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Proposal of a New Operative Brand for Environmentally Labelling Agritourism: Embodying Tourism, Buildings and Transportation Requirements

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Abstract: Agritourism represents an interesting mean to contrast the agricultural decline in developed countries. Nonetheless, these sites are potential sources of environmental impacts that must be controlled, for example, promoting the use of excellence brands that communicate their quality level to users. Specific regulations for agritourism do not exist in Europe, despite this kind of accommodation is promoted by two EU normative references. The existing environmental awards, operating at country level, do not cover all relevant components of this multifunctional accommodation. One of the most neglected aspects is the quality of food provided to guests, which represents an important element of guest satisfaction in this case instead. This paper proposes an operative excellence award for agritourism that provides an easy rating scale for the whole evaluation of their environmental performances. This brand, instead of springing from an "ex novo" designed standard, is built up by merging existing labels referring to the four following relevant aspects of the quality features of agritourism, identified in a new Italian brand for agritourism's enterprises: accommodation facilities, agricultural activities, food products and restoration, recreational activities and landscape context. The scheme's feasibility was verified by a field analysis covering all 515 agritourism operating in the Sicilian Region.

Key words: Agritourism • Sustainability Labels • Environmental Performances • Agroservices • Food Quality

INTRODUCTION

An increasing consciousness of people of the environmental burden of human and business activities [1] is rapidly involving tourism [2-4] that is more and more perceived as an important element on a new ethical approach to consumption [5]. Particularly, the rising attention toward a responsible tourism [6, 7] is involving more accurate analyses of the actual drivers of tourism [8]. According to this new vision, people are inclined to prefer for their vacations accommodations at farms, where a closer contact with the nature, the local customs, gastronomy or wine of the chosen country can be reached, in addition to the usually less needed economic expenses. In Italy, for example, active agritourism sites

registered a growth of 105% in the years between 1998 (9,718) and 2010 (19,973) (www.istat.it).

On the other hand, agritourism plays an important role in a correct land use [9, 10] policy and in the management of the peri-urban areas [11, 12]. However, the development of tourism in the countryside can generally contribute to the environmental decline due to activities such as skiing, hiking, rock-climbing and riding; these services, which are provided to guests, can indeed damage the natural environment [13, 14]. However, the promotion of "Local activities" typically offered to guests allows a reduction of the environmental burdens caused by tourist transportation, unlike other types of tourism that operate in the model of "short-trips-from-center" with large transportation requirements.

Corresponding Author: Giorgia Peri, Dipartimento dell'Energia, Ingegneria dell'Informazione e Modelli Matematici-DEIM, Scuola Politecnica dell'Università degli Studi di Palermo, Viale delle Scienze, 90128, Palermo, Italy. Tel: +39 091 238 61923, Fax: +39 091 484425. From the environmental perspective, agritourism sites (In addition to rural tourism, in general) represent a sustainable alternative to other forms of tourism since they support the preservation of the landscape and stimulate the conservation, protection and improvement of the natural environment [15, 16]. Decisions to spend vacations in the countryside generally reflect the environmentally friendly consciousness of tourists. Therefore, the environmental performances of these activities must be clearly assessed and controlled in order of ensuring their sustainability and their harmonic inclusion in the territory [17, 18].

Despite agritourism is not a new phenomenon [19, 20], specific regulation for this tourism segment does not exist thus far in Europe. The development of this sector has been promoted by two EU regulations [21, 22], intended as methods for diversification of farm households in the rural economy and thus contributing to the rural area development [23].

These EU directives are not able to carefully take into account the wide range of services provided by agritourism and do not direct any specific attention to their environmental performances.

Moreover, the differences among different types of agritourism are not pointed out in these regulations and, more generally, there exist a large spread of definitions and approaches concerning agritourism. Philip et al. [24] usefully gathered and organized agritourism definitions present in literature into a structured framework. In this work two different views for agritourism are underlined: one view considers the embodiment of "a working farm" in the agritourism facility (As it is typical in Italy, for example), the other view considers the simple connection with agriculture as a sufficient feature for labeling a tourist facility as agritourism (As it is typical in the rest of Europe). Arroyo et al. [25] have recently applied the Phillip's conceptual paper with a close attention to the role of stakeholders in US countries.

