



Research Article

Social Agricultural Services - Review

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Abstract

The paper's main objectives are to identify a model for development of integrated agricultural, together with social services, in Romania. This is an innovative approach located within two concepts based on multifunctional agriculture and social community. Social agriculture includes all agricultural activities using resources both from plants and animals, in order to promote social services in rural areas. The conceptual orientations are focused on the reputation of social farming, with impact on rural development.

Keywords: agriculture, integrated systems, business model, rural development.

Introduction

The integration of social services in rural areas encourages the conversion of conventional farms in sustainable and ecological farms which help agriculture businesses to achieve economic viability and competitiveness. Green is the management technique that has most contributed to support EU Europe 2020 strategy for smart, sustainable and inclusive growth, where the creation of new “green” businesses towards the

transition to a low carbon economy by 2050, European Commission (2013).

In order to fulfill EU strategies for Sustainable Development of Smart and Green Agriculture, this analysis model aims to address the following key-questions:

- What are the best practices to develop an agricultural integrated project?
- What are the accumulated social, economic and environmental effects of the agricultural production system?

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- What are the best strategies for installation, maintenance and operation of an integrated agricultural production system?

- What is the economic and environmental feasibility of an integrated agricultural production platform?

Over 90 % of the territory of the EU, and home to more than 56 % of the population, rural areas need to make a robust contribution if these strategic objectives are to be achieved, Eurostat (2014).

Integrated social services in rural areas have the principle objectives: to reduce pollution and to increase productivity, to increase value of the aquaculture products.

The integration of social services in rural area includes all agricultural and aquaculture activities using resources both from plants and fish, in order to promote tourism or generate therapy, rehabilitation, social inclusion, education and social services in rural areas. Social farming can also be regarded as a service provided by subsistence agriculture. This does not mean a reduction in quality of services in poorer areas, but rather serve as a way to improve their effectiveness by linking formal and informal professional services with more than one non-professional, Armstrong J.S., Morwitz V. G. (2000).

Social farming is an emerging concept in Europe that includes various participants interested in its development: farmers, farmer organizations, users of services provided by farms social welfare service providers and other health stakeholders in social services. Examples of services are: tourism, rehabilitation, therapy, job protected, lifelong education and other activities that contribute to social inclusion.

Social farming is a new concept and also traditional. It comes from traditional rural systems before modernizing agriculture

and increasing civil service system. Today's concept was substantially reformed in an innovative way in evolution.

The main products of social agriculture, in addition to marketable products are health and employment, education or therapy. Agriculture provides opportunities for people to participate in various rhythms of day and year, in aquaculture. Social agriculture includes agricultural enterprises which integrate people with physical, mental or emotional, firm, providing openings for the socially disadvantaged, for young offenders or those with learning difficulties, people with drug addictions, senior long-term unemployed and actively citizens, strong schools and kindergartens, and more. Disease prevention, inclusion and a better quality of life are features of social farming.

The added value of social farming enables disadvantaged people to be integrated in a living context. The presence of farmers, contact and relationship with people, animals and vegetable crops, specific responsibilities of the person using the service are some of the key features of the social practices of agriculture, Di Iacovo F. (2003).

Materials and Methods

The methodology for assessment of the chance analysis model for the development of integrated production platforms entails the following general steps:

- The socio-economic characterization of the model of integrated production platforms when it comes to agriculture, aquaculture and social services.

- The production and demand structures of the proposed model of integrated production platforms are investigated. This is done by the identification and quantification of costs and benefits by using market and non-market methods in order to capture private, social and ecological effects.

- Policy recommendations derive from economic tools such as for instance Cost-Effectiveness Analysis, Cost-Benefit Analysis and other approaches to socioeconomic analysis such as for instance Multi-Criteria Decision Analysis.

The suggested methodology for socio-economic analysis includes a baseline profiling of case and socio-economic characterization pertaining to future economic activities (agriculture production, aquaculture and social services). A determination on whether full or limited data should really be collected for an effect assessment is taken. Thereafter data on the website are collected and costs and benefits are quantified. The assessment of impacts and evaluation of the assessment predicated on limited data approach, integrating results on Impact Assessment Analysis are conducted. Finally, policy recommendations predicated on impact assessment results and sensitivity analysis are provided.

