



Case study: **PEMAK SK** – The story of a farm that combines tradition, innovation and sustainability

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Country	Slovakia
Region	Nitra Region
Farmer	Ing. Bálint Pém
Age	49
Gender	Man
Agrarian education/education level	Education in agricultural economics / university education
Experience in agriculture	30 years
Farm specialization	Organic farming, plant production - poppy
Number of household members	4

Description of the region

The Bálint Pém farm lies in the Nitra region in the Komarno district in the cadastral territory of the municipalities of Patince and Iža. The Nitra region, located in southwestern Slovakia, is one of the country's most important agricultural regions. Its location on the Danube Plain, favourable climatic conditions, and high-quality soils create ideal conditions for intensive and diversified agriculture. A striking example of these conditions is the municipality of Patince, located in the Komárno district in the southernmost part of Slovakia, near the border with Hungary.

The Nitra Region covers approximately 6,343 km² and includes seven districts: Nitra, Nové Zámky, Komárno, Levice, Šaľa, Topoľčany, and Zlaté Moravce. Most of the territory is made up of lowland relief, especially the Danube Lowland, which is known for its flatness and high soil quality. The lowest point in Slovakia (94.3 m above sea level) is in the Patiniec area, further emphasising its lowland character.

The Nitra Region is one of the warmest and driest regions of Slovakia. The average annual temperature ranges from 9.5 to 11 °C, with the highest temperatures recorded in Slovakia in the Patiniec and Hurbanov areas. Annual precipitation ranges between 500 and 600 mm, which is below the national average. These conditions are ideal for growing thermophilic crops, but they also require irrigation systems and efficient water management.

The soils in the Nitra Region are among the most fertile in Slovakia. In the Patiniec area, black and brown soils with high humus content and excellent nutrient and water retention predominate. These soils are highly suitable for intensive crop cultivation, especially cereals (wheat, barley), corn, sunflowers, sugar beets, vegetables and fruits.

The Nitra Region is a leader in plant production in Slovakia. The following are mainly grown here:

- cereals – wheat, barley, corn,
- oil seeds – sunflower, rapeseed,
- vegetables and fruits – especially apples, peaches, apricots, tomatoes, peppers.

Pig, cattle, and poultry farming dominate animal production. The Patince area also has smaller family farms that focus on specialised production, such as fruit growing, beekeeping and organic farming.

The Nitra Region is the third most populous region of Slovakia, with a population density of approximately 111 inhabitants per km². A significant Hungarian minority lives in the Komárno and Patince areas, accounting for 27.6% of the region's population. The village of Patince has approximately 400 inhabitants and is also known as a recreational and spa centre thanks to its thermal springs.

Despite the excellent natural conditions, agriculture in the region faces several challenges:

- climate change (increased drought, extreme temperatures),
- ageing of the agricultural population,
- low added value of production,
- The need for modernising and digitalising farms.

On the other hand, the region has great potential in agritourism, organic farming, and the development of short supply chains. The Nitra region has exceptional natural and cultural prerequisites. Agritourism can build on existing recreational facilities - the thermal swimming pool in Patince, flat countryside suitable for cycling and a strong regional identity with traditional gastronomy. The combination of relaxation with authentic farming experiences is attractive to both domestic and foreign visitors.

Organic farming benefits from high-quality black soil with a high humus content and a favourable climate for crops such as poppy, mustard and legumes. The region is already undergoing land conversion to organic production, demonstrating the feasibility and growing demand for organic food.

Short supply chains benefit from the proximity of consumer centres (Nitra, Komárno) and the existence of community markets, such as the Slow Food Earth Market Karva. Direct sales reduce logistics costs, increase product freshness and allow farmers to achieve higher added value through processed specialities (oils, chocolates, wines).

Farm history, resources, technology and farm production

The story of the SHR Bálint Pém farm – H Level is an example of how a small family farm can become a modern agricultural enterprise with international reach. The founder of the farm, Ing. Bálint Pém, comes from a family with deep agrarian roots. Already in his youth, he knew he wanted to continue his ancestors' tradition while bringing innovation and greater added value to agriculture.

Picture 1 – Example of a machine display
 Source: Bálint Pém



The Pém family (Bálint Pém's parents) inherited approximately 7 hectares of arable land and a small farm in Patince, which served as the basis for the future business. Initially, they grew vegetables and fruits, which they sold to wholesalers. After graduating from the Slovak University of Agriculture in Nitra, Bálint Pém decided to expand production to include early potatoes, Chinese cabbage and celery. The farm gradually grew to 15 hectares.

The key moment was the entry into the SAPARD program (year 2000), which enabled the purchase of modern agricultural machinery. This step required significant investments, so Bálint Pém temporarily accepted the position of chief agronomist in PD Zlatná na Ostrove. The experience and financial resources gained allowed him to expand the farm and introduce new technologies. After five years, he focused entirely on his own business, which today includes more than 530 hectares of agricultural land (most of which is his own), of which 100 hectares are in transition to organic farming.

