [6] including recreational and leisure activities for tourists, with

Sustainability **2019**, 11, 1467 2 of 24

many economic and non-economic benefits for farmers, visitors and communities [7], with a significant emphasis on natural, organic, bio aspects, in any part of human activities, health and the environment, in a word on sustainability [8,9]. In practical terms, agritourism is a complex activity, which is directly connected with other local activities [10]. In a rural locality, tourism cannot be dissociated from the economic, social and cultural life of the community in which it manifests itself. In European countries, agritourism has become a priority in the last decades of this century, in local development policies now and in the future, and this type of tourism is being based on three coordinates: space, people and products that are in a close correlation, unable to exist without each other. Agritourism can support new directions in rural sustainable development, with specific effects on the environment, agricultural heritage, or economic growth [11,12].

As a tourism offer, agritourism appeared in Europe around the 1960s. The popularity of rural and mountainous areas, in particular, [13] as a possibility to spend a second holiday [14] has increased in most countries [14]. Therefore, in European countries agritourism is not a new phenomenon, what is new is the expansion of it in recent years justified by concerns related to a high quality of life, and of course sustainability. Every offer of agritourism varies in Europe. The real agritourism offer is relatively rare, [11,15] so there are countries with specific agritourism offer (such as Italy, Austria, Switzerland, Germany, Denmark, Spain, the Netherlands, Belgium), or with a mixed offer of rural tourism and agritourism (France, Ireland, Portugal).

As mentioned, the notion "sustainable" is used in various fields, agritourism being one, so sustainability has become one of the most important strategic issues for many rural areas. [3] Most studies have shown that tourism combined with rural resources and traditional products would be an important "tool" for revitalizing rural, mountainous areas [16–22]. Modern patterns of rural development highlight that a rational and planned exploitation of agricultural resources together with the valorization of cultural and naturalistic heritage of rural areas, or simply said, the right leverage to assure sustainable growth of rural settlements, are through agritourism [23].

In fact, the connection between agritourism and sustainability is very well identified in the Italian National Law, [24] in which the eight sustainable objectives of agritourism to support rural area are mentioned: stop rural outmigration by keeping farmers on the land, improving the use of both natural and built rural resources; enhancement of environmental conservation and management; promotion of "typical" rural products; support for rural traditions and cultural initiatives; development of agricultural areas; development of youth and social tourism; and enhancement of the relationship between city and countryside [25].

The idea of sustainable development through agritourism activity in the Apuseni Mountains area is supported by the high potential for tourism activities, (the degree of urbanization is below 30%, meaning large areas that are still rural), and we consider it to be one of the viable solutions for this area. Other studies are based on this statement, studies which reveal the fact that the little settlements here are in decline in the face of limited employment opportunities and poor services, and very important for the "health" of this area is the emphasis on private farming and the expansion of some new activities that are attractive to young people, such as agritourism [17,22].

Literature Review

The sustainability of agritourism on the "health" of rural environment derives from the fact that this activity cannot be dissociated from the economic, social and cultural life of the community. Between tourism and environment there is a close relationship based on: the environmental elements considered to be tourist attractions; facilities and tourism infrastructure; and the impacts generated by tourism development and tourist use on the environment and settlements [26]. The link between agritourism and the sustainability of rural settlements derives from the definition of this activity. Agritourism (see Table 1) is as a form of rural tourism [13] a hospitality activity, performed by agricultural entrepreneurs and their families, that first of all, must remain connected to farming activities (which involves production activities, activities of processing agricultural products in the

Sustainability **2019**, 11, 1467 3 of 24

household and their marketing), [24], and complementary to developing tourism activities, that completes the income from agricultural activity [27]. We conclude that there is a sustainable activity for agricultural activities and for stopping migration.

Table 1. Agritourism as a tourism offer.

Criteria for Defining Agritourism	The Elements of Definition	Benefits for Those Involved in Developing this Activity
Definition of agritourism from the perspective of agricultural activity	unites elements of two complex sectors—agriculture and tourism can play a significant role in supporting many agricultural enterprises	Advantages for farmers (1) development of new market niches (2) increasing interest for agricultural local products (3) the opportunity to maintain/use agricultural land
Definition of agritourism from the perspective of the development of rural communities	source of the growth and diversification of the rural economy diversification to maintain the viability of agricultural businesses	(4) creating jobs at the family level (5) increasing the sustainability of agricultural businesses Benefits for communities (6) creating new jobs
Defining agritourism as a stand-alone component	conomic activity within an agricultural holding/farm or food andustry enterprise carried out in order to produce distors' advantages and satisfaction carried out in order to generate additional income for the farmer	(7) expansion of local market (8) attracting other businesses and small industries Benefits for tourism industry (9) diversifying the mix of tourist products (10) positioning, as a rarity, of agritourism communities

Source: Authors' processing by various bibliographic sources (processing after 7,9,13,27,28).

Therefore, agritourism implies the existence of two main activities: agricultural and tourism activities, which assume three elements specific to any tourist product with some particularities in this case: accommodation, food and entertainment [28], and of these peculiarities of the tourist product rural settlements may have a chance to win:

- The first element of the agritourism product is accommodation. The farmer has the possibility to obtain additional income from renting the surplus of rooms existing in the farm. The agritourism accommodation service is thus intertwined with the main activity of the farmer (agriculture), but without interfering with it.
- The second element of the agritourism product is food. Through food, the farmer has the possibility of direct capitalization of agricultural production, being a direct relationship between the person who offers the services (the farmer and his family) and the one who requests them (the tourist). Another peculiarity of food in agritourism is the fact that it is based on the traditional cuisine of the place and prepared with products from their own household, or from the area/region, thus supporting both the agritourism farm and the area it is part of.
- The third element of the agritourism product is tourist entertainment. In the case of agritourism, the tourist entertainment is based on traditional activities in the farm or household where the tourist can actively or passively participate.

The preservation of a rural world, with everything that is significant, can take into account the initiation and development of this form of tourism. The meeting between the rural area, a particularly fragile environment, and the dynamism imposed by the tourism phenomenon poses the risk of restructuring. However, agritourism must become an alternative to the problems of rural settlement, so in this context it may take three forms (see Figure 1).

Sustainability **2019**, 11, 1467 4 of 24

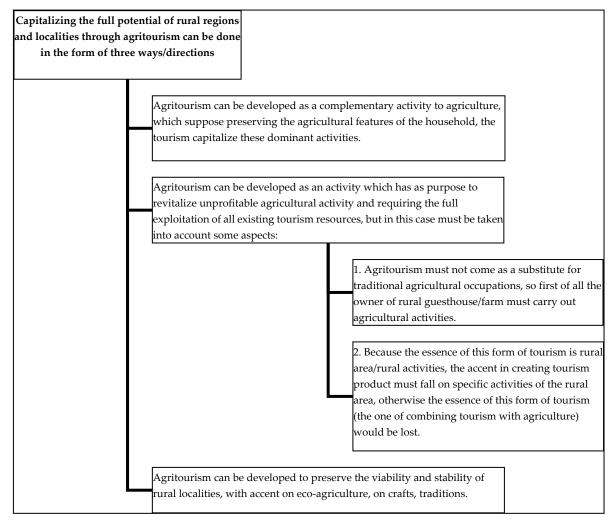


Figure 1. Capitalizing the full potential of rural regions and localities through agritourism (processing after 6,9,10,14,27).

The impact of agritourism on quality of life standards is significant in terms of profit, in many ways, [29], so the rural areas where agritourism will be practiced will become the places where all elements of local sustainable development will be assembled [5,30]. There will appear an interest in improving the infrastructure, of creating a spiritual life of rural localities, strategic objectives may be achieved regarding the human factor, technical endowments and heritage conservation [31–33]. So in order to support these statements, illustrated in Figure 2, we have briefly reviewed some examples of good practices, focusing on community approach and territorial cohesion in rural areas.

Sustainability **2019**, 11, 1467 5 of 24

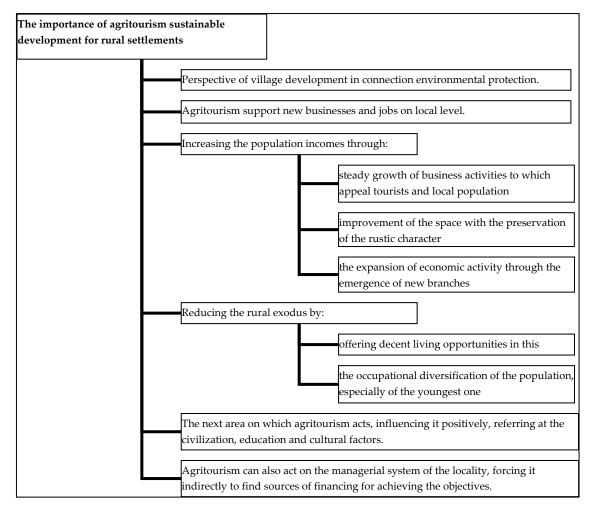


Figure 2. The importance of agritourism sustainable development for rural settlements [5,30–32].

