

# Development of Agrotourism on a Cattle Farm in Zagreb County

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## ABSTRACT

The diversification of farms into higher value-added service activities is one of the driving forces of rural development in Croatia. Agrotourism is a form of entrepreneurial activity that goes hand in hand with the preservation of the environment, landscape and cultural heritage. The objective of this paper is to investigate the feasibility of developing agrotourism on a family cattle farm in Zagreb County. The case study includes a business plan for an investment in the establishment of a rural excursion site worth EUR 83,000, of which EUR 50,000 is co-financed by EU grants under sub-measure 6.2. The financial analysis of the observed investment confirms the profitability and sustainability of the investment.

**Keywords:** family farm, agrotourism, rural excursion site, cattle breeding

## INTRODUCTION

The European Agricultural Fund for Rural Development (EAFRD) (2014-2020) defines diversification under the Common Agricultural Policy in Measure 6, Sub measure 6.2. "Support for investments for the start-up of non-agricultural activities in rural areas." The experience of many countries shows that the main support of the rural economy can no longer be agriculture, but a wide range of activities based precisely on the inactivated potential of rural areas. Small and medium sized agricultural holdings should play a key role in the restoration, preservation, and integral, multifunctional development of rural areas, thereby mitigating the overall transition (Zmaić et al., 2011). The structural changes in Croatian

agricultural production led to rural exodus and weakening of local production, so as one of the consequences the search for additional sources of income for farmers was imposed (Grgić et al., 2017). In the period from 2005 to 2018, the income from Croatian agriculture was about 36% of the average wage in the whole economy. This share ranges from 29% in 2012 to 44% in 2018, and is lower than the EU average. Income in agriculture is characterized by large price fluctuations, which is reflected in the instability of agricultural households' financial stability (Ministry of Agriculture, 2022).

Rural tourism can contribute to the development of rural areas by diversifying the local economy and thus promoting the well-being of rural areas of continental Croatia

(Ministry of Tourism, 2022). Agrotourism represents a form of rural tourism that is rooted in the local community and based on its geographical features, traditions, culture and customs. It represents the mixture of agriculture and tourism activities on the farm (Brčić-Stipčević and Petljak, 2010). Therefore, the subject of this research is agrotourism economy, especially from the point of view of contribution to the valorization of family farms, through diversification and introduction of a new tourism activity.

The aim of the research is to study the current operations, possibilities and prerequisites for the business venture of agrotourism at Emina Burek cattle farm. The subgoals of the work are:

- describe the business and personal motives for diversifying agricultural activities,
- reconsider all the financial aspects of the diversification of existing livestock farm to into one that will complement the existing cattle production with rural excursion sites (Croatian “izletište”).

## MATERIAL AND METHODS

Primary and secondary data were used in this work. The secondary data were used to prepare the theoretical part of the work, in which the descriptive method is used to describe the legal conditions, the sources of financing, and the role of agrotourism in rural development. The primary data were collected at the Emina Burek cattle farm in Zagreb County and are presented in the form of a case study. These data shed light on the motives for starting agrotourism activities on the farm and define certain elements of the strategic plan

and marketing mix.

By applying the financial investment analysis, indicators for the financial sustainability of the project were determined: net present value (NPV), the payback period (PP) and the internal rate of return (IRR).

## RESULTS

### *Rural tourism in the Croatian economy*

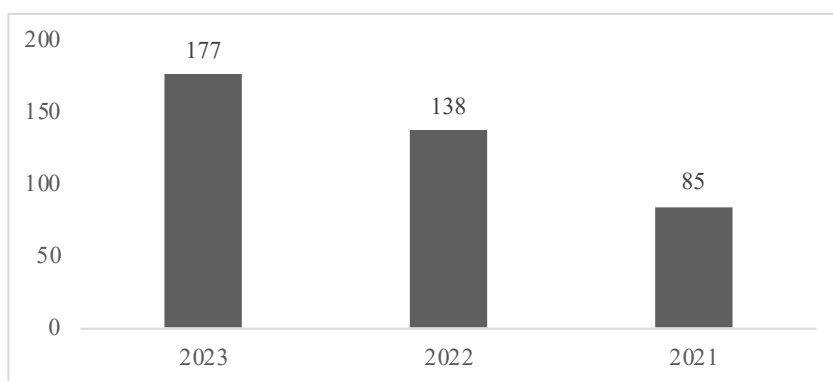
In the Republic of Croatia, tourism is extremely important for the economy, and accounts for around 19,5% of GDP in 2022. In 2022, the Republic of Croatia recorded the arrival of about 17.8 million guests, which is about four times more than its population (Ministry of Tourism, 2023). However, rural tourism is still underdeveloped at the national level. Revenues from rural tourism in Croatia make up only two percent of the total tourist traffic (Mesić et al., 2021).

