

DEVELOPMENT OF GREEN RURAL TOURISM WITH THE CONSIDERATION OF SEASONALITY OF A CONSUMER MARKET

M. Homenko

Kremenchuk Mykhailo Ostrohradskiy National University
vul. Pershotravneva, 20, Kremenchuk, 39600, Ukraine. E-mail: kafmen@kdu.edu.ua.

Purpose. The article highlights the results of the research which aims to create a regional strategy of a tourism enterprise, with consideration of the seasonality of a consumer market of green rural tourism services. **Methodology.** The systematic approach was used to determine the technological stages of the guest service cycle of rural tourism. The choice of an optimal rural tourism functioning strategy is performed with the help of solving the matrix game with the participation of two players. **Results.** A holiday package including a room, meals, excursion, and recreational and entertainment services provided by the owner of the dwelling has been considered. The main features of rural tourism guest cycle are defined with respect to the nine major technological stages of service. The results of the approval of an improved system for using matrix games involving two players from opposing interests are performed. The behavior of rural tourism enterprise management in conditions of gaming with spontaneous actions of «nature» for the purpose to increase the implementation of tourism services is considered. The optimal strategy, which uses the proposed criteria of mathematical expectation of winning games with «nature», is determined. **Originality.** The methodological approach regarding the choice of an optimal tourism enterprise strategy with the consideration of seasonality of the green rural tourism consumer services market is modified. **Practical value.** The proposed strategy of the matrix game with «nature» in case of repeated use provides the rural economy of Union for Promotion of Rural Green Tourism Development in Kremenchuk region with the maximum possible gain. References 9, table 1.

Key words: service, green rural tourism, servicing, seasonality, game, gain.

РОЗВИТОК СІЛЬСЬКОГО ЗЕЛЕНОГО ТУРИЗМУ З УРАХУВАННЯМ СЕЗОННОСТІ СПОЖИВЧОГО РИНКУ ПОСЛУГ

М. М. Хоменко

Кременчуцький національний університет імені Михайла Остроградського
вул. Першотравнева, 20, м. Кременчук, 39600, Україна. E-mail: kafmen@kdu.edu.ua.

Розглянуто сукупність послуг нічліжного, гастрономічного, екскурсійного та відпочинково-розважального обслуговування туристів власником житлового приміщення. Визначено особливості гостювального циклу сільського туризму за дев'ятьма основними технологічними фазами обслуговування. Удосконалено методичний підхід щодо вибору раціональної стратегії туристичного підприємства з урахуванням сезонності споживчого ринку послуг сільського зеленого туризму. Наведено результати апробації удосконаленої системи використання матричних ігор за участю двох гравців з протилежними інтересами. Розглянуто поведінку керівництва підприємств сільського зеленого туризму в іграх з випадковою дією «природи» для збільшення реалізації туристичних послуг. Визначено оптимальну стратегію з використанням запропонованих критеріїв математичного очікування виграшу в іграх з природою.

Ключові слова: послуга, сільський зелений туризм, обслуговування, сезонність, гра, виграш.

PROBLEM STATEMENT. In accordance to the experts of the World Tourism Organization and respected specialists, green rural tourism is rapidly developing and confidently becoming premiere at the sector during the modern stage of development [1].

Extremely popular ideas of environmental protection common throughout western civilization have been accepted by tourism industry. The development of green rural tourism will benefit the widening of the employment of rural population not only in the production sphere but also in the sector of services. The term “green rural tourism” is defined as a recreational form of tourism involving temporary residence of tourists in the countryside and reception of services of green rural tourism provided. Green rural tourism is itself a variety of economic activity within the field of private auxiliary enterprise. The complementation of the definition “rural tourism” with the term “green” empathizes the ecological orientation of the recreational activity additionally.