Maintaining agricultural activity is a major challenge for European rural areas. The decline of local economies affects the environment, landscapes and other economic sectors, especially tourism and social life. Agritourism can be a way of diversifying rural economies in rural areas and can provide alternative incomes for the population of these areas, through the quality and authenticity of traditional products, which represent the identity of popular localities, and attract consumers, saturated by the homogeneity of the same products. However, the quality of local products has a special role to play in influencing and securing agritourism [19]. Therefore, the focus should be on strong partnerships, to ensure mixing/blending of cultural activities, cultural heritage, gastronomy, agriculture. There are some practical examples from different countries, where this blending was made possible through some projects in which, through the approach or benefits of the projects, the beneficial consequences mentioned in Figure 2 or others express the link between agritourism and sustainability:

- The Province of Belluno, Italy, has developed a new approach regarding the development of mountainous territory, involving different economic sectors. "Routes to mountain aromas" was a project linking tour operators with local agricultural products from the territory. The tourist package developed includes local agricultural products, the environment and landscapes, crafts and culture, traditions, the aim being to bring together various productive sectors such as farmers, craftsmen, tourists and cultural activities through a multi-sectorial approach, supporting social cohesion by linking territorial tourism activities, encouraging the use of local products [19].
- The "Rural Tourism District" is another innovative project applied in the Valle del Crocchio Local Action Group from Italy. The project demonstrates innovation and forward thinking because it anticipated regional regulation regarding rural districts at a time when no other area had thought

Sustainability **2019**, 11, 1467 6 of 24

about it. The project itself focuses on community approach and territorial cohesion in rural areas through an integrated package of activities that have developed the quality of infrastructure for agritourism in the region and connects: the tourist accommodation structures with agriculture; local cooperatives; cultural attractions such as museums and architectural sites and recreational activities such as pedestrianized road networks [20].

- The project "Grandmother's House", from GA Pomoottoriry LAG, Finland, was the idea of a local who focused on the country's lifestyle, and the economic and ecological benefits were taken into account, the project being implemented by local authorities in order to capitalize natural and anthropogenic resources in the region and encourage migration in this region, given the economic benefits generated by the growth of housing development. The repopulation of this rural area was one of the priorities of the LAG, at the same time as economic development strategy, coupled with the stimulation of tourism and other service sectors [20].
- "Intelligent Village of the Future (Ruhtinansalmi)" from Finland, in this case, the proposed activity of the project takes place in an active and innovative but isolated village in the northeastern part of Finland. As in many isolated areas of Europe, the village faces a population decline, the effect of an economy based on agriculture that has become unprofitable for the population. This project has been developed to improve the situation of the community as this project proposes the development of infrastructure and services to attract people from all over the world or from other countries to live, work or spend a holiday in the area. The aims of this project were: to provide fast internet in the village; to develop methods of obtaining bio energy; to renovate and equip the adult education center from locality; to develop sites for promoting the area (both in German and English); to test activities such as adventure tourism; to map the properties and to promote them for sale or rent; to place tourist information signs in areas where they do not exist [21].
- The "Spa center on a farm built in 1645" from The Netherlands is another example of community approach and territorial cohesion. One of the features that make this project different is the high level of cooperation with local and regional entrepreneurs for the supply of beverages or food [21].

Agritourism, more than any other field of activity, is dependent on the environment, representing its "raw material", the object and field of activity and the development of tourism, being its framework support, or the bearer of its resources. Tourism is carried out in the environment, and the environment and its quality can favor or disadvantage tourism activities [34]. Some principles can be mentioned in the case of agritourism in order for it to be sustainable tourism: [35] economic development, social development and environmental protection.

There are also many benefits for the tourists willing to practice this activity (see Table 2).

World Tourism Organization statistics show that forms of tourism in rural area are increasing. Specialists believe that rural communities will be more successful in the future in caring out agritourism activities for several reasons [36]:

- in Europe, the aging population leads to an increase in the number of elderly tourists attracted by this form of tourism;
- to increase interest in environmental and health issues;
- those from urban area have short vacations, so they want destinations that are easy to find and affordable from a financial point of view;
- to increase the number of those who want a quiet tourist area in an unpolluted environment.

Sustainability **2019**, 11, 1467 7 of 24

Table 2. Possible elements to offer through agritourism to potential tourists.

What Does the Agritourism Consumer Want?	What Can be Offered Through Agritourism?
Quiet	location away from the noise sourcesrespect for privacy
Healthy food	products obtained in their own householdspecific culinary tradition
Relax in an active way	climate of relaxationalternatives to spending leisure time
Return to nature	location as close as possible to the vegetation areasknowledge of the area's natural resources
Knowledge of the rural area	 access to traditions, folk costumes, customs practicing specific rural handicrafts, such as weaving, pottery, etc. participation at some specific local holidays
Environmental refuge	location away from the sources of pollutionbiological food
Participation in the life of the rural community	proximity between tourist and hostdiscussions on rural issues and how to deal with them

Source: Authors' processing by various bibliographic sources [7,8,14,28,30].

2. The Aim of the Paper

This paper has as its purpose to highlight the importance of agritourism for improving the "health" of the environment and rural settlements, through sustainable capitalization of the full potential of rural regions and localities. The first sub-purpose is to explain the meaning and reason why agritourism must become an alternative to the problems of rural area, in order to achieve the main desideratum, the sustainability of this environment, taking in consideration its principles and benefits. The second sub-purpose of the paper is to underline the evolution of the current situation of Romanian agritourism guesthouses and to complete a future forecast by using a logistic model. For the third sub-purpose of the paper we chose the Apuseni Mountains, as a concrete area of research, and here we have applied a questionnaire to reveal aspects related to: the surface of the farm and the existence of specialized training, the development and capitalization of households through agritourism, the motivation of tourists to practice agritourism in the area, the desire for cooperation of the owners of agritourism structures to improve the agritourism product. Based on the statistical information existing for the Apuseni Mountains area, a series of future forecasts were made, using the same logistic model as the national level, and the results obtained support the sustainability of this area of activity for this rural area.

3. Materials and Methods

The methodological approach of this paper involved a combination of "desk research" methods (collecting information from secondary sources, already existing) with the collection of primary information through quantitative studies and discussions (interviews/questionnaires). The main advantage of the research is represented by the series analysis of 8 years, so the data were analyzed for a recent and relevant period for agritourism development, as well as the analysis of a representative

Sustainability **2019**, 11, 1467 8 of 24

tourist area (7% of the country's surface). Specifically, the main activities specific to the research carried out in this study are:

- Office research (identifying and evaluating the information sources, collecting and analyzing secondary information, preparing the theoretical framework).
- Foundation and achievement of some quantitative research (interviews/questionnaires for accommodation spaces from the Apuseni Mountains), centralization, analysis and interpretation of data resulting from the two primary researches and inclusion of conclusions in the final report.
- The questionnaire used in this paper covered two parts:
- identification of information on the respondents' characteristics and the degree of socio-economic development of the area;
- focus on the agritourism field itself.

The questionnaire was conducted through a face-to-face interview, and was addressed directly to the owners of agritourism structures. In order to achieve the proposed objectives, a questionnaire was designed, and subsequently applied in the six counties constituent of the Apuseni Mountains. Questionnaires were applied to each county, the areas being chosen for their representativeness for agritourism activity, and the number of questionnaires applied being directly correlated with the number of households approved for agritourism.

The dynamics of the number of agritourism guesthouses, meaning the net index using the agritourist accommodation capacity, was studied by using a logistic model NATE = $\left(1/u + b_0 \cdot b_1^Y\right)^{-1}$, respectively IAA = $\left(1/u + b_0 \cdot b_1^Y\right)^{-1}$, motivated by the fact that such series have a capped evolution. The dynamics of the occupied population in agritourism has been studied as a function of the number of such guesthouses found in the area studied at a particular moment in time using the hyperbola POA = $b_0 + b_1/NATE$.

