

API-TOURISM, AN IMPORTANT COMPONENT OF THE SUSTAINABLE DEVELOPMENT OF THE ROMANIAN VILLAGE - CASE STUDY: THE LOCALITY OF SIBIEL (MĂRGINIMEA SIBIULUI), ROMANIA

Iuliana ANTONIE

“Lucian Blaga” University, The Faculty of Agricultural Sciences, Food Industry and the Protection of the Environment, Sibiu, 7-9 Dr. Ion Rațiu, 550012, Sibiu, Romania, Phone: +40 269 211338, Fax: + 40 269 213381, E-mail: iuliana_antonie@yahoo.com

Corresponding author: iuliana_antonie@yahoo.com

Abstract

The ever-accelerating dynamics of the evolution of human civilization requires that the role of beekeeping be accentuated and diversified in proportion to the needs of man and the environment. Bees provide a wide range of ecosystem services and human well-being, contributing greatly to sustaining life on Earth. Currently, in the context of globalization, beekeeping takes on new values, with a role in biology, ecology, economy, social life and, finally, in maintaining the health of the population. In this context, api-tourism, as a niche tourism, appears as a new phenomenon, supporting the culture and traditions of rural communities in a sustainable way. Api-tourism, as an innovative form of tourism, plays an important role in maintaining the health of human society, starting from the consumption of beehive products to the prevention and amelioration of human diseases. The purpose of the work is to promote the village of Sibiel, as a locality conducive to the practice and expansion of beekeeping, with the stimulation of api-tourism. Its geographical location, floristic biodiversity, with the famous orchards of fruit trees with local varieties, deciduous and resinous forests, special spontaneous flora support the practice of beekeeping at the local level. The beekeeping in the area combines harmoniously and profitably with the agritourism activities carried out in the dozens of guesthouses in the village of Sibiel, where the local honey has a place of honour.

Key words: apiculture, Api-tourism, Sibiel village, Mărginimea Sibiului, Romania

INTRODUCTION

Beekeeping is a branch of animal husbandry that studies the rational rearing and care of bees in order to obtain high yields of hive products (honey, wax, pollen) and to obtain broodstock [25]. Through their activity, bees contribute to 15 of the 17 Sustainable Development Goals (SDGs) set by the United Nations Sustainable Development Goals for the well-being of people and the protection of the environment by 2030 [23].

Beekeeping is an important activity for the area in which it is carried out due to its social, economic, scientific, human health and environmental protection role [3], [4].

The aim of the paper is to promote the village of Sibiel, as a locality suitable for practicing and expanding beekeeping, with the stimulation of beekeeping tourism.

The following question is asked: Does the locality of Sibiel have the potential to develop beekeeping tourism as a tourist product?

In order to answer this question, the following objectives were taken into account: to analyse the literature on beekeeping and to analyse the conditions necessary for the development of beekeeping tourism in the locality

Nowadays beehives are increasingly visited by tourists, becoming attractive destinations for them. This is the basis of bee tourism or api-tourism, which is considered a new trend in international tourism and is integrated into agricultural tourism or agro-tourism.

The name api-tourism comes from the Latin word "apis" meaning bee (*Apis mellifera*).

Beekeeping tourism is a new dimension of tourism that promotes beekeeping and bee life, culture, traditions of rural communities in a sustainable way. It is a niche, selective form of tourism that revitalizes the countryside, creatively combining nature's biodiversity and

travel, thus ensuring green, ecological and healthy tourism. It successfully combines physical and cognitive activity [25].

The beehive becomes the finale of the unique experience, where tourists are involved in the bee story. They are informed about the morphology, biology, ethology of the bee, about the hive and its products, as well as about many of the benefits to human health of spending leisure time in the beekeeping area.

In this context, the paper aimed to promote Sibiel Village from Mărginimea Sibiului, Sibiu county, Romania as a locality where beekeeping is flourishing in a continuous expanding grace to its geographical position, flora diversity from wild flowers to orchards and forests, which are an important source of nectar for bee families and also honey and other bee products could enlarge the offer of agri-tourism products for visitors.