The western researchers of rural tourism consider areas with less than 10-20% territories covered with buildings as the countryside [9]. The rural areas in

consequence of low quantity of inhabitants of settlements are granted with the low population density. The average value of population density varies throughout different countries according to different classifications in specific states. The acknowledged forms of rural tourism are ecotourism and green rural [1]. Ecotourism is itself leaning and recreation purposed variation of tourism set in the natural territories, which includes variety of active recreation forms in the countryside without inflicting harm upon the environment. The concept of “rural tourism” is significantly wider than “agritourism” according to the semantic content. The recreational variation of agritourism is concentrated around the countryside areas in conditions of use of farming with the purpose of recreation, education or active involvement to traditional forms of farmerhood. Agritourism acts as simplified variety of green rural tourism and is represented in different forms, but constantly includes renting of a local residence. Therefore, the development of green rural tourism can become the guarantee of numerous solved problems for many villages of Poltava region.

To the problems of development of green rural tourism considering seasonality issues the attention is being given by both foreign and local scientists and practitioners including: R. Brajmer [1], M. Krass [3], N. Kudla [4], O. Loskutova [5], O. Romaniv [6], M. Tovt [7], V. Fedoseev [8], Dzh. Hollovej [9]. An acute problem for the majority of villages is the lack of workplaces; therefore an involvement of a local population in tourism-related activity stands as one of the solving means of employment for inhabitants and for development of territorial communities as well.

The aim of the presented work's performed researches is the elaboration of a regional strategy of a tourism enterprise considering seasonality of the consumer market of the green rural tourism services.

EXPERIMENTAL PART AND RESULTS OBTAINED. For the successful development of green rural tourism, an agritouristic region must meet the next requirements: clean natural environment; low level of urbanization and industrialization with the small level of non-agricultural employment simultaneously; limited intensity of agricultural and forestry production; beneficial agricultural structure with the medium-sized farms present; balanced agricultural landscape; low wages of villagers; unexploited residential resources. Spending of free time in conditions of green rural tourism is organized as a form of stationary recreation with the possibility of close radial travels or hikes. The

provision of a temporary residence for tourists serves as a major service of green rural tourism. The tourism product of green rural tourism is an array of night-refuge, gastronomical, sightseeing, leisure and entertainment services as a form of a private countryside auxiliary activity; the possession of a residence and a paid license for the owner is not mandatory [7]. The rural tourism workplaces do not require special skills and high qualification, thus local inhabitants can work in this sector as staff, producers of the foodstuff for guests, tour guides, craftsmen.

The common services of green rural tourism include: organization of transportation, placement and catering for tourists. In conditions of growth of numbers of participants of green rural tourism it is rational to provide additional services: sightseeing organization; involvement of tourists in agricultural activities and craftsmanship; renting of automobiles, boats, touristic gear; production and marketing of souvenirs; involvement into folk ceremonies and traditional events; country festivals, fairs and other public events; everyday services; providing rights for private recreational grounds use. Additional services commonly are not included into price of the package and a tourist should buy them independently according to a place of stay.

Table 1 represents a list of the additional services of green rural tourism with the peer review of a tourist demand.

Table 1 – Ranking of additional services of green rural tourism

№	Additional services	% of need	№	Additional services	% of need
1	Food and drinks supplement with serving	15	11	Special gear renting: sport, recreational	3
2	Information for tourists: commercial, ethnographical	12	12	Horse riding	2
3	Bathroom, sauna	10	13	Fishing	2
4	Visiting of local points of interest	9	14	Gathering: mushrooms, forest berries	2
5	Hikes: sport, educational, etc.	8	15	Collecting: weeds, wildflowers, etc.	2
6	Swimming, rowing, sailing	8	16	Observation, participation in farming	1
7	Traditional celebrations in villages	7	17	Observation of domestic animals	1
8	Acquaintance with rural production means	6	18	Souvenir, press marketing	1
9	Swimming pool	5	19	Participation in hunting	1
10	Internet access	4	20	Transfer	1

