POLISH AGRITOURISM FARM WEBSITE QUALITY AND THE NATURE OF SERVICES PROVIDED

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Abstract: The presented study is aimed at solving the following problems: what product is offered by agritourism farms, what is the typology of agritourism farms in terms of the products offered, and do the specific attributes of a website correspond to the specific attributes of provided services? The present study was conducted for a set of agritourism farm websites. From a total of 574 websites subjected to inspection testing, 287 websites were hosted on a paid server with a ccTLD domain, and 287 websites were hosted on a free server with an assigned free domain. Each website was described using 35 diagnostic variables. The achieved score was subsequently normalised using the zero unitarisation method. Based on the observations made in the present study, it can be concluded that the website development technique translates into the nature of activities conducted by a farm, as the form of the offer presentation online translates into what a tourist can expect directly on the farm. The study revealed that underdeveloped, amateurish websites are used to promote traditionally understood family agricultural farms which offer an opportunity to work on the farm. This knowledge is of importance for tourists worldwide, as tourists should not be afraid of the amateurish websites of agritourism farms, as they advertise genuine rural agricultural farms offering accommodation. Based on the results, a new typology of agritourism farms demonstrated that specialised farms with modern websites typically offer more extensive tourism opportunities and have more available beds at their disposal.

Keywords: agritourism, website quality, tourism supply, quality, typology.

1. Introduction

Rural tourism, which encompasses the entire tourism economy of rural areas, is perceived as an important direction in rural development. Agritourism has evolved from rural tourism, and is considered a form of leisure in rural areas that is based on accommodation facilities and recreational activities related to agricultural farms and their surroundings (Phillip et al., 2010).

Agritourism is one of the most common non-agricultural forms of business activity pursued in the countryside. Notably, it is a method of economic and social activation for rural inhabitants that supports the sales of agricultural products, preserves, and handcrafted articles, while simultaneously affecting public perception of the countryside and agriculture (Tew, and Barbieri, 2012). Agritourism frequently provides an additional source of income, thus contributing to an improved quality of life for rural populations. Moreover, agritourism offers an opportunity for the alternative use of the available resources of agricultural farms, and increases potential for the natural and cultural environment of the countryside (Baum, 2011). Additionally, agritourism helps maintain traditions and the rural lifestyle. An important part of agritourism services involves tourists' intangible benefits that are cost-free, which does affect their price competitiveness. Not only is agritourism a component of the multi-functionality of villages and agriculture. It also represents a multifunctional phenomenon itself. By assumption, it serves a number of functions for reception and emission areas, as it generates income and offers infrastructural, social, and educational benefits. However, agritourism can also potentially lead to adverse consequences. In certain regions, agritourism takes commercialised forms to such an extent that it adversely affects the natural environment and becomes burdensome to local communities, which can lead to local conflicts. These conflicts arise, inter alia, from an increased volume of tourism traffic, including more motor vehicles and pedestrians, noise and vibrations, increased water consumption (particularly in regions with low rainfall and no water supply network), increased volume of generated waste, as well as competitive struggle. Furthermore, rural communities that are attractive to tourists have observed unfavourable landscape changes and the disappearance of traditional ways of rural life (Gao et al., 2014).

Generally, agritourism in Poland is perceived as a panacea for problems in Polish villages, including unemployment and the low incomes of farmers and local governments. Moreover, agritourism development is viewed as creating opportunities to improve the standard of living in the countryside. Since 1989 (i.e. from the political transformation of Poland), all development strategies and programmes have emphasised the need for the economic and social revival of rural areas, as well as the formulation of multifunctional development concepts that promote the development of business activities outside the field of agriculture, such as tourism. In this regard, a special role for regional marketing strategies is assigned to local tourism sectors, and stimulating the development of such activities is prioritised by local government authorities.

Purposes of the study

The attention of researchers investigating websites has often focused on the assessment of website design attributes, development techniques, functionality, and usability. However, solutions that improve website browsing and increase effectiveness are needed, and the role of websites in the promotion and sales of products and services is emphasised. In such studies,

a website can be regarded as a specific "mirror reflection" of the entity it advertises. The presented study is aimed at solving the following problems: what product is offered by agritourism farms, and what is the typology of agritourism farms in terms of the products offered? Do the specific attributes of a website correspond to the specific attributes of provided services? Can the quality of websites, expressed by specific parameters, indicate the type of agritourism farm providing the service? Finally, is there a relationship between the scale and range of services provided by an agritourism farm and the quality of its website? This knowledge may be useful for agritourism farms aiming to create their images by means of appropriate online presentation of services and for customers searching for agritourism facilities online.

An analysis of studies on agritourism farms' websites enabled the formulation of a hypothesis that selected the design attributes of a website indicating the type of agritourism services that can be expected by the customer, and the website development technique translating into the scale and range of conducted agritourism activities. The facilities that conduct commercial activities with a large number of beds while simultaneously offering light catering services, trade, or service provision in the field of mass event organisation typically have professional and extensive websites with numerous functionalities. However, small farms for which tourism represents an additional form of income often have websites built or managed in an amateurish manner. The present study was conducted with the aim of researching the possible relationships between the scale and range of activities pursued by agritourism farms and the quality of their websites.