The development of agri-based environmental tourism in Poland or Malaysia is an example of the way in which SME farm providers have diversified their businesses to target tourists via a focus-differentiation strategy [26, 27].

On purpose, an operative definition of agritourism has been set in Italy [28], where agritourism activities are defined as "...activities of hospitality performed by agricultural entrepreneurs ...through the use of their own farm, which must remain connected to cultivation and farming activities...". In other words, agriculture remains one of the fundamental features of the farm. In this definition resides the main difference between agritourism and rural tourism.

This paper takes into account only the typologies of agritourism that are embodied in "A working farm", considering the presence of the working farm as the characteristic key that distinguishes agritourism from other rural tourism accommodations.

As for the evaluation of the performances of a given agritourism, there seems to exist thus far a lack of a suitable excellence quality brand capable to embody all aspects of the whole quality of agritourism, including its environmental impact. Such a label might represent an effective tool for communicating the performances of agritourism, particularly in the framework of the increasing responsible vision of people in their holiday choices [29]. Some evidence that the existence of eco-labels of farm tourism enterprises influences visitor choices has been noticed indeed since several years. In a study commissioned by the European Commission [30] it has resulted that 52.8% of domestic tourists and 46% of outgoing tourists would refer to an eco-label in the choice of vacation if such an eco-label was available. More recently, Ohe and Kurihara [31] have analyzed the relationship in Japan between local brand farm products and rural tourism, showing a strong direct relationship not only with the development of tourism but also with the increases in income and employment in the local community. Moreover, Choo and Petrick [32] have studied the interactions between agritourism services and intentions to revisit them. The important finding of this work is a call for the incorporation of social interactions as a component of the agritourism services.

Therefore, after a synthetic analysis of the current state of brands applied to agritourism on a working farm, this paper proposes a new operative environmental label that comprehensively consider all of the products and services that these categories of touristic facilities provide to guests, also considering the agricultural processes taking place on the farm.

MATERIALS AND METHODS

In this section, the features of agritourism that need to be assessed to award an agritourism an environmental excellence brand, are investigated, after briefly reviewing the possibility of adopting on purpose the existing EU Ecolabel.

Moreover, a proposal for an operative sustainability award for agritourism sites is introduced.

Main Features of an Agritourim to Be Environmentally Awarded: The site under study is an "Agritourism", which is an agro service that represents a symbiotic relationship between the primary (Agricultural production) and the tertiary (Tourism) sectors. This symbiotic relationship establishes a basis from which to enhance the environmental and natural resources protection in the local context of the tourist area. "Agritourism" systems have the potential to become eco-innovative services that integrate tourism, self-sufficiency, agriculture and nature through closed cycles (e.g., sustainable agricultural production that feeds tourists in the accommodation facility).

An excellence label is therefore expected to integrate environmental protection and offer of tourist services and products in accordance with sustainability principles. Furthermore, the facility should demonstrate an attention to the cultural context by promoting the knowledge of the historic, environmental and socio-cultural heritage in addition to the recovery of rural areas [33, 34], thus recognizing that an offer tailored on the territory is one of the keys of a sustainable tourism [35].

Services offered by agritourism facilities are diversified and are a clear expression of multi-functionality in agriculture [17, 36-39].

In this study, we will refer to the definition of agritourism as established in the Italian legislation [40] and to the recent new brand for a unitary classification of agritourism's enterprises [40]. The main goal of the brand "Agriturismo Italia" was not to environmentally awarding agritourisms but to increase the level of transparency between demand and supply sides of these tourist offers. Despite this, its classification principles were referred to the principal issues of agritourism that can be usefully considered in the aim of the present work. In fact, the guidelines of "Agriturismo Italia" are the harmonic representation of the agritourisms, the valorization of the accommodation services in the rural context, the consideration of the landscape and cultural context of the agritourism site as representative of a positive perception of guests. This brand, in order to assign a hierarchical category, singles out four different main issues of the multi-functional service that is:

- Accommodation facilities,
- Agricultural activities,
- Food products and restoration,
- Recreational activities and landscape context.