This part of the framework targets gathering information regarding the socio-economic environment and context of the proposed development pertaining to production and social services. Hence, before achieving the evaluation of the socioeconomic impact, it's necessary to start with the baseline profiling of the case study areas in order to identify who is going to be impacted. Thus, this method is expected to enable the identification of the production and demand functions of the model.

To be able to assess indirect and induced impacts a regional profiling is necessary. The info typically gathered within a regional profile includes: the natural resources, the people characteristics, the political and social resources, an explanation of historical factors, identification of the relationships with the biophysical environment, culture, attitudes and social-psychological conditions, the current status of operations (production, social services) and the identification of individuals who

are going to be impacted, in an investigation study by Social Sciences Program, Bureau of Rural Sciences, Department of Agriculture, Fisheries and Forestry, Bureau of Transport and Regional Economics and Australian Bureau of Agricultural and Resource Economics, (2005). The first assessment must include economic and social analysis of the use of waste waters under current use and future autonomous developments. This assessment should include both market and non-market costs and benefits. The scope is the profiling of current uses and identifying businesses, households and individuals that could be impacted by the future installing of the model of multi-use aquaponics production platforms. Furthermore, broader social and environmental issues linked to current and future operations should really be highlighted.

These subsections identify economic issues, environmental issues and social issues concerning amount of employment, regional development and overall attitude of the people towards the technologies and specific options proposed. The production and demand analysis is dependent on economic data, environmental valuation surveys and benefit transfer techniques, Feldmann, B. (2008).

This analysis is dependent on proposed financial costs of the model of multi-use aquaponics production platforms structures along with social and environmental costs. The identification of the private costs of the suggested model of integrated production platforms structures pertaining to agriculture and social services is the first filtering step of the production-side analysis. Training costs are likely to cover working out of individuals who will run the platforms pertaining to the safety, financial and environmental implications.

Considering that the scope of the developed methodology is to integrate private, social environmental costs of the suggested model of integrated production platforms, it's equally important to take

into account the latter in the suggested framework of analysis. The analysis here is focused on proposed financial, social and environment great things about the platform structures.

Results and Discussions

These challenges derive mainly from the varying degrees of accessibility of rural areas, the small size and low population densities of rural communities, their social and economic composition, and the nature of internal and external linkages. The small size of local markets and limited access to essential services, such as finance, information and advice, present further obstacles for rural entrepreneurs. Other issues include a lack of suitable business premises, less developed transport and communications infrastructure, and limited opportunities for networking and collaboration.

Economies of many rural areas are changing rapidly. The service sector is the most important sector in rural areas in terms of employment and Gross Value Added (GVA).

Whilst agriculture and forestry utilise 91 % of the EU territory, only 7.7 % of EU employment is generated in agriculture and related farm and agro-food activities. Instead, new activities and sectors are evolving within rural areas, such as tourism, business services, personal services, food production, specialised industrial production and other types of micro enterprise.

In the case of many businesses located in rural areas, the implementation of their development strategy is not just about location, but is also a process of interaction and integration. The importance of economic activities cannot be measured by the number of jobs created alone: it is part of a whole whose complementary aspects can join and contribute to sustainable development.

Challenges such as food security, preservation of natural resources and ecosystems, climate change mitigation and

adaptation, the desire for local food systems and increasing rural-urban interdependency all present new opportunities for rural entrepreneurship. Among others, leisure related activities, personal and household services, renewable energy businesses and cultural services represent an important source of employment.

The growth of new rural service enterprises is influenced by two factors: rising demand in places close to urban centres following the arrival of new inhabitants and demand from long-established rural residents for existing services.

This activity not only provides the farmer with an opportunity for additional income, it also meets the needs of young families, whether they are existing residents, or people who have recently left the city for a better quality of- life.

The concept of agri-tourism – holidays on farms – has become increasingly popular. One of many examples of a successful agri-tourism business is the agri-ecology centre. Business innovation can also be seen in agriculture and the food processing sector, through the emergence of new modes of production and marketing. “Local food” initiatives and short supply chains are excellent examples of this and are the subject of growing interest from food producers, consumers and public bodies.