2. Literature review

Agritourism has received increasing attention in academic literature, and it has been widely promoted both in developed and developing countries. Agritourism is defined as a form of leisure taking place on rural agricultural farms, based on accommodation facilities and activities related to farms and their natural surroundings and production (Flanigan et al. 2015; Streifeneder, 2016).

The development of agritourism brings many benefits to farm owners, villagers and tourists. One of the most important is the possibility of obtaining additional income from offering lodging and selling agricultural products (Barbieri, 2013). The housing resources available in the countryside, coupled with the underutilised workforce, offer many opportunities for providing tourism services (Das, and Rainey, 2010). Furthermore, income generated from tourism enables investment in and upscaling of tourism activities. A consequence of agritourism development in rural areas is a decline in the importance and limitation of agricultural farm production (Flanigan et al., 2015). In extreme cases agriculture

as an economic activity disappears in favour of service (often tourism) activities. Therefore, agritourism contributes to changes in the countryside, and can offer opportunities for development, particularly for small farms that are not specialised in agricultural production (Tew, and Barbieri, 2012). Additionally, agritourism sometimes offers an alternative or additional income source for specialised farms.

Notably, agritourism is also of considerable cultural importance. Agriculture and the people associated with it occupy an important place in national mythologies specific to Central Europe, and the admiration of and affection for the charms of rural life represent an important part of Europe's overall cultural heritage (Bednarek-Szczepańska, 2017). The traditional perception of rural areas is dominated by an image of villagers as people living modestly and in harmony with the nature, who keep traditions alive and are able to act collectively for the benefit of their villages. Agritourism enhances the values of traditional villages and agriculture while reinforcing their social and cultural significance. Simultaneously, a new generation of tourists is growing, for whom the opportunity to spend time in an untypical, fascinating, and innovative manner is becoming increasingly important. Various theme parks and other attractions based on an original idea are enjoying growing popularity (Arroyo et al., 2013). If a provider of agricultural services does not want to be eliminated by competitors, it must think constantly about distinguishing their farm from others, increasing the quality of services provided, and expanding the range of attractions offered to customers (Flanigan et al., 2015; Streifeneder, 2016). Therefore, many farms are currently undergoing a metamorphosis from being typically agricultural, to offering a classic agritourism product, through to specialised farms that remain active in the agricultural sector, and to large-scale farms providing commercial services.

When implemented in a competitive environment, agritourism should consider activities which attract a satisfactory number of customers to farms. After developing an agricultural product and setting a price, relevant information must then be passed on to potential customers. Therefore, many agritourism farm owners seek a way to distinguish their offer and reach out to a wider customer base. To this end they exploit the potential of websites, which enable the creation of both an image and a brand, and help convey an idea of the services provided (Platania, 2014). The interactivity, functionality, and usability of websites may affect the purchasing decisions of their users, including their willingness to shop (Ammirato, 2010; Herrero, and San Martín, 2012). However, website ownership does not guarantee success. A successful website should present valuable content and be created according to design standards, while considering current trends and technological achievements (Oliveira, and Casais, 2019).

Factors determining the quality of a website

The success of a website is primarily determined by its broadly defined quality, the marketing strategies in its environment, and a properly selected internet address (Sanders,

and Galloway, 2013). High usability of a website is perceived as an announcement of the high quality of services presented (San Martín, and Herrero, 2012). However, high quality websites require certain costs to be incurred. In search of savings and budget solutions, agritourism farm owners in Poland frequently face a dilemma between choosing to order the creation of a website and to purchase a hosting package, including the registration of a paid domain, and using a free service. Both paid (subscription) domain websites and free domain websites for agritourism farms can be found online.

The effectiveness of a website is determined by numerous factors. An effective website is a high-quality website, and the quality of a website typically determines its success (Lee, and Kozar, 2012). An effective website achieves specific goals; therefore, it has a satisfactory goal conversion rate (Pierdicca et al., 2019). Moreover, the effectiveness of a website is a result of its usefulness (functionality) and usability (Ali, 2016). This means that when using a website a user can perform specific actions (e.g. leaving a comment, making a booking, ordering a service, or purchasing a product). The usability and usefulness of a website may affect user satisfaction, and could develop the loyalty of users (Belanche et al., 2012). Website effectiveness is significantly affected by the website development technique. An effective website is a high-performance website that loads quickly in a browser window and is responsive (Dickinger, and Stangl, 2013). The effectiveness of a website should not be restricted by the display size of the device on which it is viewed (Schubert, 2016).

An effective website is also aesthetically pleasing. The effectiveness of a website is determined by its graphics and visuals, relating to attractive design and aesthetic value (Luna-Nevarez, and Hyman, 2012). Additionally, an effective website is available to all users, regardless of their limitations and disability. The ergonomics of the user interface, navigation facilitating content search, and its form of presentation are the means by which the impression of a website's professionalism is created, while building trust in the entity the website advertises. Moreover, the effectiveness of a website is also determined by the affordability of its content. The use of simple language increases the likelihood that customers will understand the message in accordance with the author's intentions. The effectiveness of a website is also determined by the appropriate formatting of the textual content, using headers, distinguishing features and bulleted lists. The presented contents should therefore be useful, varied, complete, unique, natural, and formatted appropriately, as well as complemented with graphics, videos, and also virtual tours (Paulo et al. 2018).