Accordingly, the present work considers these four features for assessing a given agritourism from an environmental point of view.

Actually, certain labels and brands, which are generally issued for the tourism sector, are currently utilized for awarding agritourism, generally at country level, due to their attention to some of the previously cited issues, among which the environmental sustainability; but an excessive spread of tools might cause confusion to farm owners who wish to apply for an excellence brand. Clearly, this situation might be avoided, for example, if an Eco-label explicitly designed for agritourism were available. Meanwhile (That is, until the definition of a generally accepted Eco-Label method for agritourism on a working farm is set), local administrations might promote high-quality agritourism by indicating effective and easy applicable schemes that would straightforwardly communicate the excellence of the sites to people. The sustainability brand here proposed represents an operative contribution in this sense.

• Is the EU Ecolabel suitable for environmentally awarding tourist facilities?

The EU Ecolabel award for tourist facilities [41-43] has first been analyzed here, to verify its fittingness in catching the four cited features. This first analysis was aimed to establish whether it could be considered as a suitable tool for environmentally awarding agritourism sites. Afterwards, we have analyzed some other brands, among the several present in the international context, to evaluate their effectiveness in representing and communicating the quality level of a given agritourism. Therefore, a brief review of the EU Ecolabel is presented, in relation to the four issues of the agritourism's multifunctional service, namely accommodation facilities, agricultural activities, food products and restoration, recreational activities and landscape context.

By analyzing the criteria for the category I, "Accommodation facilities", it appears that, although the EU Ecolabel is specifically concerned with the environmental impact of the accommodation service, like energy and water saving, reduction of the use of chemical substances and reduction of waste and the promotion of sustainable transportation (Soft mobility), it fails in considering other aspects of the accommodation services (Table 1). In fact, it does not entail a properly trained staff to ensure the application of environmental measures and does not require the staff to have a properly certified knowledge of one foreign language and certified qualifications related to agritourism. Table 1: Criteria present in the EU Ecolabel referring to the category I, "Accommodation facilities" (m = mandatory; o = optional)

Energy efficiency	m/o	
Renewable energy production	m/o	
Water efficiency	m/o	
Rainwater harvesting	0	
Wastewater use	0	
Waste prevention	m/o	
Minimization of the use of detergents and disinfectants.	m/o	
Promotion of sustainable transportation (e.g. make bicycles available to guests or use primarily soft means of transport for excursions)	m/o	
EMAS registration or ISO certification of the tourist accommodation		
EMAS registration or ISO certification of suppliers		
Indoor Air Quality	m/o	
Green procurement	0	
To avoid the use of pesticides or follow the organic farming principles in the outside areas.	0	
Staff training concerning energy and water saving, chemical substances and waste.	m	

Furthermore, the EU Ecolabel lacks other important environmental criteria such as noise and electromagnetic pollution prevention and landscape and biodiversity preservation.

As for the category II, "Agricultural activities" and, then, the environmental impact of the farm connected to the tourist accommodation, the EU Eco-label requires the tourist accommodation to be registered under the Environmental Management Audit System (EMAS) [44] or to be certified according to the ISO 14001standard [45]. However, it is not fully clear whether, in the case of an agritourism on a working farm, such a requirement must be fulfilled also by the farm. Moreover, the EU Ecolabel prescribes that the "outside areas" of the tourist accommodation shall be managed following organic farming principles [46], but it is not clearly established whether these areas include also the farm and the processes occurring on it. In other words, EU Ecolabel seems not to be very effective in evaluating the environmental quality of farm activities.

As regards the category III, "Food products and restoration", it must be noted that several brands address the food quality as it represents an important element for guest satisfaction in these categories of tourist locations [47]. Brands addressing food generally promote the use of products obtained by organic farming methods. except for the EU Ecolabel that do not seem to be specifically aimed at this goal. It, in fact, although encouraging the offer of locally sourced food (The so-called "Km. 0" food) by means of an optional criterion, does not properly consider the environmental impact of the whole food chain. The environmental impact of food transportation should be also considered, due to its potential effectiveness in reducing the environmental burden, especially when more

efficient transportation systems, lower packaging use and reduction in the loss of product are assumed [48].