Literature review on apiturism

The literature emphasizes that beekeeping tourism fulfills several functions:

(a) *Educational* with the promotion of ecological activities through which tourists gain a much better understanding of the flora-bees symbiotic relationship and the role of beekeeping in protecting the environment;

(b) *Tourism* through which visitors become aware of the importance of the beekeeping ecosystem and the specific traditions related to it;

(c) *Health* through which both natural treatments and bee hive products with major benefits for human health are promoted;

(d) *Social*, through which the rural population, in turn, could have a job as such or an additional job. Practically, beekeeping tourism can be considered as an alternative employment for the unemployed [30].

(e) *Economical* through which beekeeping tourism can generate income, increased honey and fruit production at low cost, influencing economically the whole community.

(f) *Ecological* through which beekeeping could assure a clean environment and preserve biodiversity and the beauty of the landscapes.

The foundations for api-tourism were laid in Slovenia in 2016, and it is considered a market leader in this sector [30]. It is the first country to certify its api-tourism providers

and known as the "green piece of Europe" [11].

The dynamics of this sector have intensified in recent years in Europe and the field has become extremely popular. Countries such as Poland, Czech Republic, Germany, Spain, Lithuania, Ukraine, Portugal, Slovakia, Hungary, Slovakia, Greece present a developed beekeeping tourism [30]. In Poland in order to protect nature, especially forest ecosystems and local traditions, wild beehives are used to promote this form of tourism. The bees support the forest eco-system and stimulate the seed production of trees, shrubs and herbaceous flora [20].

Another paper points out that countries such as Slovenia, Hungary, Romania, Chile and Indonesia practice bee tourism characterized by a close link between sustainable beekeeping, historical heritage and health. Turkey is also mentioned as a country with great potential for beekeeping tourism, but lack of public awareness, poor promotion and poor marketing result in underdeveloped niche tourism. The study also refers to Bulgaria, presented as a country with an adequate infrastructure but with beekeepers with little information on the subject [28].

In another study on beekeeping tourism in Slovenia, the author states that this form of tourism fits into the new concept of sustainable creative tourism that offers tourists opportunities for self-development and creative experiences [19].

Another publication [11] analyzes the beekeeping tourism offer for visitors, focusing on the observation of different activities in the apiary: the ritual of the beekeeper's work, beekeeping methods and techniques used by the farmer with an emphasis on ecological ones, the ethology of the bee family, honey production and, last but not least, how to protect ourselves from counterfeit products. The tourist is also informed about obtaining other products of the hive and their importance in human health.

Beekeeping tourism offers the opportunity to participate in round tables, workshops on the following topics: the importance of the plant-bee binomial, the selection and improvement

of honey bees, identification of the latest methods in beekeeping;

In the bee farms visitors learn about bee-therapy, aero-therapy and their role in the treatment of medical conditions.

Romanian beekeeping is successful thanks to two important factors: first, the biodiversity of the spontaneous and cultivated honey flora in our country and second, the *Apis mellifera carpatica* breed, with its 5 ecotypes (Western Plain, Transylvania, Mountain, Moldavian, Steppe, Moldavian Plateau), perfectly adapted to the conditions of our country [25].

In addition to the flower - bee binomial, beekeeping in our country has also developed thanks to the progress of beekeeping inputs. Among these we mention: equipment, specific tools and new technologies with a role in making beekeepers' work more efficient and increasing the productivity of bee colonies [18]. The convergence of all these factors results in high yields, diversity and superior quality of products offered by the bee family and, last but not least, secure jobs for the rural population. The revival of beekeeping encourages the local rural population to identify new activities in the apiaries which ultimately lead to the development of beekeeping in the area and new sources of income for the farmer.

In our country, beekeeping tourism is a new branch of tourism, which seeks to develop a variety of services and products centered on the beehive and beekeeping activity. Beekeeping is an important source of income for rural inhabitants and encourages the city-dweller to visit the apiary, to harvest the products of the hive or to experience the authentic taste of honey straight from the source, without processing.

A number of activities and good practices on bee tourism have been identified in Romanian hives.