Website effectiveness is also determined by the support it receives on social media (Varkaris, and Neuhofer, 2017; Leung, and Jiang, 2018). The effectiveness of a website may be increased by links from high-quality websites. The diversification of traffic sources and synergy of marketing channels may also contribute to increased website traffic, which translates into improved website effectiveness (Danaher, and Rossiter, 2011). Maintaining or achieving specific effectiveness requires website monitoring, continuous modernisation and optimisation, and responding to the changing environment, which includes changes in search

engine algorithms and changes based on competitors' actions (Killoran, 2013). Effective websites are frequently updated and ranked high in search results. An effective website is one that serves specific functions, including the provision of information, marketing, contact, personalisation, booking, and payment functions.

3. Materials and methods

The present study was conducted for a set of agritourism farm websites whose addresses were obtained from the following national website catalogues: onet.pl, agroturystyka.pl, and wp.pl. The inclusion criteria for websites included a clear declaration provided in the website heading or published content indicating that the farm conducts agritourism activities (i.e. clear declarations of agritourism activities). The websites of boarding houses, motels, manor-houses, and other hotel facilities – although placed in directories within the "agritourism" category – were excluded. From a total of 574 websites subjected to inspection testing, 287 websites (the initial set) were hosted on a paid server with the assigned country code top-level domain (ccTLD, an individual name in the .pl domain) and 287 websites (the second set) were hosted on a free server with an assigned free domain (free hosting package). This resulted from the assumption that the scale and range of activities conducted by farms differ between those with free domain websites and those with subscription websites. Moreover, it was also assumed that the quality of subscription websites was higher than that of free domain websites.

The present study was conducted at three levels: 1) economic and marketing, 2) functionality, and 3) website development technique. Variables describing the services offered by a farm were placed on the first level and classified as economic and marketing indicators. It was assumed that the services offered by a farm provide a basis for marketing activities, resulting in this name being adopted for this group of variables. A detailed analysis was performed of the services offered by farms, including: the form and range of their activities, including the number of beds offered in the hosts' family home, in holiday cottages, and stand-alone independent residential buildings; the number of rooms; the price of one night's accommodation for an adult; the cost of full-day catering; the accessibility of rooms for people with disabilities; agricultural activities being conducted by the farm; and the leisure activities offered to holiday-makers on the farm. Tourism facilities guarantee on-site activities for guests both inside and outside buildings (in the open air), as well as outside the premises (frequently in cooperation with other specialised entities). However, only the activities available on the agritourism farm were assessed in the present study. It was assumed that activities such as billiard sports, sauna, hot tub, paintball games, or quad riding are typical of facilities pursuing commercialised activities offering several dozen to over 100 beds,

representing a specific measure of the degree of commercialisation of the services offered. Simultaneously, it was assumed that classic agritourism farms offered such attractions less frequently. An analysis of these attributes enabled an assessment of the scale (how many beds are offered by a farm?) and range of services (what attractions are available to tourists on a farm?) provided by farms (Table 1).

Table 1.
A set of diagnostic variables characterising the agritourism services offered, the functionality, and the website development technique

Group of variables	Diagnostic variables	Range of scores and unit of measurement
Services offered (economic and marketing indicators)	X_1 – total number of beds (including: number of beds in guest rooms; number of beds in year-round or summer tourist cottages)	3-158 beds
	X_2 – organisation of special events	0-1 points
	X_3 – catering offered by the accommodation facility (full-day catering)	0-1 points
	X_4 – adaptation of the offer to the needs of people with disabilities	0-1 points
	X_5 – agricultural or fruit-growing activities	0-1 points
	X_6 – fishponds, an opportunity for fishing	0-1 points
	X_7 – farm animals	0-1 points
	X_8 – an opportunity for organising a bonfire or a barbecue	0-1 points
	X_9 – playground for children	0-1 points
	X_{10} – conducting of workshops	0-1 points
	X_{11} – recreational and sports infrastructure	0-1 points
	X_{12} – billiard sports	0-1 points
	X_{13} – sauna	0-1 points
	X_{14} – swimming pool, hot tub	0-1 points
	X_{15} – an opportunity for riding bicycles	0-1 points
	X_{16} – paintball	0-1 points
	X_{17} – an opportunity for using water sports equipment (i.e. kayaks, boats, etc.)	0-1 points
	X_{18} – an opportunity for horse riding	0-1 points
	X_{19} – access to Wi-Fi	0-1 points
	X_{20} – accessibility of multimedia materials (e.g. films, spherical panoramas, or virtual tours)	0-1 points
	X_{21} – website built in a foreign language	0-1 points
	X_{22} – website built by a marketing agency	0-1 points
Functionality	X_{23} – contact form	0-1 points
	X_{24} – service booking form	0-1 points
	X_{25} – online payment form	0-1 points
Website development technique	X_{26} – code syntax correctness (W3C)	0-1 points
	X_{27} – the use of HTML5 or XHTML Strict specification	0-1 points
	X_{28} – compatibility with mobile devices	0-1 points
	X_{29} – website performance on desktop devices (according to PSI)	0-100 points
	X_{30} – website performance on mobile devices (according to PSI)	0-100 points
	X_{31} – level of search engine optimisation (SEO) (according to ClearSense)	0-100 points
	X_{32} – level of search engine optimisation (SEO) (according to Semtec)	0-100 points
	X_{33} – level of search engine optimisation (SEO) (according to Sunspot)	0-100 points
	X_{34} – content management system (CMS)	0-1 points
	X_{35} – components extending the functionality and interactivity	0-4 points

Source: authors' own elaboration.