Statistical calculations were performed using the SPSS system in the case of determining the regression functions and correlation coefficients. For graphical representations Wolfram Alpha or Microsoft Excel applications were used. The notions of tabular calculation were achieved by using Microsoft Excel.

The motivation of choosing the area of the Apuseni Mountains, as area of this study derives from the desire to bring this area into the spotlight. We support the above statement by the fact that the area is part of the category of rural areas with great tourist potential that can offer a wide variety of tourist products to tourists. The surface of the Apuseni Mountains region (see Figure 3) represents 7% of Romania and is extended across six counties: Alba, Arad, Bihor, Cluj, Hunedoara and Salaj. The degree of urbanization is low, about 30%, which is an excellent condition for rural tourism. As a human habitat, the area groups 16 towns, 1253 villages, the characteristic element being the absolute dominance of small villages and towns, namely 348 villages have under 100 inhabitants, of which 42 villages have fewer than 20 people [37].



Figure 3. Apuseni Mountains area, (adapted from [38]).

Sustainability **2019**, 11, 1467 9 of 24

The tourist areas from Apuseni Mountains are grouped, from geographical point of view, in 15 areas, each having certain specific features, being characterized through certain forms of the tourism that it is possible to develop, taking into consideration the main resources existent in each area: Vadul Crisului area and Crisul Repede area, Meziad area, Padis-Cetatile Ponorului area, Aleul Valley area, Valea Iadului-Stana de Vale area, the karst area of the Vascau-Izbuc Calugari, the area of Baisoara Mountain, Gilau-Tarnita area, Belis-Fantanele area, Ighiu Valley area, Ampoi Valley area, the Codru-Moma mountain area, the depression area of Gurahont-Halmagiu, Geoagiu Valley, Aries Valley area.

4. Results

4.1. Agritourism in Romania. Current Situation and Future Forecasts

At Romania's level, according to the national statistics found in the National Institute of Statistics, [39], there are 2556 agritourism accommodation structures (see Table 3-current situation) with 44,499 accommodation places in year 2017 (a certain evolution being recorded here, from 20,208 places in 2010, and 30,480 places in 2014), concentrated in the areas of Bran-Moeciu, Apuseni, Maramures, Bucovina, and the Danube Delta. The Romanian economy has known numerous changes in the period after 1989 up until today. Also the year 2007, relevant to the integration of Romania into the European Union (EU), represents a distinct point in the study of the dynamics of evolution of some statistical-economic indicators. More precisely, a number of factors that were, before these years, very limited compared to the values observed in the old EU member states, recently have become important developments, but it will probably be necessary to wait a long time before they reach the natural saturation period [40].

		Current Situation							Future I	orecasts
	2010	2011	2012	2013	2014	2015	2016	2017	2020	2030
No. of agritourism										
guesthouses	1354	1210	1569	1598	1665	1918	2028	2556	3236	7113
(number) (NATE)										
Index of net using the										
agritourism accommodation	12.4	13.8	13.2	12.6	13.2	15.1	15.5	15.7	17.8	23.2
capacity (%) (IAA)										
Population occupied in	4372	4327	4672	4520	4756	4830	4912	4978	5072	5409
agritourism (persons) (POA)	-5. -				00	_5500				2 207

Table 3. Agritourism in Romania. Current situation and future forecasts.

Source: Processing by data from the National Institute of Statistics, http://statistici.insse.ro, consulted in 6 May 2018 [39].

Such an evolution (see Table 3-future forecast) can be described using a logistic model [41,42]. with a statistically assured correlation coefficient, r = 0.947 at sig. < 0.001. Thus, for the year 2020 the function determined indicates the value NATE₂₀₃₀ = 3236 respectively for the year 2030 being NATE₂₀₃₀ = 7113 agritourism guesthouses.

The net index using the agritourism accommodation capacity was described by the logistic function, whose expression we have determined as being (see Table 3-future forecast):

$$IAA = \left(1/50 + 4.6 \cdot 10^{37} \cdot 0.9564^{Y}\right)^{-1}$$

having r = 0.835 at sig. = 0.01. For the year 2020, the function indicates the value $IAA_{2020} = 17.8$ respectively $IAA_{2030} = 23.2$ for the year 2030.

The dynamics of the occupied population in agritourism was established as a function, depending of the number of guesthouses at the time, using the function (Figure 3):

$$POA = 5690.94 - 2 \cdot 10^6 / NATE$$

Sustainability **2019**, 11, 1467 10 of 24

having r = 0.957 at sig. < 0.001. For the year 2020, the function indicates a population occupied in agritourism in a number of $POA_{2020} = 5072$ respectively of $POA_{2030} = 5409$ people in year 2030.

As a comparison, Italy and Austria, especially in the mountain area, have more than 2.5 million accommodation places and host more than 50 million tourists annually. This is in conditions, in which the mountain is the main attraction, but Romania has a mountain area of over 70,000 square kilometers, and Italy and Austria have just over 50,000 square kilometers. To get deeper, the average annual occupancy degree of the guesthouses of Romania is half (25–30 days) compared to the two countries where it reaches 60 days. That means hundreds of millions of euros each year [43].

4.2. Specific Features of the Agritourist Activity from the Apuseni Mountains Area

Over time in the Apuseni Mountains, the rural specificity of the region has directly determined and influenced the specific way of life of this area. The socio-economic problems of the Apuseni Mountains area are related to the high degree of dispersal in the territory of human settlements, which determines major deficiencies in the provision of technical and public infrastructure, as well as the negative dynamics of the population caused by the high level of emigration and demographic aging. The complexity of agritourism activity for the area in question is supported, firstly, by the fact that the Apuseni Mountains include six counties and three development regions, the solution of the various problems regarding the development of the area embraces a large number of institutions, or the correlation of measures and actions that will be undertaken in each region will have to extend beyond the administrative boundaries of the regions. This is because the processes and phenomenon have zonal features that do not stop at the arbitrary border of the regions and the characteristics of such a tourist development program for the Apuseni Mountains region involves simultaneous marketing and financing programs.

If we were to undertake a diagnosis of the tourist activity of the area, we could conclude that many disparities are registered according to some studies in the field. [16–18,22,44,45] (see Table 4):

- The natural tourism potential, meaning the geographical conditions, specific to the area, represents strong points when we speak about the agritourism sector of this area.
- The anthropic potential can contribute to the increase of income and to attracting young people to the rural area, taking into account the agritourism activities. This statement is based on the fact that a large part of the area's localities are very good at preserving traditions. The rural area has not lost its originality, from its attractive side, but has supported the preservation of the identity of settlements, culture, and traditions.
- Another positive aspect is the fact that lately we became aware of the existence of a great tourist potential and the area begun to be promoted, but still quite shy.
- The total accommodation capacity of the Apuseni Mountains area represents about 9.74% of the accommodation capacity at the national level.

Sustainability **2019**, 11, 1467 11 of 24

Table 4. The main disparities of the Apuseni Mountains area-brief SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis.

Weakness/Threats

Strong Points/Opportunities

- The tourist potential of the area is exploited only in a small extent (12 hotels, classified with one or two stars, 20 villas, classified with one-four stars, 6 motels classified with one or two stars, 16 cottages, classified with one-three stars, 3 holiday villages, located in: Boga, Fantanele, Vartop, 202 households/agritourism guesthouses).
- Absence of public services (water, canal, thermal energy) at the level of rural localities.
- The general access infrastructure is one of the major weaknesses (low degree of road equipment, underdevelopment of the utility distribution network, places that are not yet electrified).
- Labor force (high share of unemployed, dependence of the workforce on mining enterprises, migration of the population and village disappearance).
- Tourist potential is not capitalized: lack of local brands and tourist products, lack of specialized training, lack of guidance to tourist areas, the existence of a poorly diversified offer.
- Poor cooperation at local level.

- Favorable areas to agritourism: Aries area, Belis-Fantanele areas, Buntesti, Pietroasa, Budureasa areas, Gurahont-Halmagiu areas, Gurahont-Halmagiu areas, that can contribute to the increase of income and attracting young people to the rural area.
- Lately it has learned about the idea of a great tourist potential and has begun to be promoted.
- Components of the possible agritourist product (relief resources and those with rural features, gastronomical elements, the existence of traditions, customs, folklore and local architecture.
- The economy is predominantly agrarian, but the income from agriculture is quite low, and the territorial services are use below standard, which requires a reorientation towards those activities that can capitalize the existing resources.

Source: Authors' opinions, based on previous researches [16–18,22,44,45].