The implementation of the effective planning and organization of green rural tourism requires an utter knowledge of features of a specific territory, its history, nature and social development. The ethnocultural diversity of Poltava region is itself one of the most important conditions of social development stability of the distinctive part of our country with the ancient traditions of agriculture of the local population. Agro-recreational region of Kremenchuk is the uniform territory of Poltava region in a natural and ethnocultural aspects with the historically formed system of villages, many of which are specialized in providing of green rural tourism services. It is important to improve activities aimed at the development and implementation of special creative, entertaining and show-oriented programs, spending of leisure time in the countryside, i.e. to provide a full complex of green rural tourism

animation. For consumers of green rural tourism significant meaning possesses a feature like the conditions of the quarters, which have to combine elements of common urban facilities with natural aesthetics of a countryside interior. In living quarters, alongside with soundproof windows, lighting, mirrors, sets of modern furniture and household appliances, it is important to organize the placement of antiquities which emphasize the atmosphere of the countryside recreation. Set of antiquities may include: wooden benches, an aged floor or table clock, icon embroidered towels or compositions of pillows on beds, etc. Rooms for guests, in case of a high level of convenience, have to be equipped with ventilation and regulated heating systems. Bundles or wreaths of dried flowers, weeds are capable of adding a special touch to the aura of aromatic recreation. During the process of farmstead landscape

planning it is advisable to consider natural treasures of the location.

It is important to rationally organize the process of recreational servicing of a tourist from the point of arrival to a countryside accommodation to the final departure. Guest cycle of rural tourism has to include nine basic technological stages of service:

1. First contact of an owner and a potential client, regarding a possibility of ordering of services in advance. For the rational distribution of tourism product in time an owner have to maintain a journal of booking and client registration. The stage finishes with an agreement considering the main aspects of future stay in a countryside residence with the determined level and price of the service.

2. Preparation of a countryside residence for guests' arrival.

3. Organization of transfer: meeting and transportation of guests from a terminal to a residence.

4. Organization of placement of guests has to be performed on the conventional hotel standard level of quality; nevertheless, it has to excel due to the countryside stylization. The prepayment for the stay, and related services delivered in advance, is collected.

5. Organization of meeting, provision of refreshments, establishment of communication between guests and owners. The stage considers combining of the three important functions: gastronomical, adaptation-centered and communicational. In case of high level of conveniences provided in a farmstead, a chance of visitors becoming regular customers is present; thus a potential reliable source of income for an owner.

6. The commercial and informational function summarizes into familiarizing of guests with potential possibilities of the infrastructure concerning leisure activities. It is important for owners to clarify the tastes and likings of guests, their dreams, expectations and requests: going for a walk during the horse grazing at nighttime, early morning fishing, sunrise watching, gathering of fruits in a garden, or mushrooms, berries, plants in a forest accordingly.

7. The period of stay of guests in a countryside residence. It is important not to allow the growth of monotony, deny the development of vividness of perception of the countryside recreation to fade by means of presentation of interesting activities and entertainment of tourists during free time.

8. The organization of "family" parting with guests while looking forward to future meeting. Additional expenses for organization of seeing-off event prior to a guest departure acts as an investment aimed at the future of the business of the owners.

9. The procedure of parting and the following terminal transferring. Introduction of the final stage of guest cycle into countryside hosting practice will encourage tourists to visit a countryside residence again: either because of conveniences provided and activeness of recreation, or due to personal traits of hosts and previously experienced individual approach.

A family of villagers working in the tourism industry is itself a compact tour operator because of own production formation process. An owner of a

countryside apartment, who wants to provide comprehensive leisure actives for tourists in case of performing of several variants of recreation is obliged to: be capable of presenting the household; to inform about features involved in running of it; to provide information about the village given, region, history, points of interest, traditions, etc.; to provide necessary equipment; to act as a guide and a tour guide; to be fluent in accountancy; to be capable of providing first aid. Villagers willing to participate in hosting are usually more interested in protection of local landscapes and cleanness of the environment. Villager families in conditions of effective tourism activity management are expanding the possibilities of implementation of private auxiliary enterprise production, maintaining the local culture, encouraging communities to restore regional monuments of historical and cultural heritage. In the competitive environment success is gained through the most qualitative service provided to clients in different market niches, and in case of display of initiative, creativity and flexibility, aimed at the achievement of a market advantage.