The second level includes attributes enabling the assessment of a website's functionality, with the accessibility of contact and booking forms, as well as an opportunity for making electronic payments being noted. The third level included the assessment of attributes characterising the website development technique, which was assessed based on selected engineering criteria, including international W3C (*World Wide Web Consortium*) standards, responsiveness (compatibility with mobile devices), and design criteria, including web performance and the level of search engine optimisation (Pan, 2015). This grouping of attributes enabled the assessment of relationships between the scale and range of services provided by farms (first level indicators – economic and marketing indicators) and the quality of their respective websites (second and third level indicators – functionality and website development technique).

Each website was described using 35 diagnostic variables, of which 22 were economic and marketing characteristics, 3 were related to functionality, and 10 were related to website development technique. It was assumed that the selected variables would be sufficient to assess the range and form of services provided by farms and their website development techniques.

In addition, the technical parameters of websites were tested using selected web-based test automation applications (Table 2). Code syntax correctness was verified using the W3C Markup Validation Service online application. One point was awarded for a lack of code syntax errors. During manual inspection of the code, the specifications in which a website had been built were noted, and one point was awarded for the use of the latest HTML5 specification or one of the XHTML specifications. Website responsiveness was tested using the Opera Mobile Classic Emulator application, which enables browsing websites in the window of a selected mobile device in the Opera Mini browser, with one point being awarded for responsiveness. Website performance was tested using the Google PageSpeed Insights application. The level of search engine optimisation was verified using three web-based applications, namely ClearSense SEO Audit, Semtec SEO Audit, and Sunspot SEO. In addition, the components used to build a website and the content management system (CMS) were verified using the Complex SEO Audit application. One point was awarded for each component noted (components frequently increase the functionality and usability of a website, although they may decrease web performance). One point was also awarded for the use of the content management system (CMS). The achieved score was subsequently normalised using the zero unitarisation method.

Table 2.
Parameters adopted in the assessment of agritourism farm websites and testing applications

Design (qualitative) attributes	Testing application (form of test)
Design standard according to W3C, DTD (document type definition) (X_{26}, X_{27})	W3C Markup Validation Service (readout of the DTD header and validation of HTML code syntax correctness)
Responsiveness – compatibility with mobile devices (X_{28})	Opera Mobile Classic Emulator (simulation of website browsing on mobile devices)
Web performance (X_{29}, X_{30})	PageSpeed Insights (measurement of website performance on desktop and mobile devices)
Search engine optimisation (SEO) (X_{31}, X_{32}, X_{33})	ClearSense SEO Audit, Semtec SEO Audit, and Sunspot SEO Audit (a test on selected website parameters affecting search result position)
Technology of website building, design techniques, and tools used (X_{34}, X_{35})	Complex SEO Audit (identification of the content management system (CMS), identification of components extending functionality and interactivity, e.g. jQuery)

Source: authors' own elaboration.

Zero unitarisation method

Zero unitarisation is a method of normalising diagnostic features (Balcerzak, 2015), and is characterised by a constant reference point (i.e. the range of the normalised variable). Normalisation is an operation aimed at the adaptation of diagnostic variables to the role of partial criteria in the process of complex phenomenon assessment. Diagnostic features are usually expressed in various units of measurement, and have corresponding, different numerical ranges. Normalisation methods are used to transform absolute values into relative values, with transformed variables having no unit, and being unified in terms of the range of values they can take on. Therefore, the normalisation of features enables comparative testing on objects (complex phenomena) described using many variables.

Given that the variables adopted for the present analysis were of a stimulant nature, formula (1) was applied in the unitarisation process in order to replace different ranges of variability with a constant range, and to make them comparable with each other. This enabled the description of each website with a normalised website development index (WDI) and a normalised index of the range of services offered (SOR). The WDI index was the result of adding up normalised variable values from the set of variables characterising the website development technique as well as website functionality (as attributes resulting directly from the website development technique). The SOR index was the result of adding up normalised variable values from the set of variables characterising the services offered.

$$x'_{ij} = \frac{x_{ij} - min_i\{x_{ij}\}}{max_i\{x_{ij}\} - \min_i\{x_{ij}\}} \tag{1}$$

Based on the values of aggregated variables, the website quality index SQI was subsequently determined, which allowed websites to be grouped according to the quality criterion. Moreover, the value of the "accumulated quality index" for each set of websites was calculated. Moreover, the relationships between the website development technique (expressed with the WDI) and the scale and range of services provided (expressed with the

SOR) were assessed using the Pearson correlation coefficient. This correlation coefficient was calculated for both the set of paid domain websites and the set of free domain websites.