The offer of rural tourism in the Republic of Croatia has a short history. It started in 1998, when the first holders/owners of “tourist family farms”, 32 of them, were registered. At the time of program creation in 2015, the number of on-farm tourism facilities was unreasonably low, with only 447 registered farms with tourism activities, distributed very unevenly across the country (Ministry of Agriculture, 2022).

According to the latest data from AGRONET, the agricultural database of the Agency for Payments in Agriculture, Fisheries and Rural Development, as of September 1. 2023, there are a total of 1,976 farms in Croatia where various forms of tourism activities are registered. However, it is possible that an agricultural

holding has several recorded tourism activities, so the actual number of Croatian farms engaged in tourism is realistically lower than that figure. One of the tourist facilities, the introduction of which is the subject of this paper, is the rural excursion site. According to the Family Farm Register, a rural excursion site is a food service facility on a farm where hot and cold food, drinks, and beverages are prepared and served to guests.

The data of AGRONET give information about the number of registered excursion sites in the last 3 years, which show a significant increase, certainly a consequence of the incentives of the Rural Development Program. On September 1. 2023, there are 177 rural excursion sites registered in Croatia (Graph 1). According to the same source, there are only 13 registered rural excursion sites in Zagreb County.



Graph 1: Number of registered farm's rural excursion sites in Croatia (2021-2023)

Source: AGRONET

The Rural Development Program (RDP) of the Republic of Croatia for the period 2014-2020 played a vital role in fostering rural development, supporting agricultural activities, promoting sustainability, and improving the quality of life in rural communities. It aligns with the broader European Union's policies and funding programs dedicated to rural development and agricultural modernization.

This paper explored opportunities under sub-measure 6.2 of the Rural Development Program, which focuses on supporting business start-ups for non-agricultural activities in rural areas, which is the most appropriate for farm diversification towards agrotourism.

Because an increasing number of family farms can no longer operate in an economically viable manner, based solely on primary agricultural production and without additional income on the farm, the objective of sub-measure 6.2 is to provide an alternative by creating jobs on farms in non-agricultural activities and services. Support for investment in the development of non-agricultural activities through sub-measure 6.2. is intended to help increase economic activity in rural areas, retain and create jobs, and increase business revenues. The goal is to promote diversification of economic activity that makes it attractive for people to live and work in rural areas. The value of the start-up support per beneficiary is EUR

50,000. The amount of support was determined considering the socioeconomic situation and the unfavorable size and structure of farms, including limited access to finance for small farms, and the need to diversify activities and create new jobs in rural areas.

### ***Case study***

Farm Emina Burek is an established and the largest farm in Zagreb County, specializing in cattle breeding. The farm is in the village Mostari, which belongs to the municipality of Dubrava. The developed agricultural branches in Dubrava are cash crops, fruit and vegetable growing. The branches of animal husbandry represented in this area are pig and cattle breeding.

Emina Burek, the owner, runs a family farm with 550 cattle, including about 200 dairy cows. Cattle for fattening, heifers and calves are also kept. They currently produce about 1.6 million liters of milk annually, all of which is delivered to the Dukat Dairy. In addition to milk, they also produce beef and deliver between 60 and 70 tons of meat to slaughterhouses each year. The farm cultivates 200 hectares of land and employs 13 people.

In 2022 the farm achieved total annual revenue in the amount of 1,308,632.29 EUR which is a relative increase of 24.8% compared to 2021. In 2022, the farm has achieved a net income of 149,251.18 EUR and the net margin achieved was 11.41% (Poslovna Hrvatska, 2023).

According to the owner of the farm, it is almost impossible to work the “old-fashioned way” without keeping up with digitalization and lifelong learning. She had a vision for her

own business while studying at the Faculty of Agriculture, and her studies laid the foundation for the work she does today. In addition to her education in artificial insemination and bovine identification, she has also continued her education in areas such as accounting and tax policy. The education has helped her navigate new situations and solve problems, and she stresses the importance of lifelong learning to keep up with technological advances. Her farm uses software to track and record data about the dairy herd, including reproduction and production.

### ***Motives for a farm diversification***

According to the farm owner, the farm has performed well during the crisis COVID-19 and milk procurement has always worked smoothly, but there are many important factors in the farm that need to be considered. The input-output ratio, which includes the cost of feed, inputs, spare parts and fuel compared to the production of milk and meat, is critical. Recently, this ratio has been severely disrupted as the cost of all inputs has increased by 50 to 100 percent while the prices of their products, milk and meat, have remained flat. Every liter of milk or kilogram of meat they produce results in a loss due to the multiple price increases for their inputs.