The change of conjuncture in conditions of a consumer market with the consideration of seasonality of tourism services affects the development of rational line of behavior for the private farming in the tourism sector. In conditions of instability of the market the consumption of tourism services it is extremely difficult to choose the rational line of behavior. In addition, with the use of mathematical methods regarding the focus of behavior of managers of the Union for Promotion of Rural Green Tourism Development it is possible to approach to the achievement of maximum income for households in case of actual performance. The strategy of behavior on the market in conditions of instability decreases the influence of the factor of chance that allows, with a significant probability, to forecast the profit-making of private farms.

A consumer demand and volume of provision of tourism services of a private farm depends on the season. Thus, the peak of demand on spectacular and entertaining, sporting and recreational services occurs during the spring-summer period; for medical and preventive, informational and educational – autumn-winter accordingly. In matrix games the participation of two players with the opposing interests is presumed [3]. Actions of either player are aimed towards the increase of gain (decrease of loss). In certain situations, which are defined as game, the instability is taking place that is caused by absence of information regarding the impact of weather factors. These conditions depend not on the conscious actions of the opposite player, but rather the objective reality itself, and are called the games with "nature" [8]. An owner of a farm, in conditions of games with "nature", tries to act cautiously and the player "nature" acts spontaneously in turn. Thereby, the great interest for managers of the Union for Promotion of Rural Green Tourism Development is caused by elaboration of the optimal strategy during transitional periods. For the purpose of support of development of green rural tourism in Kremenchuk region it is necessary to solve the problem of optimal strategy regarding the behavior during the game with "nature"

considering seasonality. The conditions of the game are set with the matrix $(a_{ij})_{m \times n}$ [3]. Let the player as an owner of a farm A has the strategies A_1, A_2, \dots, A_m , and nature – the states B_1, B_2, \dots, B_n . The least complicated is the situation when the probability p_j of each state of nature B_j is already known. In this case, if all possibilities are considered:

$$p_1 + p_2 + \dots + p_j + \dots + p_n = 1. \quad (1)$$

If the player A chooses the pure strategy A_m , then the expectation value of gain will be:

$$p_1 a_{i1} + p_2 a_{i2} + \dots + p_n a_{in}. \quad (2)$$

The most profitable will be the strategy in case of which:

$$\max_i (p_1 a_{i1} + p_2 a_{i2} + \dots + p_n a_{in}). \quad (3)$$

If the amount of information of the weather conditions is not enough, it is possible to apply Laplace's Principle of Insufficient Reason [8], according to which it is possible to consider that all states of the weather are equally possible:

$$\max_i (a_{i1} + a_{i2} + \dots + a_{in}) / n, \quad (4)$$

meaning the strategy, for which the arithmetic average of elements of the appropriate line is the highest. For working conditions of a standalone farm of the Union for Promotion of Rural Green Tourism Development in Kremenchuk region a number of criteria that are used in the process of choosing of an optimal strategy should be considered [3].

Wald's maximal criterion. It is suggested to use the maximal strategy if:

$$\max_i \max_j a_{ij}, \quad (5)$$

that matches with the lower value of game.

The criterion of choice is itself pessimistic, which considers the worst weather impact regarding a situation of provision of service by a standalone farm. In accordance with the presented criterion it is reasonable to use the strategy A_2 .

Maximum criterion. An optimal strategy is chosen if (5). The criterion is itself optimistic and considers the most favorable impact of the weather on man for conditions of the standalone farm service provision. In case of the presented criterion it is reasonable to use the strategy A_1 .

Hurwicz's optimism-pessimism criterion. Considering the presented criterion the strategy defined by the formula is recommended:

$$\max_i \{ \alpha \min_j a_{ij} + (1 - \alpha) \max_j a_{ij} \} \quad (6)$$

where α is the degree of optimism, which varies in the range of [0,1].