4. Study results

On the paid domain websites of agritourism farms (the first set) a total of 5913 beds were noted, including 4688 in 1337 rooms rented in the hosts' homes or in residential buildings only offered to holidaymakers, while 1225 beds were available year-round or in summer tourist cottages. On average, there were 21 beds per facility, with most facilities offering from several to a few dozen beds.

The farms that presented their offers on free websites (the second set) offered approximately 38% fewer beds in 871 rooms (an average of 12.5 beds). In this set, a much greater proportion of farms had a maximum of 10 beds. In addition, these farms offered accommodation in holiday cottages twice as early. Therefore, it can be concluded that the websites of farms targeted at agritourism activities with more beds more frequently had modern, responsive websites.

Every second agritourism farm that presented offers on a paid website demonstrated the infrastructure necessary for organising special events, including wedding receptions (144 farms, over 50%). However, for offers placed on free websites, only 58 such farms were noted (slightly over 20%).

Full-day catering proved to be standard in the farms under study. These services were declared by 80% of farms presenting an offer on a free website (231 cases), with the price indicated only for every fourth farm. Regarding offers placed on paid websites, full-day catering was declared by 171 farms (approx. 60%), of which 108 indicated their price.

Accommodation and catering in facilities presenting offers on paid domain websites were typically more expensive than those using free domain websites. The average price of an overnight stay for an adult in offers placed on paid domain websites ranged from PLN 21.5 (approx. 5 Euro) to PLN 46 (approx. 11 Euro). Furthermore, an overnight stay on farms presenting offers on free domain websites ranged from PLN 16.5 (approx. 4 Euro) to PLN 32 (approx. 7.5 Euro). The average price for full-day catering offered on paid domain websites was PLN 50 (approx. 12 Euro), while it was PLN 40 (approx. 9.5 Euro) for offers placed on free domain websites. In most cases, the costs of stay were negotiable, and depended heavily on the number and type of booked beds, the range of services ordered (accommodation with or without catering, an extra bed, a visit with guests' own animals), and on the length and period of stay (in season or off-season). Notably, the values provided here are approximate, and the final costs were not used for the final assessment of studied farms. Agritourism farms frequently failed to present a service price list on their websites, though farms using free

domain websites were less likely to include this information. Moreover, service price lists were presented for a variety of offer variants and configurations, as farms set their own time periods typical of a particular location, which determined the price for accommodation. For example, selected farms had higher prices during the so-called "natural period" when selected animal or plant species could be observed. Farms also made prices dependent on the holiday period, "from autumn to early spring", or during events (holidays) such as the "May Day Picnic" or Easter.

For the set of paid domain websites, 72 (12%) presented offers in a foreign language or provided automatic translation of the content. In the set of websites hosted on free servers, only 20 such cases were noted. Therefore, it is evident that most of the analysed offers were intended for the national (Polish) market.

A total of 139 (48%) agritourism farms presenting offers on paid domain websites declared agricultural or fruit growing activities (of various scales) and, in 133 cases, kept farm animals. However, these activities were often conducted "for show", and served the role of a specific tourism "attraction". In addition, every third farm (96 websites, 33%) declared that they owned fishing ponds, either used for fish farming or recreation. In agritourism offers presented on free websites, 92 farms declared agricultural activity, 100 owned farm animals, and 83 offered visitors access to fishing ponds. It should be emphasised here that the data obtained from free websites may be underestimated, as offers presented in this group were often described superficially. However, more information could often be read from website photo galleries than from text descriptions. This was different for websites with a paid address, where leisure offers were usually extensively described.

Agritourism farms presenting offers on paid websites more frequently included activities such as billiard sports, sauna, swimming pools, or paintball. The most popular forms of activity offered on farms include outdoor sports such as water sports and horse riding.

Only 10 agritourism farms (all from the first set) declared the adaptation of farm infrastructure to meet the needs of disabled people. A relatively high number (37%) of websites from the first set had been built by IT service companies or marketing agencies whose signature was provided at the bottom of the website (the "footer"), while only one such case was noted in the second set. In the set of paid domain websites, 45% (130 websites) were compatible with mobile devices. Moreover, the content management system (CMS) was identified in 152 cases (53%). Additionally, 60% websites from this set were built in the latest HTML5 specification or in one of the (X)HTML Strict specifications. Among the free domain websites, only 7 responsive websites, 11 websites built based on the content management system (CMS), and 37 (13%) websites built in one of the valid HTML specifications were noted, with most being rated as amateurish and created at the lowest possible cost (Table 3).

Table 3.
Total number of beds offered by agritourism farms in the studied dataset

Offer presentation	3-10	11-20	21-50	51-100	>100	Total
Paid domain websites (ccTLD)	51	152	74	8	2	287
Free domain websites	156	109	21	1	0	287
Total	207	261	95	9	2	574

Source: authors' own study.

On paid domain addresses a contact form was provided in 97 cases. Lodging could be booked using an online form on 25 websites (9%), while only 2 websites offered an opportunity to pay a deposit fee or the costs of stay via PayPal. Among free domain websites a contact form was available in only 3 cases, while the same number of websites offered an accommodation booking form. Moreover, none of the free domain websites had enabled payment options. In addition, viewing free websites was significantly hindered by advertisements in 199 cases (70%), which contained content dependent on the hosting service provider.