The owner of the farm believes that the current situation in livestock production, regardless of the type of production, is unsustainable. This alarming situation raises concerns about the sustainability of farm under these conditions.

In addition to the fact that the farm would like to develop in new directions, the

idea of diversifying the farm into additional agrotourism activities is supported by the fact that there is infrastructural capacity on the property that can be repurposed for agrotourism needs.

On the farm owner there is a legalized detached building (about 100 m<sup>2</sup>) that can be converted to meet the minimum legal requirements for the inclusion of agrotourism, considering the type of facility defined in the following chapter. The level of market demand for agrotourism in the area will play a large role in the investment decision. Supporting factors are the proximity to the Croatian capital (Zagreb) and its population, tourism trends and consumer behavior. The Emina Burek farm is the largest livestock farm in the region and can offer a unique and compelling value proposition that is essential in a competitive agrotourism market. Identifying and leveraging all the farm's unique characteristics will be the key to success.

### *Description of the excursion site project*

Considering the motivation and the above-mentioned strengths and capacities of the farm, the study proposes complementary non-agricultural activities of the farm that have the greatest chance of success under the given circumstances. The complementary activity at the Emina Burek farm will be the establishment of a farm rural excursion site based on "farm-to-table experiences" where visitors can enjoy locally produced food and beverages. There will be only a few types of dishes: the meat-based beefsteaks and the vegetarian and vegan dishes based on cheese and vegetables. The idea is to offer only food sourced directly from the farm or local farms, and specialize in preparing and marketing the best quality steaks in the

region. In addition to the food services, the resort may offer its guests additional services in the form of various recreational activities. Accommodation services are not provided in a facility that is registered as an excursion site.

The investment consists in transforming part of the farm into a rural excursion site, for which the following three main activities must be carried out:

1. Building reconstruction
2. Procurement of equipment
3. Other

The subject of the outdoor reconstruction are two buildings. The first building (50 m<sup>2</sup>) will serve as a dining room and the second as a kitchen (40 m<sup>2</sup>). A canopy will be built between these two buildings to create a covered outdoor terrace in case of rain, but also as a shelter from the sun. The roof structure is made of wood and will be covered with tiles in local style.

Interior remodeling is necessary to create sanitary and other conditions in the interior and exterior of a dining room and kitchen, and to visually improve the ambience to give it a traditional look and better fit into Emina's Steak House. Interior remodeling includes adjusting electrical and plumbing lines, as well as ceramic, carpentry, and other necessary craft work.

In order to start the activity, the kitchen must be equipped with all the necessary equipment for the proper functioning of the catering activity. The room is already available and must be appropriately equipped with professional equipment for food preparation. The price of it is calculated based on the supplier's offer.

To ensure adequate promotion of the excursion site, a website that includes text and images of the subject property, as well as micro and macro locations which will be established. In this way, the cultural and historical heritage, the natural heritage and the landscape and geomorphological diversity will be promoted and tourism in the farm area will be supported. This measure will ensure the accessibility of the sites for certain groups (people with visual disabilities).

Other investment activities include the preparation of project technical documentation and individual courses for the preparation of steaks.

### *Financial aspects of the excursion site project*

In the previous chapter, the necessary investment elements were listed. The following table shows the structure of the investments, the total value of which is 83,000 EUR.

Table 1: The investment budget (EUR)

Reconstruction	45,000.00
Equipment - kitchen	15,000.00
Equipment - furniture	15,000.00
Web page - Promotion	1,000.00
Staff training	3,000.00
Technical documentation	4,000.00
<b>TOTAL</b>	<b>83,000.00</b>

The source of financing is assumed to be the subsidies from sub measure 6.2. in the amount of EUR 50,000 and EUR 33,000 of the investors' own funds. The main source of income of the excursion site business will be the food menu (75 % meat meal, 25 % vegetarian and vegan meal) while the rest will be desserts and drinks.

The menu will be very simple, consisting of a few dishes, beef steaks (different cuts and preparation methods) and a vegetarian and vegan dish with cheese and vegetables. This was decided as an essential business model to specialize closely and perfect as the best quality steakhouse.

According to the business plan, the average prices are as follows:

- Steak with a side dish – 20 EUR (the estimate is based on the average of competitive prices. The side dish is adjusted to the available ingredients (fresh and homemade).
- The second meal is grilled homemade cheese or vegetables with a side dish – 10 EUR
- Appetizers are served free of charge before the main course (as an envelope) and consist of simple traditional dishes, depending on the season.
- The average price for a dessert is 5 EUR.