According with the presented criterion, the intermediate position is recorded, that takes into account the worst and the best conditions of the weather impact simultaneously regarding consumption of tourism services, which are provided by a standalone farm. In case of $\alpha = 1$ the criterion transits to Wald's criterion, in case of $\alpha = 0$ – to maximum criterion. α is affected by the measure of responsibility of the person, who decides on the choice of line of behavior for the owner of a farm. The more significant are the consequences of the faulty decision making, the higher is the aspiration to

achieve the degree of insurance, the closer is α to 1. For the conditions of work of farms that provide tourism services it is rational to select the degree of optimism about $\alpha = 0,4$, then for the strategy A_1 . $\alpha \max a_{ij} + (1 - \alpha) \min a_{ij}$.

For the management of the Union for Promotion of Rural Green Tourism Development in Kremenchuk region it is reasonable to use the strategy A_2 .

It should be mentioned, that each of the presented criteria cannot be considered as satisfactory for the final decision choice, although, the simultaneous analysis of the criteria makes it possible to present the consequences of the according management decisional more clearly. In conditions of the known probability distribution of different states of nature the maximum expectation of gain is the decision making criterion. The results of the research stated, that for the management of the Union for Promotion of Rural Green Tourism Development it is reasonable to use the strategy A_2 to plan forward the improvement of health services with the cold weather orientation.

The National University of Life and Environmental Sciences of Ukraine in collaboration with the Union for Promotion of Rural Green Tourism Development in Ukraine provide training for representatives of local authorities and government, heads of regional branches of green rural tourism, holders of private farms and other public organizations [5, 6]. Students receive the thorough knowledge of the history and characteristics of development of green rural tourism in the world and in our country; regulatory framework and public policy conditions in this important segment of rural territorial development; quality of service; rural architecture and landscape design; features of the national diet; commercial activity; production of qualitative and safe products in agricultural farmsteads; active forms of rural tourism; acclimatization problems; wetland and forest ecosystems and on many other issues as well. It is reasonable to organize training courses for representatives of executive authorities, owners of farms of the Union for Promotion of Rural Green Tourism in Kremenchuk region at the Department of Tourism and Management of the local university.

CONCLUSIONS. For the development of green rural tourism it is necessary to: establish contacts with the local communities, farmers and villagers, who are interested in creation of respective tourism production and its implementation on a service market; develop the mechanism of creation, certification and promotion on a service market with an own brand with the use of local resources based on farming; create an informational-educational center for the implementation of consulting and education of interested parties regarding the basics of rural tourism; develop ecological and touristic rules of conduct for producers and consumers of "green" tourism product. Owners of rural apartments should constantly widen the package of animation services that are not available in other forms of tourism in general.

In conditions of development of market relations it is advised to define an optimal strategy for operation of green rural tourism with the application of game theory. The proposed strategy in case of game with "nature" in

case of repeated usage provides villagers, involved in service of tourists, with the maximum possible average gain. The inhibitory factors of strategy development for the management of the Union for Promotion of Rural Green Tourism Development are: discrepancy of regulatory framework towards international law; limitations of the current investment potential of tourism sector; insufficient governmental financial support regarding promotion of regional tourism product throughout internal and external markets; an imperfect system of accounting of business entities that provide rural tourism related services. The solving of shortcomings is impossible without implementation of the main public policy tasks during the coming years regarding the harmonization of the regulatory framework of tourist activity and realization of measures concerning the targeted programs eventually.

REFERENCES

1. Brajmer, R.A. (1995), *Osnovy upravlenija v industrii gostepriimstva* [Fundamentals of management in hospitality], Aspekt Press, Moscow, Russia.
2. Dorozhkina, H.M. (2013), "Development of strategy for tourist companies considering seasonality of consumer market services", *Transactions of Kremenchuk Mykhailo Ostrohradskyi National University*, no. 2 (79), pp. 170–174.
3. Krass, M.S., Chuprynov, B.P. (2006), *Matematicheskie metody i modeli dlja magistrov jekonomiki* [Mathematical methods and models for the economy masters], Piter, St Petersburg, Russia.
4. Kudla, N.Ye., Klok, N.V. (2010), "The impact of promotion and information on the development of rural tourism", *Visnyk Lvivskoho instytutu ekonomiky y turizmu*, no. 5, pp. 78–83.
5. Loskutova, O.A. (2013), "Courses with green tourism", *Turyzm silskyi zelenyi*, no. 1, pp. 30–31.
6. Romaniv, O.Ya., Trusova, T.S., Tverdokhlib, O.I. (2014), "Demand for rural green tourism product Rivne region", *Herald of Khmelnytskyi national university*, no. 6, vol. 1 (218), pp. 202–208.
7. Tovt, M.M. (2013), "Formation of policy development and operation of green tourism in Ukraine", *Turyzm silskyi zelenyi*, no. 1, pp. 10–15.
8. Fedoseev, V.V. Garmash, A.N., Dajitbegov, D.M. (1999), *Jekonomiko-matematicheskie metody i prikladnye modeli* [Economic-mathematical methods and applied models], JuNITI, Moscow, Russia.
9. Hollovej, Dzh., Tejlor, N. (2007), *Turisticheskij biznes* [Tourist business], Znannja, Kiyv, Ukraine.