However, as observed above, with all the great potential, there are many negative elements that influence the development of agritourism in the studied area:

- Absence of public services (water, canal, thermal energy) at the level of rural localities;
- The general access infrastructure is one of the major weaknesses, which has a long way to go to improve up to the national average quality level and still very much to be comparable to the infrastructure of tourist areas of the West, if such an evolution of localities in the area is desired;
- Non-exploitation of the agritourism potential, the causes being multiple:
- agritourism is practiced more in a spontaneous form rather than an organized form, following the motto "the tourist finds the agritourist farm and it is not the farm that attracts the tourists". This is one of the reasons that demonstrate the need to organize this form of tourism with the involvement of the authorities and the local community, so it will be economically viable for both.
- the owners of tourist locations have entrepreneurial skills, in general, and less specialized knowledge in the field of tourism and management skills in this field;
- tourist locations have a low occupancy degree compared to the potential;
- services offered to tourism consumers are not very diversified (accommodation and meals).

However, in years to come, the Apuseni Mountains must be perceived, not only as a geographical individuality, but also as an individuality from economic or tourism point of view. Therefore, according to some studies, a reconsideration of the area's economy is necessary and it requires a reorientation towards those activities that can capitalize on the existing resources. In recent years, all counties from Apuseni Mountains have documented their main guidelines for future development by focusing on local tourism, of which agritourism has a very large share, but, in the future, a series of measures are needed for a re-launching solution for the rural areas, such as: the need to modernize tourist offers by developing regional products; raising workforce qualification; improving service quality; improving public-private collaboration and partnership; the qualitative and quantitative increase of tourism promotion [22,44,46,47].

Sustainability **2019**, 11, 1467 12 of 24

4.3. Identifying Representative Aspects Related to the Development and Capitalization of Households from the Apuseni Mountains Area through Agritourism

A large number of Apuseni Mountains localities are very good at preserving traditions. (see Figure 4). If traditions and customs areas are added to mountain natural resources and specific traditional products, [5,22,45,48] a valuable tourist product emerges, which could contribute to the increase of income and to attracting young people to the rural area [17,18]. The rural settlements, which have a remarkable historical, natural and cultural potential and have developed the necessary tourist infrastructure (guesthouses/agritourism farms) have entered in the tourist circuit.

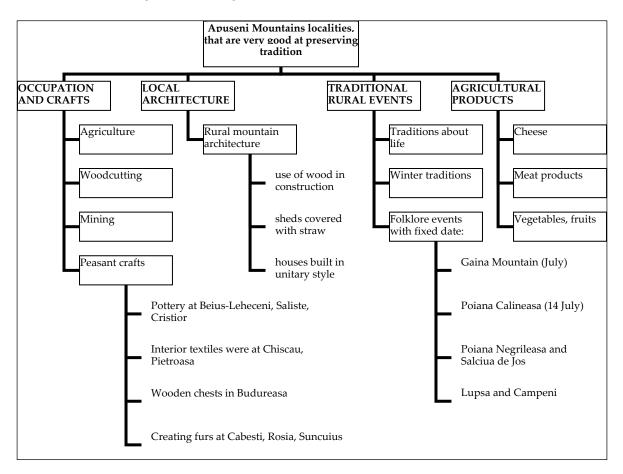


Figure 4. Apuseni Mountains localities, that are very good at preserving tradition [17,18].

The agritourism guesthouses (see Table 5) are unequally distributed in the counties constituent of Apuseni Mountains and starting from this premise, the questionnaires that we applied were different in number.

Table 5. Distribution by counties of the guesthouses questioned.

Cluj County	Bihor County	Alba County	Arad County	Salaj County	Hunedoara County
60 guesthouses	44	48	7	23	20

Thus, in order to pursue the purpose of the paper, to underline the evolution of the current situation of the current situation of the agro-tourism guesthouses in Romania and for future forecasting through a logistic model, specifically on the Apuseni Mountains, we have used a questionnaire that was conducted through a face-to-face interview, and addressed directly to the owners of agritourism structures. The samples were selected by taking into consideration their representativeness for agritourism activity (to practice booth agriculture and tourism), their geographic position, their

Sustainability **2019**, 11, 1467 13 of 24

economic representativeness. The number of questionnaires applied was directly correlated with the number of households approved for agritourism from the area, and then statistical calculations were performed in SPSS.

The items included in the questionnaire, ten in number, are grouped in the following categories:

- finding information about the characteristics of respondents;
- finding aspects related to the surface of the farm and the existence/inexistence of a specialized training;
- finding aspects related to the development and capitalization of households in the area analyzed through agritourism;
- finding aspects related to the motivation of tourists to practice agritourism in the area/agritourism guesthouses under analysis;
- finding aspects about the willingness to cooperate, in order to improve the agritourism product, from the owners of the agritourism structures.

Characteristics of respondents. A number of 202 owners of agritourist households/guesthouses from the chosen area have been chosen, namely from the Apuseni Mountains area, their distribution on counties, showing a representative share for Cluj County (29.70), followed by Alba County (23.76%), Bihor County (21.78%). (see Table 6).

Sex	3.6	3.5	*47	To	otal	
Studied Area	Measure Unit	Men	Woman	No.	%	
Alba County	No.	32	16	40	22.77	
Alba County	%	66.66	33.33	48	23.76	
Rihar County	No.	23	21	4.4	01.70	
Bihor County	%	52.27	47.72	44	21.78	
Clui County	No.	42	18	60	20.70	
Cluj County	%	70.00	30.00	60	29.70	
Hunedoara County	No.	13	7	20	0.00	
Tunedoara County	%	65.00	35.00	20	9.90	
Arad County	No.	3	4	7	2.46	
Arad County	%	42.85	57.14	/	3.46	
Salaj County	No.	15	8	23	11.38	

Table 6. Grouping the respondents from Apuseni Mountains area by counties and sex.

The lowest share of the number of persons interviewed is attributed to Arad County (3.46%). Their distribution by gender is as follows: 128 men, representing 63.36% from the total and 74 women, respectively 36.63% from the total of those interviewed.

Aspects related to the surface of the farm and the existence/non-existence of specialized training among owners of agritourism households. Because agritourism activity is conditioned by agricultural activity, the existence of the farm was an aspect pursued by us in the questionnaire. Thus, from the 202 agritourist guesthouses surveyed, (see Table 7) within the six counties, a large proportion of farms have a small size farm between 5 and 10 hectares.

Sustainability **2019**, 11, 1467 14 of 24

Table 7. Aspects related to t	the surface of the farm and	the existence/i	inexistence of s	pecialized training.

Studied Area	Measure Unit		n-existence of lized Training	Agricultural Area of the Farm (Ha)			
	Cint	Yes	No	5.00-10.00	10.00-20.00	20.00-30.00	
Alba County	No. %	19 39.58	29 60.41	41	7	-	
Bihor County	No. %	17 38.63	27 61.36	36	8	-	
Cluj County	No. %	34 56.66	26 43.33	42	12	6	
Hunedoara County	No. %	7 35.00	13 65.00	14	4	2	
Arad County	No. %	3 42.85	4 57.14	4	2	1	
Salaj County	No. 10 % 43.47		13 56.52	16	7	-	

On the other hand there is a small number of agritourism guesthouses on farms between 20 and 30 hectares. The existence/non-existence of specialized training among agritourist households is also a representative aspect to be followed, and following the data processed in Table 4 and comparing it to other studies [48] within the area, we see an improvement in the last few years. Despite the training situation in the area studied, in five counties of six, the number of Apuseni Mountains has improved, and the number of agro-tourism guesthouses that do not have specialized training is higher than the number of those who work in the field of agritourism.

Aspects related to development and capitalization of households in the area analyzed through agritourism. Essential elements of agritourism activity, but also some of the main attraction points for tourists, practicing craft activities with the involvement of tourists, or the capitalization of products from their own farm through agritourism were also on the list of aspects we pursued in this paper. The extent to which agritourism represented or not a growth opportunity for their own household, or in other words, the degree of awareness of the beneficial aspects of agritourism activity by those who carry it. (see Table 8), has also been determined.

 Table 8. Development and capitalization of households from the area analyzed through agritourism.