1. *The concept of the "Tourist Hive"* has emerged, a concept developed by the association "Miarea Sinceră" from Câmpina (Prahova). It is a social business that creatively combines education, beekeeping, tourism and social entrepreneurship. Basically, it is a traditional Romanian farm where tourists of all ages can discover the

secrets of beekeeping. Visitors discover, step by step, how honey is produced and learn to distinguish natural honey from counterfeit honey. In the apiculture school of the beehive, disadvantaged people are trained in the beekeeping profession and are also helped to develop their own business [10].

2. *Beekeeping tourism* has stimulated the emergence of *beekeeping trails*. In the case of the county of Sălaj, the Intercommunal Development Association (ADI) Sălaj Plus has created a tourist map with trails offering visitors culinary and beekeeping experiences, bringing together beekeeping and gastronomic tourism in a single product [1].

3. Beekeeping tourism in Romania offers *beekeeping enthusiasts* the opportunity to participate in *round tables* on various beekeeping topics, including the selection and improvement of the native bee, *Apis mellifera Carpatica* [6]. The Hamba apiary of the Melikoleg Association, through its beekeeping school, offers courses in which professionals and amateurs alike are introduced to the latest developments in the field by lecturers, beekeeping specialists from Romania, Germany, Denmark, Austria, Switzerland and other countries. Some of the courses are also shared with the younger generation.

Beekeeping tourism can also be supported by visits to beekeeping museums where visitors come into contact with collections of traditional equipment and art related to bees [11]. The number of museums varies from country to country. Thus, Austria has 3 museums, Belgium 4, Switzerland 3, France 12, Germany 15, Italy 8, the Netherlands 3, and also Poland with 3 museums. In Romania there is only one permanent beekeeping exhibition in Bucharest and one beekeeping museum in the village of Minis, Arad county. According to the beekeeper, the aim of this museum was to support beekeeping and the hive products used in apitherapy [12].

4. Apitherapy is defined as the science, and also the art, of maintaining health through the use of hive products. The products, rich in minerals, vitamins, essential amino acids, proteins, carbohydrates, organic acids,

enzymes, are perfectly assimilable without any processing by the human body [9].

Api-Air, a method using the air in the hive, belongs to this category of treatment. The hive aerosol is rich in active substances that characterize the peak period of bee activity and saturated with essential oils from honey ripening. Api-Air can be compared with other natural treatments: mopheas, salines, saunas, marine or mountain bioclimates. A first step in this therapy was initiated in 1950 by Hungarian beekeepers who had gone pastoral. The second step was taken in 1987 with the advent of the hive air extractor (Pilstein, Austria) [8]. As a treatment method, the use of hive air was first implemented in Germany. The procedure is also authorized in other European countries such as Austria, Slovenia and Hungary. Hive aerosol treatment is effective in various respiratory tract diseases [28]. Slovenian beekeepers, innovators in the procedure, have installed beds inside the beehive and tourists inhale the "scent of the hive" [11]. Another experiment using hive aerosol is being carried out in the HoneyHouse in Truşeni, Republic of Moldova. In wooden hives with beehives inside, the hive air is inhaled by the visitors [15].

In our country, this type of unconventional therapy can be found in Silagiu (Buziaş city) in the Timessian locality of Silagiu. The business started with two wooden cottages where tourists can sleep and inhale the perfect combination of propolis, honey, wax, flowers, pheromones of the Nasonov gland, atmospheric air with its components, which have a role in relieving respiratory ailments. The aerosol is complemented by the buzzing of bees, which invites calm and relaxation [24]. The same type of therapy is also found in Sântana de Mureş, at Nutri Terapii Apicole S.R.L., a company established in 2017 with the aim of introducing and understanding the fascinating world of bees [8]. Hive air therapy is suitable for all age groups, except for people allergic to bee products.

In Romanian hives the form of bee-air therapy has also been identified. This beehive product refers to the humming of hymenoptera hives captured in their natural environment and used

to treat hypoacusis. The method involves the construction of a wooden cottage with a structured bed of four horizontal beehives, the patient being interconnected to an audio headset [8].