A low accumulated website development index (WDI) value of 1.42 characterised the set of paid domain websites, while for free domain websites it was even lower at 0.94. During the study the website performance parameter increased the rating of website development technique for simple, out-dated, free subdomain websites, while decreasing it for mobile websites using modern components to extend their functionality and interactivity. This is due to the fact that websites built in an out-dated manner, which are static and present information primarily using text, are small in size, use a small number of image files, and even fewer external resources. Therefore, they load rapidly in browsers due to their simplicity.

An accumulated, reduced index of the scale and range of agritourism offers (SOR) of 2.08 characterised the set of paid domain websites, while free domain websites exhibited a value of 1.29. For paid domain websites the total value of the accumulated quality index was 3.5, which was higher than the value for free domain websites (2.2).

The paid domain websites of agritourism farms most frequently obtained an SQI index value ranging from 10 to 14.99, with as many as 207 websites (approx. 72%) obtaining a value exceeding 10. Free domain websites were ranked lower (Table 4). Of the set of 287 websites, as many as 208 (approx. 72%) obtained SQI values ranging from 4 to 9.99.

Table 4.
Number of websites according to SQI value

SQI qualitative range	1.9-3.99	4.0-6.99	7.0-9.99	10.0-14.99	15.0-20.4	Total
Paid domain websites	1	20	59	138	69	287
Free domain websites	18	105	103	58	3	287
Total	19	125	162	196	72	574

Source: authors' own study.

Analysis using the Pearson correlation coefficient (r = 0.155) for the set of paid domain websites presented a weak correlation between website development technique (WDI) 0.5 significance level. This implies that a paid website determines a better, more complete

offer presentation. It is evident that farm hosts pay more attention to the offer descriptions and presentation when spending resources on website maintenance. It can be concluded that farms with a professionally built website usually have a more extended offer for tourists. It can also be concluded that improved technical quality (development technique) in a website resulted in an improved presentation of what farms offered to tourists and the range of services offered (SOR), which was statistically significant at $\alpha = 0$.

An analysis of the Pearson correlation coefficient ($r = 0.02$) in the set of free domain websites demonstrated that the correlation between the website development technique (WDI) and the range of services offered (SOR) was not statistically significant at $\alpha = 0.05$ significance level. This implies that out-dated website development techniques were not an obstacle to providing a full description of the services offered, which are not significantly inferior to those presented on paid websites. However, a distinction should be made between the range of an offer and the form of its presentation – which has not been assessed – as it involves an assessment of graphics. This, in turn, may be the result of the auditor's subjective preferences. This does not change the fact that offers on free websites were usually presented with significant issues (e.g. a service price list being omitted).

5. Typology of agritourism farms

Based on the observations made in the present study, it can be concluded that website development technique translates into the nature of activities conducted by a farm, as the form of offer presentation online translates into what a tourist can expect directly on the farm. An analysis of offers placed on the websites of agritourism farms in Poland reveals four main forms of the services provided:

1. The first type (T1) is "classic" agritourism; an agricultural agritourism farm providing services to tourists on a relatively small scale, offering from a few to several beds in the host's house, and allowing tourists to participate in field work and have contact with farm animals. Agritourism activities are usually regarded as an additional source of income, and farms themselves conduct production activities of various scales. These farms are frequently based on multi-generational traditions. The hosts cultivate the land, sow grains, and grow potatoes. They have a vegetable garden as well as fruit trees and bushes. They also produce food products, and often everyday and ornamental objects (handcrafted articles) as well. These farms' activities are not aimed at the maximisation of occupancy rate;

2. The second type (T2) is "specialised farms" with a specific agricultural activity profile, either cultivation or breeding. These are farms which keep studs, have orchards, nurseries, or fishing ponds, are aimed at providing tourism services such as

rafting and canoeing trips, or frequently organising "green schools" and thematic workshops.

3. The third type (T3) is "para-agritourism farms", being tourism farms located in rural areas. Their owners do not conduct agricultural activities and have no farm animals, only pursuing activities that involve offering beds in facilities such as a boarding house, motel, or guest rooms; however, they do so under the banner of agritourism. There, the agricultural production aspect is reduced to a house garden or a vegetable garden. This is also frequently an activity involving the renting of holiday cottages.

4. The fourth type (T4) represents "neo-agritourism", tourism "in an agritourism style", or "quasi-agritourism" activities provided by extensive farms, agritourism centres, and in modern, often large facilities (on average from several to a few dozen beds), either traditionally built or patterned on a traditional style. This is a form of commercialised tourism. Descriptions of the activities conducted in such facilities present agritourism as "civilised rural tourism", "closeness to nature along with the comfort of leisure", and "convenient accommodation in rural style". Many of these facilities keep farm animals and pursue agricultural (often fruit-growing) activities, but this is not exhibited. A typical rural background with hens and ducks running around is not to be found here. In these farms agricultural activity only provides a background for tourism, and farm animals are frequently kept in "mini zoos". Agricultural machines and equipment are often treated as exhibits, and older ones as museum objects. These farms prefer large organised groups and the organisation of special events. They frequently even have several large rooms at their disposal, which can accommodate up to several dozen people. Offers are targeted at wealthy customers willing to pay a higher price, and requiring more luxury. Such facilities often have a reception and a restaurant, manage a facility servicing offices, and sell gift vouchers, discount cards and vouchers for their services. They frequently offer a myriad of activities, including: paintball games, quad riding, saunas, hot tubs and indoor swimming pools, as well as spa and cosmetic services, organised health camps and slimming holidays with cosmetic treatments, exercise packages, and consultations with a dietitian, while hosting green schools, day camps, and camps with various activities and excursions. This is a specialised tourism activity conducted in rural areas, and often on a large commercialised scale.