Studied Measure Area Unit		Capitaliz Product f Farm T Agritou	rom Own hrough	with the Inv	raft Activities volvement of sts (2)	Agritourism Represented or not a Growth Chance for Own Household (3)		
		Yes	No	Yes	No	Yes	No	
Alba	No.	29	19	23	25	43	5	
County	%	60.41	39.58	47.91	52.08	89.58	10.41	
Bihor	No.	25	19	21	23	36	8	
County	%	56.81	43.18	47.72	52.27	81.81	18.18	
Cluj	No.	48	12	38	22	53	7	
County	%	80.00	20.00	63.33	36.66	88.33	11.66	
Hunedoara	No.	13	7	9	11	14	6	
County	%	65.00	35.00	45.00	55.00	70.00	30.00	
Arad	No.	7	-	2	5	4	3	
County	%	100.00	-	28.57	71.42	57.14	42.85	
Salaj	No.	18	5	12	11	17	6	
County	%	78.26	21.73	52.17	47.82	73.91	26.08	

It can be noticed that, in the analyzed area, (see Table 8, (1)) for the first aspect subjected to analysis, the capitalization of the products from the farm through agritourism, a favorable trend is registered or an essential condition of agritourism activity (that of the production of a part of the products capitalized through tourism). In all six counties, the majority share tends towards the capitalization of products from their own farm through agritourism. Among the products capitalized through agritourism

Sustainability **2019**, 11, 1467 15 of 24

activities are: livestock products, vegetables, fruits, many obtained under biological conditions, fishery products, wine products.

The second aspect analyzed, (see Table 8, (2)) practicing craft activities with the involvement of the tourists, registered a positive trend, mostly at the level of Cluj and Salaj counties, but also a negative one at the level of Alba, Bihor, Arad, Hunedoara counties. The evolution is a favorable one as this statement is based on the fact that 5–7 years ago the share of those who did not value the capitalization of the traditional crafts through agritourism within this area was much higher. The craft activities practiced in the guesthouses questioned are: various woodworking, picking forest fruits in the guesthouses from Alba County; weaving, sewing folk costumes, wood processing, picking forest fruits in the guesthouses from Cluj County; zootechnical activities (sheep, cows) specific to mountain areas, specific culinary activities, weaving/sewing in the guesthouses from Bihor County; techniques of making wine, agritourism occupations, hunting, fishing in guest houses from Arad County.

Although agritourism is practiced more in a spontaneous rather than in an organized form in the studied area, the owners of tourist locations have entrepreneurial skills in general, and less specialized knowledge in tourism and management fields; the tourist locations have a low occupancy degree compared to their potential; and services offered to tourists are diversified to a limited extent. Agritourism represented a chance that for their own households to grow in the overwhelming opinion of those interviewed, (see Table 8, (3)).

Through the capitalization of the local resources and products by combining two activities, the agricultural activity as a core activity and the tourism activity as complementary activity, the profitability of agritourism is high, being in fact a chance for alternative income for rural areas with those in the mountain area. The practice of agritourism promotes the idea of combining economic interests in community development, the conservation of nature, and in other words, it ensures the sustainable development of the area. The entrepreneurs in the area can have a successful model for capitalizing the tourist potential of the area and for supplementing farm incomes through the possibility of adding a modest income from tourism activities.

Aspects related to the motivation of tourists to practice agritourism in the area/agritourism guesthouses under analysis. From this point of view, it was intended to identify the motivation for which the tourists chose the guesthouses in the Apuseni Mountains/agrotourism and three major aspects were considered (see Table 9):

- Special tourist resources specific to the Apuseni Mountains area;
- Quality-price ratio;
- The products/services offered by the agritourism guesthouses from the area.

Table 9. The motivation of tourists to practice agritourism in the area/agritourism guesthouses from Apuseni Mountains.

Studied Area	Special Tour	rist Resources	Quality-P	rice Report	Products/Services Offered		
	No.	%	No.	%	No.	%	
Alba County	22	45.83	14	29.16	12	25.00	
Bihor County	15	34.09	13	29.54	16	36.36	
Cluj County	23	38.33	18	30.00	19	31.66	
Hunedoara County	12	60.00	-	-	8	40.00	
Arad County	-	-	5	71.42	2	28.57	
Salaj County	3	13.04	11	47.82	9	39.13	

We have obtained this information through the questionnaire, questioning the owners of agritourism guesthouses. The conclusions reveal the fact that, from the experience of agritourism farm owners, tourists are attracted by the exceptional tourist resource, at a higher share, by the quality–price report on the second place and then by the products offered. Although the aspect of the diversification

Sustainability **2019**, 11, 1467 16 of 24

of tourism products and services offered is still to be worked on, it is apparently one of the attractive elements to tourists in the area.

The Apuseni Mountains area is valuable in terms of the existence of traditional resources and products that can be exploited by agritourism, and there are agritourism structures that attract tourists throughout the year (both in summer and winter). In conclusion, agritourism is a lever for local development, but we still have to solve a number of problems that this area is currently facing.

Aspects related to the identification of the desire to collaborate in order to improve the agritourism products from the owners of the agritourism structures. In recent years, all counties in the Apuseni Mountains have documented their main directions regarding future development, focusing on local tourism, within which agritourism has a huge share.

For agritourism to be truly a solution for the economic recovery of rural areas in the future, a series of measures are needed, such as: the modernization of tourist offers; creating some tourist products that highlight the "brand" of the area; collaboration between those involved in the implementation of this activity and the application of public-private partnerships would be just a few examples (see Table 10). The research made shows that the owners of agritourism guesthouses identify as future actions the increase of agritourism product quality/branding (in a large percent in Bihor County and Alba County, and in a small percent in Arad County form example) and, secondly, it is necessary to create tourism programs that focus on the life of the farm (Arad County having for this aspect the largest percent, the explanation deriving from the fact that here agritourism is at the beginning of development compared to the other counties). Regarding the third direction for improving the agritourism product, counties Salaj, Hunedoara, Bihor and Cluj consider opportune to focus on promotion and distribution.

	Measure Unit	Desire for C	Collaboration	Directions for Improving Agritourism Product				
The Studied Area		Yes	No	Increasing Quality	Focusing on Life on the Farm	Focusing on Promotion and Distribution		
A 11 C t	No.	33	15	31	13	4		
Alba County	%	68.75	31.25	64.58	27.08	8.33		
D:1 C	No.	27	17	29	7	8		
Bihor County	%	61.36	38.63	65.90	15.90	18.18		
Clasi Cassastas	No.	46	14	37	13	10		
Cluj County	%	76.66	23.33	61.66	21.66	16.66		
II1	No.	11	9	9	7	4		
Hunedoara County	%	55.00	45.00	45.00	35.00	20.00		
A 1 C	No.	6	1	3	3	1		
Arad County	%	85.71	14.28	42.85	42.85	14.28		
C-1-: C	No.	16	7	10	6	7		
Salaj County	%	69.56	30.43	43.47	26.08	30.43		

Table 10. Identifying the desire to collaborate in order to improve the agritourism product.

4.4. Current Situation and Future Forecasts Regarding Agritourism from the Apuseni Mountains Area

For future forecasts concerning agritourism in the Apuseni Mountains area, a special tourist resource, the quality–price report must be taken into account, as well as a focus on the products and services offered (see Table 9). Also, from the identification of representative aspects related to the development and capitalization of households in the Apuseni Mountains area through agritourism, it is concluded that agritourism entrepreneurs capitalize products and craft activities with the involvement of tourists from their own farms through agritourism, an aspect which, in most part, represents a chance for their own household to grow (see Table 8). In this way entrepreneurs are becoming aware of the opportunity of agritourism as an activity, identifying the desire to collaborate (see Table 10), the need to increase the agritourism product quality through some tourism programs with an emphasis on increasing quality, a focus on the life on the farm, and strong and sustained promotion (see Table 10).

Starting from the existing and the forecast situation (see Table 11), we have considered that such an analysis at the level of the analyzed area is appropriate. Just as at the national level, in

Sustainability **2019**, 11, 1467 17 of 24

the Apuseni Mountains region there has been an upward trend, during the analyzed period, in the number of agritourist accommodation structures; in other words, an increased interest from the agritourism entrepreneurs. Although there is an increase during the analyzed period, if in 2010 the number of agritourism units from the Apuseni Mountains represented 11.37% from the total number of agritourism guesthouses at a national level (see Table 11), in 2017 the Apuseni Mountains held a share of 9.74% of the total number of agritourism guesthouses existing at the national level, for the following reasons: the increase of the number of structures at the national level, the poor infrastructure of the area, the low financial motivation of the human resources from the area, or the preference of the consumers for other tourist areas. Also, in the net index using agritourism, the accommodation capacity follows an upward trend, reaching 15.6% in 2017. With regard to the population occupied in agritourism, the trend is growing, but the growth is less visible. (see Table 12).

Table 11. The current situation of the distribution of agritourism guesthouses from the Apuseni Mountains area, by counties.