- Drinks – 2 EUR (the price is determined on the basis of the average of the competition prices for coffee/juice/beer/wine)

In calculating the income, it is assumed that the facility works only on weekends, with certain weekends defined as non-working (holidays, annual vacation), and the working hours are 8 hours on each weekday. The total capacity of the facility is 48 seats (12 tables with

4 seats per table) and the average occupancy time per seat is assumed to be 1.5 hours. Taking into account the above assumptions and the annual occupancy rate, which is between 20% and 30% in the observed period, the average annual capacity of the facility was calculated.

The following table provides an overview of the expected revenues in the first five years of operation.

Table 2: Total annual operating income

Operating income (EUR)	1.	2.	3.	4.	5.
Food	68,812.80	68,812.80	87,736.32	89,493.50	91,299.84
Dessert	9,830.40	9,830.40	12,533.76	12,779.52	13,025.28
Drinks	9,338.88	9,338.88	11,907.07	12,140.54	12,374.02
TOTAL	87,982.08	87,982.08	112,177.15	114,413.56	116,699.14

As a result of the planned diversification, at least two more people will be hired to help provide catering and hospitality services.

Personnel costs are estimated based on the combination of the planned number of employees and the standard share of these costs in revenues starting at 30%, which decreases as efficiency and experience increase.

In calculating operating costs, the planned employment and the standard share of procurement (sales) costs, inflation (2%), and operating and other costs in the regular operation of the catering facility were taken into account, with values corrected higher than usual due to the investor's lack of experience in the observed activity. Over time, the share of costs approaches the industry reference values.

Towards the end, the costs decrease slightly because the experience increases and the efficiency of the company increases, so their share in the revenues generated decreases.

Table 3: Operating costs

Operating costs (EUR)	1.	2.	3.	4.	5.
Cost of sales (material costs)	31,673.55	30,793.73	39,262.00	37,756.47	38,510.72
Personnel costs	26,394.62	26,394.62	32,531.37	33,179.93	32,675.76
Other costs	21,995.52	21,995.52	26,922.52	27,459.25	28,007.79
TOTAL	80,063.69	79,183.87	98,715.89	98,395.65	99,194.27

According to the presented projections of investment, revenues and costs, the investment generates positive cash flows throughout the entire observed period, whereby the cumulative cash flows in ten years' period amount to EUR 172,005.85. The payback period of the project is in the fifth year of the observed period, while, with a discount rate of 4%, the IRR is 33.39%, and the NPV of the investment is 95,015.56 EUR, which confirms the profitability and sustainability of the investment.

At the farms level, the investment, through the expansion of the existing offer and the increase in the Farm's reputation, directly influences the stable growth of income from regular activities, which in the observed period will grow at a rate higher than 5% per year, whereby the share of new activities in total revenue from sales will constantly be above 10% per year. If there was no diversification of the business, the expected growth rates of income on an annual level do not exceed 2.5%, therefore the impact of the investment is significant and evident.

## CONCLUSION

As tourism continues to increase in rural areas to counteract the economic decline in primary production sectors, the need for sustainable forms of development is recognized. The objective of this case study is to introduce a non-agricultural activity on the cattle farm with the aim of reducing financial

instability and contributing to the development of the undiscovered potential of the Emina Burek farm. The project "excursion site with food menu" will create at least two new jobs, generate additional income, contribute to stability, reduce depopulation and promote sustainable rural development.

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# Razvoj agroturizma na govedarskom gospodarstvu na području Zagrebačke županije

## SAŽETAK

Diversifikacija poljoprivrednih gospodarstava prema uslužnim djelatnostima s višom dodanom vrijednošću jedna je od pokretačkih snaga ruralnog razvoja u Hrvatskoj. Agroturizam je oblik poduzetničke djelatnosti povezan s očuvanjem okoliša, krajolika i kulturne baštine. Cilj ovog rada je istražiti izvodljivost razvoja agroturizma na poljoprivrednom gospodarstvu s govedarskom proizvodnjom u Zagrebačkoj županiji. Studija slučaja uključuje poslovni plan ulaganja 83.000 eura u pokretanje ruralnog izletišta od čega je 50.000 eura sufinancirano bespovratnim sredstvima EU iz podmjere 6.2. Financijska analiza promatrane investicije potvrđuje isplativost i održivost investicije.

**Ključne riječi:** obiteljsko poljoprivredno gospodarstvo, agroturizam, izletišta, govedarstvo