All this has led to the development of bee wellness, which is a philosophy and way of life aimed at maintaining good health through relaxation, movement, spiritual balance, harmonization with nature and a balanced diet [17]. Apitherapy Romania Tour successfully follows this philosophy, our country being recognized as rich in honey flora that provides a diversity of clean hive products of high health value, perfect for apitherapy [7].

MATERIALS AND METHODS

The investigations conducted between 2022 and 2024 had two main objectives:

1. To analyze the literature on apitourism;
2. To identify the factors influencing the development of bee tourism as a tourist product in Sibielvillage.

The following factors were analyzed in the research: the local bee breed in the agro-ecosystem studied, the requirements necessary for the beekeeper to become a successful beekeeping guide, the honey base and honey quality in the agro-ecosystem, the historical-cultural and natural heritage of the locality, the development of infrastructure and services in Sibiel, the options for tourist recreation in the area and the organization of local fairs.

RESULTS AND DISCUSSIONS

Analysis of the necessary steps for the development of beekeeping tourism in Sibiel (Sibiu Marginimea) is essential for harnessing local resources and stimulating sustainable, sustainable development in the area.

The first step is to protect the local breed of bee in the agroecosystem, i.e. *Apis mellifera carpatica*, the mountain subpopulation. The hilly and mountain honeybee has smaller body dimensions compared to other ecotypes, but shows a much higher nectar accumulation instinct [25]. Research shows that local bee breeds strengthen the links between

beekeepers, tour operators and local businesses. The honeybee, an inexhaustible source of legends and myths, brings moments of inner peace to modern man, and its story, told by the beekeeper in a beautiful natural setting, creates a unique tourism product [26]. The bee farm offers tourists a wide range of services and products with moderate investment, providing the beekeeper with financial comfort. Apitourism, through the promotion of the local bee breed and its integration into tourism activities, contributes to the sustainable development of the area by supporting the local economy, preserving biodiversity and creating sustainable and educational tourism experiences.

The second step is the need to transform the beekeeper into a beekeeping guide. Following discussions with various beekeepers in the area, we have found that they need to have knowledge of: entomology and bee ethology. For the business to run smoothly, knowledge of: management, marketing and first-aid skills are also necessary, in case a tourist is stung by a bee. The farmer's ability to communicate and be able to express himself in an international language will add value to the business. Diversifying the beekeeper's skills allows for a responsible use of natural resources and thus the generation of a stable income for the beekeeper and the local community.

The third step is to identify Sibiel's honey production base

We cannot talk about bees and the products they provide without pointing out that they depend to a large extent on the plant world. Knowledge of this resource is important in beekeeping, as it is the key to success in obtaining high quality, high yields.

The village of Sibiel, with its geographical location, floristic biodiversity, famous orchards of fruit trees with local varieties, deciduous and resinous forests, and outstanding spontaneous flora, is a suitable location for practicing and expanding beekeeping and stimulating beekeeping tourism.

The investigations of the meliferous base of the area under study were carried out during the vegetation period of 2022 [5], [29], and

the vegetative surveys identified habitats with predominantly mesophytic-hygrophilous species (meadows / orchards / gardens - moderately humid), with numerous species of straw species. These habitats have a double value for the landowner: forage and honey. In the two works, 47 species with honey-bearing potential were identified, which were classified in terms of their beekeeping economic importance into the following categories: plants with a very high beekeeping weight, representing 4.26% of the total number of species analyzed; plants with a high beekeeping weight, representing 6.38% of the honey-bearing flora studied; plants with a medium beekeeping weight, the most important, which provide constant nectar and pollen harvests, necessary for the maintenance and development of bee families, representing 72.34% of the honey-bearing flora analyzed. The last category is represented by plants with a small beekeeping weight, of no importance and not supporting honey production. They represent 17.02% of the total. The beekeepers have understood the importance of the honey bee base of the studied area in the spirit of the ecological, biological, economic, and quality products in a healthy environment that are the basis for the development of beekeeping tourism in the area with the support of the local economy. In this context, an even more efficient utilization of the honey resources of the locality is necessary, since the productive performance, measurable in quantities of honey and other hive products, is determined by it and with implications for the niche, beekeeping tourism.