Types of tourist					Ye	ars			
Accommodation Structures	County	2010	2011	2012	2013	2014	2015	2016	2017
Structures				U	M: Numl	er of Un	its		
	Alba	29	45	50	49	56	59	60	75
Agritourism	Arad	13	8	13	14	11	12	12	9
	Hunedoara	11	7	7	7	6	8	9	20
guesthouses	Bihor	5	1	8	13	14	18	23	44
ŭ	Cluj	90	54	63	50	40	36	38	77
	Salaj	6	6	9	9	12	16	19	24
Total agritourism g	uesthouses from	154	121	150	142	139	149	161	249
Apuseni Mo	ountains								
No. of agritourism guesthouses at		1354	1210	1569	1598	1665	1918	2028	2556

Source: processing according to data from the National Institute of Statistics, http://statistici.insse.ro, consulted in 6 May 2018, and other administrative data [39].

Table 12. Current situation and future forecasts regarding some agritourism indicators from the Apuseni Mountains area.

		Current Situation							Future Forecasts	
	2010	2011	2012	2013	2014	2015	2016	2017	2020	2030
No. of agritourism guesthouses (number) (NATE)	154	121	150	142	139	149	161	249	261	560
Index of net using the agritourism accommodation capacity (%) (IAA)	10.2	11.4	13.5	12.6	12.9	14.3	15.4	15.6	18.6	26.7
Population occupied in agritourism (persons) (POA)	413	373	422	457	466	481	493	517	540	601

Source: processing according to data from the National Institute of Statistics, http://statistici.insse.ro, consulted on 6 May 2018, and other administrative data [39].

The number of agritourism guesthouses in the Apuseni Mountains was established in the form of the logistic evolutionary model (Figure 5):

NATE =
$$(1/2500 + 8 \cdot 10^{76} \cdot 0.9135^{Y})^{-1}$$

with a statistically assured correlation coefficient r = 0.797 at sig. = 0.03. For the year 2020, the determined function indicates the value of NATE₂₀₂₀ = 261 respectively for the year 2030, NATE₂₀₃₀ = 560 agritourism guesthouses.

Sustainability **2019**, 11, 1467 18 of 24

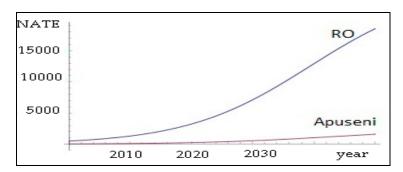


Figure 5. Graphical representation of the functional model for the number of agritourism establishments (NATE).

The net index using the agritourism accommodation capacity evolves after the logistic expression as being (Figure 6):

IAA =
$$(1/50 + 7.8 \cdot 10^{55} \cdot 0.9637^{Y})^{-1}$$

having r = 0.910 at sig. = 0.004. For the year 2020, the function indicates $IAA_{2020} = 18.6$ and $IAA_{2030} = 26.7$ respectively for the year 2030.

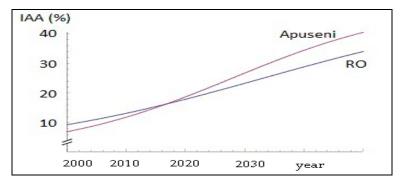


Figure 6. Graphical representation of the functional model for the net index using the agritourism accommodation capacity (%) (IAA).

The population occupied in agritourism has been established in the same way, as a function of the number of boarding houses, using the function (Figure 7):

$$POA = 654.825 - 29818/NATE$$

having r = 0.808 at sig. = 0.028. For the year 2020, the function indicates a population occupied in agritourism in a number of $POA_{2020} = 540$; respectively, in the year 2030 we predict that the number of people employed in agritourism would be $POA_{2030} = 601$.

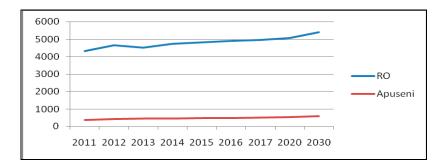


Figure 7. Graphical representation of the annual evolution of population occupied in agritourism (POA).

Sustainability **2019**, 11, 1467 19 of 24

5. Discussion

Starting from the current situation and following the forecasts made, it was found that the forecast situation is satisfactory, the area being one with high tourist potential. Consequently, the premise of this scientific paper, in the sense that the people have become aware of the existence of great tourist potential, is supported by the statement that the total accommodation capacity of the Apuseni Mountains area is about 74% of accommodation capacity at national level, with good expectations in the future. Given the fact that the area confronts many disparities, described in Table 4, it can be stated that *agritourism activity* has the potential for development, being a particularly valuable one, which somewhat *supports the sustainability* of this field of activity *for rural area of Apuseni Mountains*, through many benefits [49,50]:

- It ensures unaltered preservation of rural structures and the ways of living, customs and traditions, in a word of a traditional culture made available to tourists. This form of tourism is a multifunctional activity, representing more than just a stay at a peasant guesthouse. In general, the interest in natural and rational nutrition represents a factor of attraction that is increasingly manifested by tourists from developed countries. Due to the relatively small size of the companies involved (most of them family business), agritourism is able to satisfy the demands of tourists for quality, intimacy and originality, and the flexibility of purchased services ensures their adaptability to individual needs.
- Diversification and, in conclusion, a certain stabilization of the local economy, with the possibility of creating some business opportunities [51,52] and through them the emergence of new jobs.
- the superior capitalization of the natural and anthropic valences of rural settlements from the area studied through agritourism, the accent being placed on maintaining attractive traditional components at the same time with the increasing the requirements of modern, competitive tourism; co-participation and co-hosting of tourist-host and host-receptor, which are defining elements.
- Positive evolutions among tourists-that come in contact with other mentalities, customs, with another way of organizing life, as well as among hosts who might learn about a series of characteristics of the environment and the places from where tourists come from. Thus, through the exchange of information, the rural world comes out of isolation, and it protects its cultural dimension, viability and stability through tourism.

Nowadays, the growth of global tourism has caused a significant interest in research focused on the impact of the tourism on environment and community, specifically on agritourism structures. [53,54] The development of agritourism [55,56], in the studied area, will lead to a sustainable economic development of rural localities. From the forecasts, we can gather that there will be positive influences on the environment, agriculture, transport, construction, processing and food-processing industries, and services from various fields. The development of rural entrepreneurship, in the agritourism field, based on managerial knowledge and non-polluting technologies, in harmony with the principles of sustainable development, can certainly become a profitable activity for the inhabitants of the Apuseni Mountains, ensuring them a decent living and a job.

Therefore, entrepreneurs from the area can, through agritourism activity, develop a successful model in order to capitalize the tourist potential of the area, and to supplement the income from agricultural holdings through the opportunity of adding a modest income from tourism activities. Such a proposal aims at an approach focused on that area, which capitalizes the advantages of the region: agriculture, tourism and recreational activities.

6. Conclusions

The reason for choosing the Apuseni Mountains area derives from the fact that it has high agritourism potential, so the desire to highlight this area is justified. We support the above affirmation

Sustainability **2019**, 11, 1467 20 of 24

by the fact that the area takes part of the rural areas with special tourist potential, at the European level, which can offer to tourists a variety of tourism products.

This paper has as its purpose to highlight some aspects regarding the importance of the necessity of implementing the sustainability of the agritourism field, with benefits for rural settlements, taking as an area of study the mountainous rural environment of the Apuseni Mountains. During the study, we drew some conclusions that have been demonstrated in the paper:

- At present, the combination between sustainable rural development and tourism facilities represent a "must have", so a particular importance is given to agritourism, both in the specialized literature and in practice. The rural settlements where agritourism will be practiced will become places where all elements of local sustainable development will be assembled, and become a possible alternative to the problems of agriculture and the "health" of the rural environment, the development of agritourism, related to the evolution of agriculture, takes many forms and brings many benefits also for tourists that are willing to practice this activity if some principles are respected, these aspects are underlined in Figure 1, Figure 2, Table 1, Table 2.
- In order to underline the evolution of the current situation of Romanian agritourism guesthouses and to make future forecasts, a logistic model, according to Table 2, was used. We can conclude that, regarding this purpose at the Romanian level, there are 2556 agritourism accommodation structures (see Table 3-current situation) with 44,499 accommodation places in year 2017, concentrated in different geographic areas of the country and using a logistic model; the result is that in 2030 these structures will be NATE $_{2030} = 7113$ agritourism guesthouses (see Table 3-future forecasts).
- One of the sub-purposes was to achieve a concrete study on the Apuseni Mountains by using a questionnaire so it can highlight the aspects related to: information about the characteristics of respondents; the surface of the farm and the existence of specialized training; the development and capitalization of households in the area analyzed through agritourism; the motivation of tourists to practice agritourism in the area under analysis; and the identification of the desire to collaborate in order to improve the agritourism product from the owners of agritourism structures. Therefore, we can conclude that, regarding the capitalization of the products from the farm through agritourism, a favorable trend is registered (Table 8). Regarding the capitalization of craft activities through tourism with the involvement of tourists, this registered a positive trend mostly at the level of Cluj and Salaj counties, but also a negative one at the level of Alba, Bihor, Arad, Hunedoara counties (Table 8). The owners of tourist locations have entrepreneurial skills, in general, and less specialized knowledge in tourism and management fields (Table 7). From the experience of agritourism farm owners, the tourists are attracted by the boarding house/area, due to the exceptional tourist resources and the quality-price report (Table 9). The research shows that the owners of agritourism guesthouses identify as future actions the increase of agritourism product quality/branding and, secondly, that it is necessary to create tourism programs that focus on the life of the farm. (Table 10).
- For the Apuseni Mountains area, some future forecasts were made by using a logistic model, and it was found that the forecast situation is a positive and satisfactory one; so the first indicator analyzed, NATE, will increase to 261 agritourism guesthouses in 2030, the second indicator, IAA, will also have a satisfactory evolution to 18.6% in 2013, and the third indicator POA, will also rise to 540 persons occupied in agritourism in 2030, according to the results from Table 12.

The time series for 2010–2017 indicate a significant increase regarding the indicators studied (IAA, NATE, POA). This aspect is largely due to the European/national support and funding programs that have been intensively carried out during this period, but also to a tendency to change the opinions of the population, especially young people. This is also evidenced by the increase in employment (IAA), which is noticeably higher in the Apuseni Mountains compared to Romania (Romania's IAA shows an increase of 26.61% in the period 2010–2017 while at the level of the Apuseni Mountains,

Sustainability **2019**, 11, 1467 21 of 24

the IAA shows an increase of 52.94%). This difference was observed against the background of a relatively similar growth in the number of units: NATE increased by 88.77% at the level of the whole country and at the level of the Apuseni Mountains only by 61.68%, but also a significant increase. Also the growth rate of the occupied population (POA) is higher in the Apuseni Mountains, the increase observed in this period being 25.18%, while in Romania the growth was 13.86%. These details clearly show the sustainability of an improved attitude of the population in terms of options regarding such non-tourist activities, which does not exhaust resources and preserves the environment. Moreover, the local population growth trend in these areas (POA) indicates with great certainty the possibility of professional reconversion of people who not long ago were undertaking other activities in the sense of being able to carry out activities that support and induce sustainability.

From the previous points in the paper, we have concluded that, regarding the specific peculiarities of agritourism activity from the Apuseni Mountains area, during recent years it developed great tourism potential, which has gradually begun to be used through agritourism structures to attract tourists throughout the year. Given the fact that the area is confronted with many disparities, described in Table 4, the statement that agritourism supports the sustainability of this mountainous rural area through many benefits, expressed in the text, is real. The transformations that need to take place in the rural area to support the connection between sustainable development and agritourism, in our opinion, are:

- raising the level of civilization and comfort of the boarding houses, in accordance with their originality and diversity.
- change of mentality, by giving up a way of thinking synthesized by the phrase "this is fine, too", and understanding the exigencies and necessity of professionalism and performance in carrying out agritourism activities. As generous as the supply of certain components is, it does not necessarily prove to be profitable unless it manifests itself in a system that integrates all the factors that define the agritourism product (accommodation, tourist movement, animation, various activities, services, courtesy, exemplary cleanliness, attention to detail, etc.).
- the development of entrepreneurial spirit among the "natives". Agritourism can only be developed under conditions of risk assumption, by those from rural households with the development of human health and the "health" of the environment, and through this achieve the main desideratum—the sustainability of the rural environment.

Obviously, it is not easy for transformations to take place in the studied area, especially because of the large territorial extension, but in the long term agritourism can support the emergence of horizons in the sustainable development of rural settlements, at least for the analyzed area.

Author Contributions: All authors have contributed to the study and writing of this research. R.C. and T.I., conceived the overall idea of the research; C.R. performed the calculations; T.A., G.P. and D.M. analyzed the data and R.L. drew the main conclusions. In conclusion, all authors have the same rights on the paper.

Funding: The publication of this paper is supported through the project "Assuring Excellence in RDI Activities within the USAMVBT" Code 35PFE.

Acknowledgments: This paper is published within the project "Assuring Excellence in RDI Activities within the USAMVBT" Code 35PFE, submitted in Competition Program 1—Development of the National Research and Development System, Subprogram 1.2—Institutional Performance, Institutional Development Projects—Excellence Funding Projects in RDI.

Conflicts of Interest: The authors declare no conflict of interest.

References

- 1. Bungau, S.; Suciu, R.; Bumbu, A.; Cioca, G.; Tit, D.M. Study on hospital waste management in medical rehabilitation clinical hospital, Baile Felix. *J. Environ. Prot. Ecol.* **2015**, *16*, 980–987.
- 2. Torretta, V.; Rada, E.C.; Ragazzi, M.; Trulli, E.; Istrate, I.A.; Cioca, L.I. Treatment and disposal of tyres: Two EU approaches. A review. *Waste Manag.* **2015**, *45*, 152–160. [CrossRef] [PubMed]

Sustainability **2019**, 11, 1467 22 of 24

3. Kişi, N.A. Strategic approach to sustainable tourism development using the a'wot hybrid method: A case study of Zonguldak, Turkey. *Sustainability* **2019**, *11*, 964. [CrossRef]

- 4. Font, X.; Mccabe, S. Sustainability and marketing in tourism: Its contexts, paradoxes, approaches, challenges and potential. *J. Sustain. Tour.* **2017**, 25, 869–883. [CrossRef]
- 5. Muresan, I.C.; Oroian, C.F.; Harun, R.; Arion, F.H.; Porutiu, A.; Chiciudean, G.O.; Todea, A.; Lile, R. Local residents' attitude toward sustainable rural tourism development. *Sustainability* **2016**, *8*, 100. [CrossRef]
- 6. Tinsley, R.; Lynch, P. Small tourism business networks and destination development. *Intl. J. Hosp. Manag.* **2001**, 20, 367–378. [CrossRef]
- 7. Tew, C.; Barbieri, C. The perceived benefits of agritourism: The provider's perspective. *Tour. Manag.* **2012**, 33, 215–224. [CrossRef]
- 8. Bramwell, B. Rural tourism and sustainable rural tourism. J. Sustain. Tour. 1994, 2, 1–6. [CrossRef]
- 9. Turnock, D. Sustainable rural tourism in Romanian Carpatians. Geogr. J. 1999, 165, 192–199. [CrossRef]
- 10. Călina, A.; Călina, J.; Iancu, T. Research regarding the implementation, development and impact of Agritourism on Romania's rural areas between 1990 and 2015. *Environ. Eng. Manag. J.* **2017**, *16*, 157–168. [CrossRef]
- 11. Bonnin, C.; Cauet, J.M. L' Évaluation de l' Entreprise en Hotellerie-Restauration; Editura BPI: Paris, France, 1991.
- 12. Ciolac, R.; Iancu, T.; Rujescu, C.; Milin, A.; Merce, I.; Marin, D.; Dincu, A.M.; Stanciu, S.O. Agro-tourism in European Mountain Areas. *Rural Dev. Proc.* **2013**, *6*, 80–85.
- 13. Lane, B. What is rural tourism? J. Sustain. Tour. 1994, 2, 7–21. [CrossRef]
- 14. Ghereş, M. Agroturism, de la Tradiție la Ofertă Comercială; Editura Risoprint: Cluj-Napoca, Romania, 2003.
- 15. Bausch, T. *Le Tourisme et l' Environnement en Europe*; Office dest Publications Officielles des Communautes Europeennes: Luxemburg, 1995.
- 16. Rey, R. European Context and the Crisis State from Romanian Agriculture and Mountain Rural Area, Out of the Volume Rural World-Today and Tomorrow-Coord.acad; Cristian Hera; Editura Academiei Române: Bucureşti, Romania, 2006.
- 17. Abrudan, I.; Turnock, D.A. Rural development strategy for the Apuseni Mountains, Romania. *GeoJournal* **1998**, *46*, 319–336. [CrossRef]
- 18. Ciolac, R.; Csosz, I.; Bogdan, N. Brief description of the agritourism potential of Western Mountains area and identification of the main traditional products possible sold through agrotourism. *Agrobuletin* **2012**, *12*, 148–154.
- 19. Euromontana. Către dezvoltarea integrată a zonelor montane și recunoașterea acestora în cadrul politicii agricole comune. Modelarea noului spațiu european. In Proceedings of the Euromontana Conference, Piatra Neamţ, Romania, 4–6 October 2007.
- 20. Comisia Europeană. O Selecție a Celor Mai Bune Practici Leader+; Comisia Europeană: Brussels, Belgium, 2009.
- 21. RNDR. Bune Practici, 2014, No. 4 Anul II, USR, Departamentul Publicaţii MADR. Available online: http://madr.ro (accessed on 16 February 2019).
- 22. Vaetisi, S. Rural Tourism in the Apuseni Mountains, Romania. An anthropological research on using natural and cultural resources in developing tourism in a poor region. In *Tourists and Tourism*; Abhijeet Publications: New Delhi, India, 2006.
- 23. Ammirato, S.; Felicetti, A. The Agritourism as a Means of Sustainable Development for Rural Communities: A Research from the Field. *Int. J. Interdiscip. Environ. Stud.* **2014**, *8*, 17–29. [CrossRef]
- 24. Legge Quadro Nazionale n. 730/1985 sull'Agriturismo art.1, pubblicata nella *G.U. n.* 295 del 16 dicembre. 1985. art.1. Available online: https://www.tuttocamere.it/files/agricol/1985_730.pdf (accessed on 7 March 2019).
- 25. Sonnino, R. For a 'Piece of Bread'? interpreting sustainable development through agritourism in southern Tuscany. *J. Eur. Soc. Rural Sociol.* **2004**, *44*, 285–300. [CrossRef]
- 26. Karabati, S.; Dogan, E.; Pinar, M.; Celik, M.L. Socio-Economic Effects of Agri-Tourism on Local Communities in Turkey: The Case of Aglasun. *Intl. J. Hosp. Tour. Adm.* **2009**, *10*, 129–142. [CrossRef]
- 27. Garcia, H.B. Marketing în Turism Rural; Editura Irecson: Bucureşti, Romania, 2003.
- 28. Brezuleanu, S.; Brad, I. Considerații privind activitățile agroturistice din landul Baden-Wurttemberg, Germania. *Lucr. șt. USAMV Iași*. Seria Agronomie. 2001, vol. 44. Available online: http://www.uaiasi.ro/revagrois/PDF/pdf_2001_fdf99a5620d83e128992e72b54a04713.pdf (accessed on 7 March 2019).