Economic activities in rural areas have to deal with the issue of product distribution: not only does this concern distribution within and between rural and remote areas but also distribution between rural and urban areas. Indeed, many rural businesses develop in response to demand in cities. Distribution can take two forms; short or long supply chains, but in both cases this demands a specific dynamic within the territory that can be built by the entrepreneur. The distribution sector can thus be a real opportunity for entrepreneurs in rural areas. Indeed, production and transformation units are often separated and the development of a

distribution activity can help local actors to improve the supply structure. This can have a positive impact for producers, providing better access to markets and thereby increasing demand, but it can also be interesting for the territory as it supports economic activity and can encourage the development of new activities.

The social dimension of agriculture can be defined as its capacity to produce inclusive processes and social cohesion using local resources, and to respond to the specific needs of a particular target group. Social farming can improve the viability of rural areas by providing new opportunities for diversification.

The modernisation of agriculture, through mechanisation and the widespread use of fertilisers and plant protection products, increased productivity beyond the level of subsistence. It also changed the social image of the sector. Marginal areas were abandoned and migration to towns and cities led to the depopulation of rural areas, resulting in a deeply modified relationship between people and the countryside.

Many started to look upon rural areas as uninteresting wildernesses and became ignorant of agricultural processes. As a consequence, agriculture's contribution to added value and employment was reduced significantly and its social role diminished.

In the 1970s, contradictions inherent in the intensive farming approach – e.g. pollution, soil erosion, poor animal welfare – focused attention on the secondary effects of agricultural processes, and an increasing number of people began to take an interest in the “multi-functionality” of agriculture. Secondary functions also included social dimensions, as well as environmental issues. The social dimension of agriculture can be defined as its capacity to produce inclusive processes and social cohesion using local resources, and to respond to the specific needs of particular groups: namely people with physical or mental disabilities, children, the elderly, people

with problems of social exclusion drug-addicts or prisoners, socially excluded women or young people. In other words, social agriculture is an innovative way of reviving the potential of traditional farming to include everyone, regardless of age, gender or ability, Biffel, G. (2012).

Social agriculture may include some or all of the following components:

- Work and training opportunities – where agriculture creates employment and income opportunities for the disadvantaged;

- Recreation and quality of life – mainly “not for profit” activities that are often managed at municipality level, whereby small allotments are given to the elderly with the aim of creating the opportunity both to have fun and to socialise with neighbours;

- Education – creating actions to improve knowledge of agricultural practices and rural culture and to develop environmental awareness among young people (e.g. city farms, school gardens managed by pupils, etc.);

- Services to populations in rural areas – kindergartens; summer reception centres for children; homes for the elderly. This is very important for local development, since a lack of services, together with limited job opportunities, is one of the most important reasons for depopulation in rural areas;

- Rehabilitation and therapy – agriculture can be a tool to improve the welfare of individuals with mental or other health problems. Therapeutic agricultural activities can either be carried out on farms themselves, or in a medical environment with the input and expertise of farmers. In any event, these activities are planned by health experts (psychologists, psychiatrists, etc.) and – when they aren't directly managed by health staff – they are under health authorities' control, Riesenfelder, A., Schelepa, S. and Wetzler, P. (2011).

These types of social farming experiences can involve a variety of different agricultural activities: from vegetable, vine or olive growing to animal care, the making and/or selling of dairy products on farms, or even working in a farm restaurant.

In this way, people have the opportunity to increase their capabilities and skills, to improve their social life and to reduce time spent under medical care in hospital or elsewhere. These experiences are particularly important in periurban areas, where social and health care services are often insufficient, Schmitt, R. (2012).

Social farming can be considered as a diversification activity, which improves a farm's income and contributes to social well-being, while also boosting the image of agriculture in society. At the same time, since social farming deals with personal wellbeing and care, it requires strict adherence to the appropriate standards and procedures in order to protect users' welfare and interest.

At present, quantitative studies on the benefits of these practices for participants and the impact on rural areas are not available. A solution is to evaluate the opportunities for rural development arising from social agriculture, in terms of innovative socio-therapeutic services, social cohesion, and sustainable economic development;

The study analyses both the characteristics of farms supplying social services, with the aim of developing new multifunctional agricultural practices, and the effects of therapeutic interventions.