Free domain websites with inferior technical parameters, which frequently displayed external advertisements, were more often used by classic agritourism farms (T1) and farms that did not pursue agricultural activities (or these activities were only pursued on a small scale, for their own use) (T3). For the owners of these farms, agritourism was usually an additional source of income. The scale of activities for these farms was mostly small, and amounted to a few or several beds in rooms located in the hosts' home. Free websites were not used by any entities pursuing commercial activities in rural areas (T4). It can also be

concluded that a large number of facilities that invested in paid websites were in a "transitional" phase from agricultural activities to service activities: a total of 124 farms with paid websites were in the "phasing out agricultural operations" phase, while developing offers for tourists. Websites with inferior technical parameters of the "old design" type were characterised by poor content, static layout (800-1000px width), small fonts, no CMS, and static geoinformation (raster map). Such websites were usually used by classic, small, rural farms for which agritourism was an additional activity.

The present study demonstrates that with increasing website quality – expressed by selected attributes of website development techniques (e.g. the HTML version used, responsiveness, performance, level of search engine optimisation, and the functionality range) – the degree of commercialisation of an agritourism farm as well as the scale and range of available activities tends to increase. Agritourism farms pursuing commercialised activities (T4) more often possessed high-quality websites that ranked high in the assessment of parameters (e.g. 89 points out of the 100 that could be obtained in the SEO test). Classic, small agritourism farms more frequently had free domain websites characterised by a static form and a lower level of search engine optimisation (lower goal conversion capabilities).

6. Website quality and the nature of agritourism services

The present study demonstrated that with increasing website quality (expressed, inter alia, by responsiveness, web performance and the level of search engine optimisation), both the number of functionalities offered by the website and the scale and range of services provided by the agritourism farm increase. That is, farms pursuing commercial activities tend to have better quality websites.

Agricultural farms that regard agritourism as an additional source of income (classic agritourism, T1) frequently do not own a website, and tend to use national portal grouping offers of accommodation and social media, or have websites built at the lowest possible cost, which are old-fashioned, amateurish, static, and frequently in the form of online showcases or specific "online information sheets" (i.e. a short text description adorned with a couple of photographs and contact details, with everything included in a single hypertext document). These websites are often maintained on free servers with the assigned free domain. The technique of their development leaves much to be desired, and the offer description is often concise, incomplete, and out-dated, which translates directly into the goal conversion. Such websites do not serve their marketing and information functions, nor do they exploit the internet's full potential. Another important aspect is that such websites are "invisible" on the internet, as they may have low positions in search results. The hosts, however, are not usually

interested in intensive promotion of services online, primarily due to the small scale of the activities carried out, and to the fact that they treat them as an additional source of income.

The websites of the largest agritourism facilities (neo-agritourism, T4) are most frequently built and supported by interactive agencies. These websites are modern, frequently updated, and prepared with mobile devices in mind. Such websites serve a representative and marketing function, and are used to acquire customers. Offers are presented in a dynamic and interactive manner with attractive graphics, frequently using professionally edited photographs. Such websites provide multimedia, which often take the form of interactive spherical panoramas (virtual presentation of the farm's infrastructure). Moreover, contact forms and service booking forms are often provided on these websites, which has been confirmed by other studies. Nieto, Hernández-Maestro, and Muñoz- Gallego (2011) studied 150 rural Spanish tourism facilities and their websites. The authors demonstrated that 42% of entrepreneurs in their study maintained their own website, while the majority hired an external firm to maintain and develop websites for them.

Farms pursuing specialised agricultural or breeding activities, as well as farms that do not conduct agricultural activities only offer beds in rural areas (the third and fourth type), and usually only have online showcases. These farms are typically characterised by a lack of booking and payment functionalities and contact forms. Such websites primarily provide basic information and contact details.

7. Discussion of results

Phillip et al. (2010) presented a typology of agritourism farms that considered the farms' agricultural activities as well as tourism opportunities involving participation in daily farm work (non-working or working farm agritourism, passive, indirect or direct contact agritourism, staged agritourism, or direct contact, authentic agritourism). This typology is focused on agricultural farms and the nature of activities they pursue.