These criteria are well considered by methods such as the Life Cycle Analysis (LCA) methodology [49, 50] and the Ecological Footprint [51, 52], for example but are not properly taken into account in the EU Ecolabel scheme.

Therefore, the brand does not require the production of food within the agricultural firm connected to the tourist accommodation and limits the attention to the offer of organic food to guests. Because the methods of organic farming are supposed to have environmental impacts lower than those referring to conventional farming practices [53], this brand indirectly awards lowenvironmental-impact food products coming from the agricultural firm connected to the tourist accommodation.

On the other hand, the EU Ecolabel neglects the certified quality of food. As it is well known, this quality is certified by brands such as PDO (Protected Designation of Origin), PGI (Protected Geographical Indication), etc. These brands are based on the legal framework provided by the Council Regulation (EC) No 510/2006 [54]. These quality food labels promote a wider diversity in agricultural production, protect product names from misuse and imitation and provide consumers with a more transparent information concerning some specific product aspects. For foodstuffs to which these EU labels are not attributable (e.g., fishery products), the agritourism might refer to a traceability standard [55].

Turning back to the environmental impact of food, it must be noted that the EU Ecolabel shows a clear gap, since it is not particularly effective in evaluating the environmental impact of food in agritourism sites. Anyway, an important ISO standard on the requirements and guidelines for quantification of the carbon footprint of products, that deals with this issue, has recently been released [56]. This new standard, which is largely based on both the existing standards for LCA and environmental labels and declarations [57], addresses the computation of greenhouse gas emissions related to goods and services.

Finally, as for the category IV, "*Recreational activities and landscape context*", it must be noted that EU Ecolabel does not take into account these issues. For this reason, it fully disregards the role of farm holiday in promoting recreational activities and cultural tourism, a kind of tourism that pays attention to the historic, environmental and socio-cultural heritage of the surrounding cultural contexts.

It is evident that, particularly with respect to this category, local brands are far better labels for referring to the cultural context of the area where the agritourism is located unlike the EU Ecolabel.

In conclusion, the EU Ecolabel scheme for tourist services is not well suitable for environmentally awarding agritourism sites with respect to the four features that are singled out in the "Agriturismo Italia" approach.

More generally, the need for a new environmental brand for agritourism sites is confirmed [58].

Proposing an Operative Sustainability Award for Agritourism Sites: From the previous analysis the difficulty in designing an "Ex novo" excellence brand embodying all criteria featuring the environmental quality categories of an agritourism has arisen. Even existing brands that are expressly designed for specific characteristics of the agritourism fail to embody certain aspects of the holistic quality of agritourism. These limitations might be overcome by awarding farms with a label that consider all of the services and products that these touristic facilities provide people with, also including the on-farm agricultural processes [59, 60].

As it has been previously noted, regarding the integrated evaluation of the quality of agritourism, four aspects related to the quality of a given agritourim on a working farm should be embodied in a single label (Figure 1). In other words, a summation of the criteria present in different brands seems to fully cover the requirements of an excellence label for agritourism.

The tentative scheme proposed here, is simply obtained by merging some of the existing brands that refer to each quality category. Obviously, brands to be merged are selected on the basis of their effectiveness in describing the excellence features for each of the four considered quality categories (I, II, III and IV). Consequently, the building up of a brand that summarizes the best current labels representing the excellence of a given quality category instead of the designing of a new brand with new criteria and procedures, is hypothesized here.

This working hypothesis, actually under evaluation by the University of Palermo, springs out from a still on-going collective bargaining with tourist councilor's office of the Sicilian Region, which is interested in defining a simple and operative tool for awarding the high quality agritourism of the island.

The basic concept of this operative proposal is that the joint and simultaneous effects produced by such advanced brands might offer a holistic characterization of the excellence of agritourism. The contemporary adoption of all of these brands will enable to establish whether a given agritourism may award an excellence specification.