РАЗВИТИЕ СЕЛЬСКОГО ЗЕЛЕННОГО ТУРИЗМА С УЧЕТОМ СЕЗОННОСТИ ПОТРЕБИТЕЛЬСКОГО РЫНКА

Н. М. Хоменко

Кременчугский национальный университет имени Михаила Остроградского
ул. Первوماйская, 20, г. Кременчуг, 39600, Украина. E-mail: kafmen@kdu.edu.ua.

Рассмотрена совокупность услуг ночлежного, гастрономического, экскурсионного и развлекательного обслуживания туристов собственником жилого помещения. Определены особенности гостевого цикла сельского туризма по девяти основным технологическим фазам обслуживания. Усовершенствован методический подход к выбору рациональной стратегии туристического предприятия с учетом сезонности потребительского рынка услуг сельского зеленого туризма. Приведены результаты апробации усовершенствованной системы использования матричных игр с участием двух игроков с противоположными интересами. Рассмотрено поведение руководства предприятий сельского зеленого туризма в играх со случайной действием «природы» для увеличения реализации туристических услуг. Определена оптимальная стратегия при использовании предложенных критериев математического ожидания выигрыша в играх с природой.

Ключевые слова: услуга, сельский зеленый туризм, обслуживание, сезонность, игра, выигрыш.

ЛІТЕРАТУРА

1. Браймер Р.А. Основы управления в индустрии гостеприимства / Р.А. Браймер. – М.: Аспект Пресс, 1995. – 602 с.
2. Дорожкіна Г.М. Розробка стратегії туристичної компанії з урахуванням сезонності споживчого ринку послуг / Г.М. Дорожкіна // Вісник Кременчуцького національного університету імені Михайла Остроградського. – 2013. – Вип. 2 (79). – С. 170–174.
3. Красс М.С. Математические методы и модели для магистров экономики / М.С. Красс, Б.П. Чупрынов. – СПб.: Питер, 2006. – 496 с.
4. Кудла Н.Є. Вплив популяризації та інформації на розвиток сільського туризму / Н.Є. Кудла, Н.В. Клок // Вісник Львівського інституту економіки та туризму. – 2010. – № 5. – С. 78–83.
5. Лоскутова О.А. Курси з сільського зеленого туризму / О.А. Лоскутова // Туризм сільський зелений. – 2013. – № 1. – С. 30–31.
6. Романів О.Я. Попит на сільський зелений туристичний продукт Рівненської області / О.Я. Романів, Т.С. Трусова, О.І. Твердохліб // Вісник Хмельницького національного університету. Економічні науки. – 2014. – № 6, т.1 (218). – С. 202–208.
7. Товт М.М. Формування політики розвитку та функціонування сільського зеленого туризму в Україні / М.М. Товт // Туризм сільський зелений. – 2013. – № 1. – С. 10–15.
8. Федосеев В.В. Экономико-математические методы и прикладные модели / В.В. Федосеев А.Н. Гармаш, Д.М. Дайитбегов. – М.: ЮНИТИ, 1999. – 391 с.
9. Холловой Дж. Туристический бизнес / Дж. К. Холловой, Н. Тейлор – К.: Знання, 2007. – 798 с.

Стаття надійшла 25.02.2016