More recently, Flanigan, Blackstock, and Hunter (2014) modified the classification offered by Phillip et al. (2010). Notably, the phrase "a holidaymaker's contact with the agricultural farm" was replaced by "interaction" (i.e. what is the nature of interaction between guests and agriculture?). This phrase more completely reflects the relationship between the holidaymaker and the inhabitants of the agritourism farm, as interaction includes both the tourist's impact on the hosts and the hosts' impact on the tourist. Notably, the nature of the interaction is determined by the type of agritourism farm in question. Differences exist between facilities of the NWF type (non-working farm agritourism) and farms of the WFDCA type (working farm, direct contact, authentic agritourism (Flanigan et al., 2014).

The typology was developed during the research results based on the assessment of agritourism farms' websites. A "reverse" approach was applied to develop the typology, with farm websites, website development techniques, and the presentation of the offered services representing the basis of considerations. It is the website that provides the basis for the typology—an image of a farm emerging from an analysis of its website, resulting in the farm being classified in a particular category.

The present study concludes that agritourism farms can generally be divided into those with modern websites and those with old-fashioned or amateurish websites that are frequently hosted on free domains. The former type usually conducts more or less commercialised activities, with tourism as their main income source. On the other hand, the latter type usually conducts agricultural activities while simultaneously offering accommodation services. For such farms agritourism represents an additional income source. Certainly, "somewhere in between" forms exist, yet the existing regularity holds true. The more commercialised (specialised) a facility, the more modern and developed their website.

8. Recommendations for tourists, practitioners, and policy makers

The present study offers recommendations for tourists, owners of agritourism farms, and website developers. Farms conducting commercialised activities typically offer their services to organised groups and to wealthy customers who are willing to pay more for a service while expecting sophisticated attractions and luxurious amenities such as saunas, hot tubs, spa services, and/or quad riding. A sophisticated website with a modern layout can be associated with a certain type of service and agritourism facility, including the scale of pursued activities. As such, customers searching for small agritourism farms will find them on classic, often rustic websites.

The present study also revealed that underdeveloped, amateurish websites are used to promote traditionally understood family agricultural farms which, instead of hot tubs and spas, offer an opportunity to work on the farm. This knowledge is of importance for tourists worldwide, as tourists should not be afraid of the amateurish (underdeveloped) websites of agritourism farms, as they advertise genuine rural agricultural farms offering accommodation. However, customers searching for leisure in rural areas who are not interested in traditionally understood agritourism should seek offers hosted on modern websites, as it is more plausible to conclude that such websites advertise entities pursuing commercialised activities. Website developers should also be aware of this trend, and should determine the type of customer that the website aims to cater to at the design stage. Therefore, website developers should select website parameters such as graphic design in relation to the customer's profile, or, indirectly, to the scale and range of the activities conducted by the farm.

9. Conclusion

The results of the present study highlight the services provided by agritourism farms in Poland as seen through the eyes of an online user viewing a browser window. A website presents a certain projection or presentation that may either encourage a customer to book a service or discourage them from doing so. Furthermore, it creates an impression of the service in the customer's mind. Notably, it is the hosts who must ensure that the realities of their farm are appropriate to those created in the customer's mind after having read the offer presented online.

The quality of a website may indicate the nature, scale and range of services that an agritourism farm provides. Farms advertised on simple and ordinary, amateurish websites – which are frequently hosted at a free domain – are usually involved in traditional agritourism activities on a small scale, where holidaymakers can experience farm work and get in contact with farm animals. In turn, facilities carrying out activities "in the agritourism style" or through "neo-agritourism" activities – where farm animals and farming hold a specific attraction to visitors – usually have responsive and extensive websites complete with multimedia. Therefore, paradoxically, an offer of traditionally understood agritourism on an agricultural farm can be found on simple web pages or online showcases. This implies that the presentation of an agritourism offer on a web page with inferior technical parameters does not necessarily imply an inferior quality of the services provided.

A certain phenomenon which accompanies the enlargement of agritourism facilities is their gradual transformation into mass tourism facilities in which farm work is replaced by activities such as Nordic walking, yoga exercises, mud baths, massages and spa treatments, and traditional rural vegetable-based meals. All of the aforementioned activities are offered in rural areas, and in facilities that are modernly equipped yet patterned on a traditional, wooden, regional structure. However, such offers are not addressed to every customer, as there remain a group of holidaymakers who prefer to rest in ordinary agricultural farms. This sector is also visible online. An increasing number of entities providing tourism services are advertised by websites created by interactive (marketing) agencies, which demonstrates the specialisation in tourism as well as the commercial nature of the services provided. This is because such websites exist to guarantee the promotion of offers online in the form of a continuous inflow of new customers, since the success of commercial facilities is determined by the number of overnight stays sold.

10. Limitations of the study and further research

The study indicates certain trends. It confirms that agritourism farms which pursue commercial activities on a larger scale usually have websites of better quality. There are, however, small farms with a few beds which have high-quality websites, and large farms with websites of poor quality. Therefore, the study results should not be perceived in absolute terms. They can offer certain suggestions to farm owners as to what website parameters they should take care of for it to be of good quality, and to customers as to what website parameters they should focus on, and what parameters may show the actual picture of a farm as well the range and form of services provided. The research materials were collected in 2017, and their analysis showed the current state of the problem. A repetition of the study in a few years will enable the observation of trends in the information and promotional actions in agritourism, including the indication of changes in the services offered in the fields of agritourism and rural tourism.

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