The fourth step. Honey quality in the Sibiel area. The laboratory analyses carried out in 2022 showed that all the honey samples tested from the Sibiel locality meet the quality standards required by the legislation, complying with the requirements for moisture content, pH, free acidity, electrical conductivity and total alkalinity. None of the samples contained sugar syrup and the Sibiel varieties are of high quality and completely natural [5]. Thanks to its quality, honey from the "Marginimea Sibiului" has even found its way into Pope Francis' cupboards at the Vatican. Its internationally recognized quality

supports the creation of a local, authentic brand that can stimulate the local economy. Promoting organic practices can attract more tourists interested in natural and sustainable products.

The fifth step. Analyze the historical-cultural and natural heritage of the locality. Sibiel is a small and relatively isolated community, a corner of Heaven, which has withstood the vicissitudes of time through all its most precious assets: its historical and cultural heritage and its natural heritage. Their quintessence has made Sibiel the first rural tourist resort in our country to receive the Golden Apple in 2009, a trophy awarded by the International Federation of Journalists and Travel Writers. In recent years, the quality of tourism in Sibiel has undergone major changes. An interconnection has been created between entertainment, exploitation of nature and getting to know the local culture. Locals have fully understood that the countryside, the state of the economy and the low infrastructure costs can take the development of agritourism to a new level by including beekeeping activities. This is the genesis of niche tourism, beekeeping tourism, which harmoniously combines sustainable beekeeping, cultural and historical heritage, nature and health tourism.

a. Historical and architectural monuments. In Sibiel, the visitor makes an incursion into different historical epochs, materially represented by historical and ethnographic remains. The town's most prized tourist attraction is the Museum of Glass Icons, founded in 1983 by Father Zosim Oancea, and cataloged as the largest museum of glass icons in the world. It holds authentic pieces of inestimable cultural and historical value, contributing to Sibiel's inclusion in UNESCO's cultural heritage. Over 15,000 tourists visit the museum every year. This tourist attraction is joined by the Church of the Holy Trinity, 1765, which still bears the frescoes painted by the brothers Stan and Iacob Zugravu. In the church courtyard stands a richly ornamented wooden cross, a reminder of the heroes who fell in the War of Independence. Three stone trophies have watched over the village from the 19th

century. A point of interest in the village is the cultural hostel built by talented stonemasons from Italy. History also leads the tourist to the monastery "La Chilizii", where book-loving priests and teachers were trained. On the top of the Wall, 2 km from the village, you can see the stone walls of the medieval fortress "Salgo", whose origins are lost in the mists of time. Last but not least, the 19th century pompiri shed is worth a visit.

It is important to emphasize that the historical remains of Sibiel are located close to main roads and popular tourist routes, which significantly increases their value and attractiveness.

b. Sibiel's natural monuments are the traditional apple and pear orchards in individual households. The foundations for practicing orcharding in the area were laid in 1862 by the priest Alexandru Lebu, who made a pioneering contribution in this field. Between 1850-1900, as transhumant herding declined, Sibielul found in fruit-growing an important complementary economic source [13]. Today, 40 apple varieties and more than 10 pear varieties, all well adapted to climatic changes, are still cultivated in the traditional orchards of the Sibiu Margin. In his work 'Botanica populară în Mărginimea Sibiului', Professor Drăgulescu Constantin identifies 16 apple varieties in the locality of Sibiel, namely: de Banat, Butul, păpăscuță, cacovenești, csnădești, boscove, Bel-fleur, florine, Mașanschi, Parmen auriu, Auriu, Brauman, căsale, stetine, de ghiață, Jonatan and 8 varieties of pears: Cengheamenghea, chiurele, Cu miez Roșu, Cu coada strâmbă, de vară, Sînchetrești, Pergamute, Prăsare [16].

The traditional orchards of Sibiel are home to numerous apiaries where the bees benefit from several advantages: early nectar and pollen harvests, which ensure good development of the bee families and a good honey harvest. Sibiel honey, thanks to its orchards, is of superior quality, has a pleasant taste, crystallizes finely and takes on the consistency of sherbet.