In this way, the aim is to contribute to identifying new therapeutic strategies in the field of mental health and to expand opportunities for health policy. The results show that social farming can improve the quality of life of participants and their families by giving them greater autonomy, a greater number of options, and improved prospects for the future. Social agriculture also has economic benefits: reducing public expenditure on drug consumption and hospital

admissions; providing new job opportunities in rural areas; improving the public image of farms and farming; and building networks of actors that increase the competitiveness of rural areas. The education level is correlated positively to the image of social farming. The higher the education level increases, the farmer sees the social farming.

The absence of image of the social farming sector is still seen as a risk by some managers. Indeed, the image can then still be developed and hence be hijacked. To fill this gap, the image should therefore be considered as a strategic priority for the social farming sector. Farmers have a confused and slightly negative image of the social services sector. The image of social farming sector derives from the image of the social services sector.

If a specific promotion of social farming were to be preferred, it should base itself on the positive but often unknown attributes of these types of activities. Indeed, improving the image of social farming sector should be a priority of the public service sector, as it will contribute to improving acceptance of this type of services, on the long term.

Aquaponics is a food production system that combines soil-less vegetable growing (hydroponics) and fish farming (aquaculture) inside a closed recirculating system. This mix of food production methods (hydroponics and aquaculture) removes the problems connected with the patient production methods, Holmer et al. (2008) and Soto (2010).

For aquaculture, the key problem with Recirculating Aquaculture Systems may be the production of Nitrate rich waste water that must really be treated or dumped, creating major environmental problems. For hydroponics, the key problem is the entire reliance on chemical fertilizers to cultivate the vegetables, Chopin et al. (2008) and Abreu et al. (2009). When both methods are combined in an aquaponic unit, the nutrient-rich wastewater from the fish tanks, which

must normally be treated or dumped, can be used as an organic fertilizer for plant production. Consequently, this removes the requirement for chemical fertilizers for plant growth using hydroponics, Vizzini, S. & Mazzola, A. (2004).

The main benefices of aquaponics:

1. Two agricultural products could be produced from just one input (fish food)
2. High density crop production is achievable as no real competition for nutrients on the list of plants
3. Aquaponic food production is quite water-efficient (units use significantly less than 20% of the water required for normal soil farming) and units could be installed in urban or peri-urban environments
4. Aquaponic food production creates zero waste and no chemical fertilizers or pesticides are utilized making it an extremely green method of producing food

Advantages for aquaponic food production:

- Uses organic waste since the plant fertilizer
- Uses natural pest controls
- Tends to make better tasting and occasionally more nutritional crops
- Possibility of year-round production if growing environment can be controlled (i.e. greenhouse)
- Imitates an all-natural eco-system thus making it a highly sustainable food production method
- Increasing population & Urbanization
- Declining land agricultural productivity
- Increasing demand for healthy, pesticide free produce

It is considered that the model multi-use aquaponics production platforms have socio-economic and environmental impacts on aquaculture, recreational fishing, yachting and boating and other water-based activities. There is also an impact on land-based activities, agricultural tourism, water waste management, regional employment

(direct and indirect) and training opportunities, Mirto et al (2010). The tremendous impact of aquaponic in aquaculture has been particularly obvious in recent years. However, aquaponic needs to overcome a lack in standardization of methodologies and procedures.

Conclusions

Social farming adopts a multifunctional view of agriculture. The main products, in addition to marketable products, are health care, education or therapy. Agriculture provides opportunities for people to participate in the activities of the plant or animal. Social agriculture includes agricultural enterprises that integrate people with physical, mental or emotional, firm, providing openings for the socially disadvantaged, for young offenders or those with learning difficulties, people with drug addictions, long-term unemployed people, people with the old active engagement with schools and kindergartens, and more. Disease prevention, inclusion and a better quality of life are features of social farming. Social farming has widened the concept of the role of agriculture in the development of rural areas. Since the lack of social services is one of the reasons for the depopulation of rural areas, social farming can improve the attractiveness of these areas. It can provide new opportunities for diversification, which can increase farm income, while also providing important services for previously disadvantaged or excluded social groups.

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