Sustainability **2019**, 11, 1467 23 of 24

29. Marin, D. Study on the economic impact of tourism and of agrotourism on local communities. *Res. J. Agric. Sci.* **2015**, *47*, 160–163.

- 30. Iorio, M.; Corsale, A. Rural tourism and livelihood strategies in Romania. *J. Rural Stud.* **2010**, *26*, 152–162. [CrossRef]
- 31. Ciurea, I.V. Şi colaboratorii. Organizarea activităților economico-sociale în sistem agroturistic a localităților montane de pe Valea Oituzului, județul Bacău. *Lucrări științifice seria Agronomie Universitatea Agronomică Iași* 1995, 38.
- 32. Buciuman, E. Economia Turismului Rural și Agroturismului; Editura ProTransilvania: Alba-Iulia, Romania, 1999.
- 33. Nistoreanu, P. *Turismul Rural-o Afacere Mică cu Perspective Mari*; Editura Didactică și Pedagogică: București, Romania, 1999.
- 34. Istrate, I.; Bran, F.; Roşu, A. *Economia Turismului şi Mediul Înconjurător*; Editura Economică: Bucureşti, Romania, 1996.
- 35. Rusu, S. Turism Rural și Agroturism; Editura Mirton: Timișoara, Romania, 2007.
- 36. Condratov, I. Priorități ale turismului rural românesc. Revista de Turism 2006, 1, 48-51.
- 37. Ciolac, R.; Rujescu, C.; Constantinescu, S.; Adamov, T.; Dragoi, M.; Lile, R. Management of a tourist village establishment in mountainous area through analysis of costs and incomes. *Sustainability* **2017**, *9*, 875. [CrossRef]
- 38. Google Maps. Available online: https://www.google.com/maps (accessed on 10 November 2004).
- 39. National Institute of Statistics. Available online: http://statistici.insse.ro (accessed on 6 May 2018).
- 40. Feher, A.; Goşa, V.; Raicov, M.; Haranguş, D.; Condea, B.V. Convergence of Romanian and Europe Union agriculture–evolution and prospective assessment. *Land Use Policy* **2017**, *67*, *670–678*. [CrossRef]
- 41. Kwasnicki, W. Logistic growth of the global economy and competitiveness of nations. *Technol. Forecast. Soc. Chang.* **2013**, *80*, 50–76. [CrossRef]
- 42. Stoleriu, I. Matematici Financiare; Universitatea A.I. Cuza: Iași, Romania, 2015.
- 43. Bussines Cover. Available online: https://www.businesscover.ro/romania-si-tentativa-de-agroturism/ (accessed on 12 March 2018).
- 44. Bran, P.; Bran, F.; Roşca, I.; Manea, G.; David, O.; Costică, I.; Iorgulescu, A. Componenta Ecologică a Strategiei de Dezvoltare Economică a Zonei Munților Apuseni: Studiu de caz Roşia Montană; Editura A.S.E.: Bucureşti, Romania, 2003.
- 45. Constantin, V.; Kantor, C.M.; Surd, V. An analysis of the Apuseni Mountains settlements development based on synthetic indicators. *J. Environ. Res. Prot.* **2015**, *12*, 6–17.
- 46. Constantin, V.; Surd, V.; Kantor, C.M. Vision and Strategic Objectives for Sustainable Development of the Apuseni Mountains Mining Settlements. *Geogr. Pannonica* **2014**, *18*, 82–88. [CrossRef]
- 47. Buza, M.; Dimen, L.; Pop, G.; Turnock, D. Environmental protection in the Apuseni Mountains: The role of Environmental Non-Governmental Organisations (ENGOs). *GeoJournal* **2001**, *55*, 631–653. [CrossRef]
- 48. Ciolac, R.; Csosz, I.; Petroman, C.; Petroman, I.; Iancu, T.; Martin, S.; Marin, D.; Dincu, A.-M. Research regarding agro-tourism stage in Apuseni Mountains area and capitalize of traditional products through this. *Sci. Pap. Anim. Sci. Biotechnol.* **2013**, *45*, 366–371.
- 49. Giannakis, E. The role of rural tourism on the development of rural areas: The case of Cyprus Elias. *Rom. J. Reg. Sci.* **2014**, *8*, 38–53.
- 50. Garau, C. Perspectives on cultural and sustainable tourism in a smart region: The case study of Marmilla in Sardinia (Italy). *Sustainability* **2015**, *7*, 6412–6434. [CrossRef]
- 51. Getz, D.; Page, J.S. *The Business of rural Tourism International Perspectives*; International Thompson Publishing Company: Toronto, ON, Canada, 1997.
- 52. Evans, N. Strategic Management for Tourism, Hospitality and Events; Routledge: New York, NY, USA, 2015.
- 53. Cioca, L.I.; Giurea, R.; Precazzini, I.; Ragazzi, M.; Achim, M.I.; Schiavon, M.; Rada, E.C. Agro-Tourism and Ranking. In Proceedings of the AIP Conference Proceedings, Karnataka, India, 10–11 August 2018; Volume 1968.
- 54. Cioca, L.I.; Giurea, R.; Moise, I.A.; Precazzini, I.; Ragazzi, M.; Rada, E.C. Local environmental impact of wood combustion in agro-tourism structures. In Proceedings of the 8th International Conference on Energy and Environment (CIEM), Bucharest, Romania, 19–20 October 2017; pp. 120–123.

Sustainability **2019**, 11, 1467 24 of 24

55. Panyik, E.; Costa, C.; Rátz, T. Implementing integrated rural tourism: An event-based approach. *Tour. Manag.* **2011**, *32*, 1352–1363. [CrossRef]

56. Polo-Peña, A.I.; Frías-Jamilena, D.; Rodríguez-Molina, M.A. The perceived value of the rural tourism stay and its effect on rural tourist behaviour. *J. Sustain. Tour.* **2012**, 20, 1045–1065. [CrossRef]



© 2019 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).