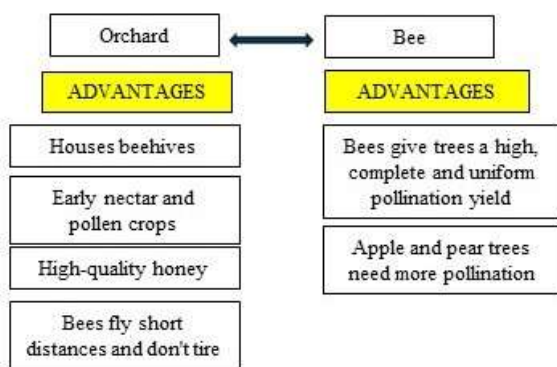


Fig. 1. The benefits of fruit trees and bees
 Source: Own design.

Another advantage is that the bees move short distances in the orchard and do not wear out very much. The bees, in turn, provide the trees with a higher yield of fruit by pollinating them completely and uniformly. It is known that apple and pear trees require much more intense pollination than other fruit tree species (Fig. 1).

The landscape potential of the Mărginimea Sibiului relief is given by the main ridge of the Cindrel Mountains from which three secondary buttress-type ridges are derived, identified with wide levelling platforms: the upper platform (1,700-2,244 m) dominated by alpine and subalpine pastures, the middle platform (1,650-1,350 m) with meadows and coniferous forests and the lower platform (800-1,200 m). The latter, characterized by wide and undulating interfluves, is heavily anthropized, with hill top settlements including Sibiul [14].

Through its historical and cultural monuments of the past and today's natural monuments, Sibiul is becoming more and more attractive for visitors, stimulating niche tourism, the beekeeping tourism. It contributes to heritage conservation, stimulates environmental education and promotes sustainable practices in tourism, increasing local well-being.

The sixth step

The development of infrastructure and services in Sibiul can stimulate the bee tourism sector.

The rural community of Sibiul has the great advantage of being located in a region which is extremely attractive for both Romanian and foreign tourists.

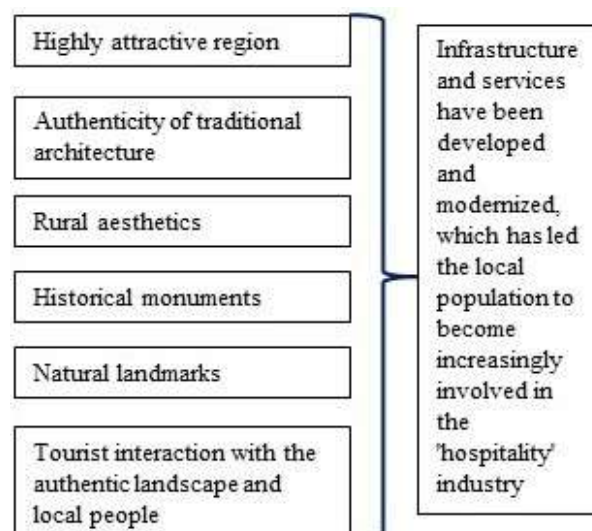


Fig.2. Infrastructure development in Sibiul - Community benefits
 Source: Own design.

Tourists visiting the locality are enchanted by the authenticity of the traditional architecture and rural aesthetics, the historical and natural monuments of the area, the interaction with the authentic landscape and the local people (Fig. 2).

Over the years, the local infrastructure and services have been developed and modernized, which has led the local population to be more and more involved in the "hospitality" industry, proving to be an additional source of income for both the inhabitants and the local budget. The number of tourists visiting Sibiul is constantly increasing, which has led to a steady growth in the number of places to stay. After 1990, as a result of a favourable legislation for the development of private tourism initiatives in the countryside, especially in the mountain area, an increase in the number of accommodation units in Sibiul was observed [14].

The current data on accommodation facilities in the locality of Sibiul were summarized by a group of researchers in 2023 [22]. They identified 5 types of tourist structures: Tourist pension, Agrotouristic guesthouse, Hotel, Camping cottages, Rooms for rent.