Fig. 1: Categories of quality to be awarded by an integrated brand for agritourism





Fig. 2: The proposed scheme for environmentally awarding agritourism sites

The procedure attributes an environmental award to a given agritourism. Three different levels of quality are defined based on the number of brands hold by the agriturism and representative of the different categories, that is: class A (Four brands, each of them pertinent to four different categories), class B (Three brands, each of them pertinent to three different categories) and class C (Two brands, each of them pertinent to two different categories). Figure 2 reports the logical scheme of the procedure.

It is evident that this scheme is based on the number of brands achieved by the agritourism site in four different categories of features, without attributing a rank to the categories. In other words, holding a brand belonging to the category I or to the category IV will bring the same result to the agritourism. Obviously, different schemes could be designed, as will be proposed in the Discussion section.

RESULTS

In this section, a field verification of the proposed brand in the Sicilian region is presented, in order of checking its reliability in a context where agritourist sites are well diffused. In fact, such a classification scheme, proposed within the Degree in "Food Industry Engineering" of the University of Palermo, is currently under evaluation by the Sicilian Region in sight of the definition of a voluntary environmental award label for the agritourism sites of the island.

Sicily has a surface of 25 711 km² (Being the largest Italian region) with a population of 4,994,383 *inh*. The region, to be considered as typical of the current increasing trend of agritourism sites in Italy, is also characterized by an important presence of agro-food enterprises, ranging from wine to oil and fish. The economic importance of the Sicilian agro-food sector is clearly indicated by the sectorial GDP that accounts for the 4.51% of the whole island, compared with the Italian figure, which is 2.5%. In total, the nine Sicilian provinces have 515 agriturism sites. Such a large number of agritourism is interested indeed in applying for an excellence label for communication and marketing purposes.

A feasibility evaluation of the proposed new brand has been carried out considering the 515 Sicilian agritourism sites operating in the region. By means of direct enquiring, the ownership of quality brands with respect to the four criteria, singled out by the "Agriturismo Italia" scheme, has been assessed.

	Brand's name	Quality categories mainly represented
1	Classificazione in spighe:	
	1 spiga	I - Accommodation facilities
	2 spighe	II - Agricultural activities
	3 spighe	IV - Recreational activities and landscape context
	4 spighe	III - Food products and restoration
2	Agricoltura biologica	II - Agricultural activities
3	Marchio ospitalità italiana	I - Accommodation facilities
4	Agriturist	I - Accommodation facilities
5	EU Ecolabel	I - Accommodation facilities
6	Marchio qualità ambientale strutture ricettive (Madonie mountains)	I - Accommodation facilities
7	Marchio qualità ambientale ristorazione (Madonie mountains)	III - Food products and restoration
8	Oasi della filosofia	IV - Recreational activities and landscape context
9	ISO 9001: 2008	II - Agricultural activities
10	ISO 14001: 2004	II - Agricultural activities
11	I.G.T. "Terre siciliane"	III - Food products and restoration
12	IGP "Limone Interdonato"	III - Food products and restoration
13	Etna d.o.c.	III - Food products and restoration
14	Alcamo d.o.c.	III - Food products and restoration
15	D.O.P. Monte Etna	III - Food products and restoration
16	D.O.P. Valdemone	III - Food products and restoration
17	D.O.P. Monti Iblei	III - Food products and restoration
18	D.O.P. Valle del Belice	III - Food products and restoration
19	D.O.P. Valli Trapanesi	III - Food products and restoration

Table 2: Quality brands owned by Sicilian agritourisms

Table 3: Brands owned by the Sicilian agritourism sites and achievable quality classes in the present proposal

Number of brands hold by the agritourism	Number of agritourim	Quality class achievable
none or 1	163	none
2	98	С
3	250	В
4	4	А

From the analysis it has emerged that 19 different brands have been acquired by the Sicilian agritourism enterprises and these brands cover the four quality categories, as indicated in Table 2. The brand "Classificazione in spighe" (Ears classification), is an articulate scheme that is subdivided into four different quality levels, called "Spighe" (Ears).Each quality level mainly covers a specific category of the four considered.

Following the assessment of the correspondence between operating brands and quality categories, the situation of each of the 515 agritourism has been evaluated, as reported in Table 3 [61].