The dominant tourist structure in Sibiul is the tourist pension with 26 establishments. Agrotouristic guesthouse, camping cottages and hotel are represented by one

establishment each. There are also rooms for rent (2 units).

As regards the structure of the accommodation structure, by comfort categories, in Sibiel, the units classified with two daisies/stars (14 units) predominate, followed by those with three daisies/stars (12 units), with four stars/star/star 3 units, and with 5 stars/star 2 units.

The largest number of places is found in tourist guesthouses (290 places), the second place is occupied by hotels (42 places), the third place is occupied by agrotouristic guesthouses and camping cottages (16 places each). The smallest number of places are in rooms for rent.

In Sibiel, tourist pensions are preferred by tourists who appreciate the originality of the place rather than comfort.

The seventh step. Tourist Agreement in Sibiel
The leisure stimulates the movement of tourists, it is an important source of revenue with increased economic profitability. Several types of recreation have been identified in the area of the locality:

Cycling. Through the "Ecomuseum circuit of the treasure of old varieties" tourists visit the traditional fruit orchards in the Sibiel-Fântânele area [27].

Eco-entertainment. Through the adventure park "Almontes" tourists of all ages are outdoor activities such as: zip-line, tree circuit, climbing, team-building, orienteering, tourist trails [2].

Mountain tourism is also in great demand with its trails:

1. "Sat Sibiel - Valea Cetății - vf. Cetatea (La zid) - former Fântânele hut";
2. "Sat Sibiel - Valea Cetății - hill of the Citadel - former Fântânele hut";
3. "Sat Sibiel - Valea Sibiel - la Mănăstire - Valea Sibielaș - former Fântânele hut".

Recreational activities in the area can be an advantage for beekeeping tourism [21].

The eighth step Organization of fairs

Every year, the inhabitants of Sibiel organize the "Apple Fair". The offer is generous:

buying and tasting old varieties of apples and pears of good quality, together with other traditional village products: honey, walnuts, apple must, apple vinegar, apple brandy; short walks in the village surroundings admiring the rural landscape rich in meadows, orchards and apiaries. All of this ensures the preservation of local genetic wealth and promotes the concept of the short food chain, with the purchase of traditional, authentic products right on the door steps of the villagers.

We can say that bee tourism in Sibiel is a complex and multidisciplinary concept. It combines elements from tourism, agriculture and horticulture, ecology, education and health, promoting tourist activities centered around bees and bee products (Fig. 3).

Therefore, bee tourism is not just a simple tourist activity, but a field that interconnects several disciplines, offering a rich and diversified experience for those interested.



Fig. 3. The concept of apiturism in Sibiel (Sibiu Marginimea)

Source: own design.

CONCLUSIONS

Nowadays the demand for healthy living and natural products is growing and the interest in bee tourism has intensified.

The honey-bearing base, quality honey, the historical and cultural monuments of the past, today's monuments of nature, the development of infrastructure and services in the area, the diversification of forms of recreation, fairs with traditional products increase the natural and anthropic potential of Sibiel, which plays a determining role in the development of beekeeping tourism in the locality.

The learning of best practices regarding apiary activities offers the prospect of increasing the number of holdings and developing niche beekeeping tourism.

The inclusion in the "short food chain" of hive products that can be marketed at fairs organized in the local community also stimulates beekeeping tourism.

Farmers are encouraged to find out about the stages in the processing of hive products and the certification of their products as organic, with a view to their approval as a local community brand: "Miarea de Sibiel" (Sibiel honey).

It is hoped that bee-keeping in the area will combine harmoniously and profitably with the agro-tourism activities carried out in the dozens of guesthouses in the locality of Sibiel, where local honey will be the pride of place.

The study highlights the significant role of this form of tourism in the sustainable development of Sibiel.

Economic. It contributes to increasing local incomes by capitalizing on beekeeping products, organizing educational activities in apiaries and attracting visitors.

Social. Supports the revitalization of the rural community, may lead to more jobs, stimulates the preservation of local traditions and culture.

Ecological. Supports the protection of bees and biodiversity by educating tourists about the importance of environmental conservation.

Through these contributions, bee tourism becomes an essential element for the sustainable progress of the region.

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