The field analysis introduced here, showed the feasibility of the new operative brand: despite at present only four enterprises might be certified class A, approximately 352 agritourism might be acknowledged with one of the proposed levels of quality.

Another interesting element is the large number of agritourism holding approximately 3 brands (Class B), compared with those holding two brands (Class C). This signals that agritourism sites interested in a quality path, once holding a second brand, tend to achieve higher levels of quality. This, indirectly confirms the suitability of the scheme proposed here.

DISCUSSION

In this section, two issues are investigated. On the one hand, the role of institutions and impartial third party organization in the process of implementation of the brand; on the other hand, the possibility of following a different scheme for the achievement of the three subsequent levels of quality. As for the first issue, the role of the (The Sicilian Region, in this case) local administration in the certification process must be clarified.

The proposal scheme might be classified as one of the three major voluntary environmental labels, i.e. Type I [62], Type II [63] or Type III [57] environmental labeling. In the first case, an impartial third-party organization awards with environmental labels products that meet excellence criteria established by the organization itself. These multi-criteria-based labels identify overall environmental preference of a product (i.e. good or service) within a product category based upon life cycle considerations. In the second case, an environmental declaration is made by the manufacturers themselves, with no evaluation by a third party. This kind of labels often evaluate a single attribute. In the third case, consumers are provided with quantified environmental data referred to pre-set categories of parameters. These parameters, in turn, are set by a qualified third party on the base of life cycle assessment evaluations and are verified by that or another qualified third party. In the latter there are no criteria to meet (http://www.globalecolabelling.net/what is ecolabelling/index.htm).

Therefore, whether the proposed scheme is considered as a Type I label, an interesting point to be clarified regards the role of certification bodies that are called to provide a certification of compliance with the scheme.

The first-party certification is represented here by the agritourism; the second-party certification could be represented by the association to which the single agritourism belongs; the third-party certification body might be represented here by the Regional Administration (The Sicilian Region, in this case). The declaration of conformity may be based on the verification of the holding of four (Class A), three (Class B) or two (Class C) brands referring to the considered quality categories by the considered agritourism.

As for the second issue, it must be observed that the final rank of a given agritourism might be achieved by following a different path. In other words, the Region could decide to prioritize the four categories of quality. For example, the category that refers to the "Accommodation Facilities" (Category I of Section 2.1) and the category pertinent to the "Agricultural Activities" (Category II of Section 2.1) might be both considered as mandatory in order of allowing an agriturism site to achieve higher levels of quality. In this case, sites holding brands belonging to both cited categories will be awarded with the C class of quality. Then, the achievement of one

or two further bands, pertinent to the category III ("Food product and Restoration") or IV ("Recreational Activities and Landscape Context"), respectively, will enable the agritourism site to obtain a B level (One further brand) or an A level (Two further bands) of quality.

This modified scheme would modify the number of agritourim sites achieving a given class of quality. In fact, the application of this procedure to the same 515 Sicilian agritourim would lead to a number of 74 agritourism with class C (Simultaneous owning of brands of categories I and II), 16 agritourism with class B (Simultaneous owning of brands of categories I and II and one brand of categories III or IV) and none agritourism with class A (Simultaneous owning of brands of categories I, II, III and IV). This result is strongly different by that obtained considering all brands as equivalent and in which a site was simply required to sum up the number of own brands.

Obviously, the application procedure of the scheme depends on the policy adopted by the releasing institution. Clearly, different regional governments of a same country should adopt the same scheme in order to enable customers to directly compare the excellence level of the agritourism sites operating in different Regional contexts.

CONCLUSIONS

To collectively assess the entire performance of agritourism on a working farm, a new environmental quality label has been proposed here that considers not only the accommodation services (Typical of hotels) and the food provided to guests, but also the environmental impact of farm activities (Including the production of agricultural products, even those not provided to guests).

The strength point of this proposal is to define an excellence brand for agritourism sites avoiding the designing of an "ex-novo" label. Moreover, the proposed scheme, being based on the subsequent achievement of different brands pertinent to four quality categories, pushes these enterprises toward an enrichment of their offer in a sustainable path characterized by higher performances and lower environmental impacts.

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