The farm has extensive land in the Patiniec area with fertile black soil, modern agricultural technology, including its own poppy harvester, and a strong family background. The cooperation of several generations is one of the pillars of success - the farmer's father introduced innovations and other technical adjustments. The PEMAK SK brand covers the production and sale of poppy seeds and products made from them, which has also made the farm known outside the region.

Technological innovation is the foundation of the farm's philosophy. Bálint Pém is a pioneer in implementing regenerative practices, including no-till farming, the systematic use of green manure and catch crops, crop diversification, and biodiversity protection. After harvesting the main crop, he never leaves the soil bare – he sows phacelia, mustard, vetch, peas or buckwheat, which naturally fix nitrogen and improve soil structure. This approach reduces the need for chemical fertilisers, protects the soil from erosion and supports life in the soil.

*Picture 2 – Poppy is one of the main crops on the farm
 Source: Bálint Pém*



An important element is also the diversification of cultivated crops. In addition to cereals and oilseeds, the farm specialises in poppy, which has become a strategic crop in its crop rotation. Poppy is grown for food, the pharmaceutical industry, and organic products. The farm's portfolio includes various varieties of poppy - blue, white and ocher - with an emphasis on low

alkaloid content. The finalisation of products under the PEMAK SK brand complements the production of cold-pressed poppy oil, poppy chocolates, poppy honey, poppy wine, and natural cosmetics. The farm's philosophy rests on three pillars: tradition, innovation and cooperation. Bálint Pém combines family values with modern technologies and openness to research. He cooperates with universities, tests soil quality and the profitability of individual growing systems. All decisions rest on data and careful observation. This approach makes the farm not only a producer of high-quality poppy seeds but also a centre of knowledge and development.

The SHR Bálint Pém - H Level farm is proof that ecologically and economically viable farming is possible even in the conditions of southern Slovakia. In times of climate change and rising input prices, it represents a model that combines sustainability, quality and local identity. It is an example of a business that respects the soil, nature and the future.

Reasons for integrating into a short food supply chain

The decision of the PEMAK SK farm, led by Bálint Pém, to integrate into a short supply chain was not accidental. It was a strategic step that addressed the current challenges in agriculture, changing consumer preferences, and the need for sustainable development. This approach was a response to the pressure of a globalised food system, which often leads to product anonymity, low added value for the farmer and environmental problems. In an environment where large retail chains dominate the market and dictate prices, a short supply chain becomes a tool for strengthening economic stability, protecting the environment, and restoring the relationship between producers and consumers.

Economic factors play a key role in this decision. The traditional sales model through wholesale networks reduces farmers' margins and separates producers from end customers. For the PEMAK SK farm, which manages more than 530 hectares of agricultural land, including 100 hectares in conversion to organic farming, it is crucial to maximise the added value of its production. A short supply chain allows for better control over pricing, reduces logistics costs, eliminates intermediaries, increases the farm's economic stability, and creates space for investments in innovation, such as developing its own poppy-harvesting adapter or expanding its product portfolio with high-value-added specialities. This model also allowed the farmer to respond flexibly to changes in demand and to create products aligned with current trends in healthy nutrition.

Ecological factors are equally important. The Nitra region is one of the most fertile regions of Slovakia with humus black earth soils. These conditions are ideal for organic farming, which is the core of the PEMAK SK philosophy. The farm uses no-till farming, catch crops, and green manure, which reduce the carbon footprint and support biodiversity. In addition, the short chain minimises the need for long transport, thereby contributing to environmental protection. In times of climate crisis and growing pressure for sustainability, this approach becomes a competitive advantage that appeals to consumers sensitive to ecological issues. For the farm, this means not only environmental responsibility but also marketing potential, as organic products increase in demand.

Social and cultural factors add another dimension to the strategy. Integration into a short chain allows the farmer to have direct contact with the customer, build trust, and raise

awareness of sustainable agriculture. Participation in community markets, such as the Slow Food Karva Market, creates space for personal meetings, tastings and discussions. This model supports the local economy, preserves regional identity and connects gastronomy, history and modern trends. In a region with a rich cultural tradition and a substantial Hungarian minority, this creates a unique space for presenting products bearing the seal of authenticity. Here, the consumer buys not only food, but also a story – the story of the farmer, his philosophy and his relationship with the land.

The decision to integrate into a short supply chain is therefore the result of an encompassing consideration that combines economic, ecological, social, and strategic aspects. This model delivers higher added value to the farmer, high-quality, transparent products to the consumer, and a sustainable system that respects nature and cultural traditions to society. At a time when globalisation and the industrialisation of the food industry lead to uniformity of tastes and the loss of biodiversity, the PEMAK SK approach serves as an inspiration for other producers seeking a path to fair, ecological and economically viable agriculture.

The specific way the farm engages in the short food supply chain: customer segments, channels, and customer relationships

The integration of the PEMAK SK farm into a short supply chain represents a well-thought-out strategy based on clearly defined customer segments, diversified distribution channels and systematic building of relationships with consumers. The PEMAK SK farm, led by Bálint Pém, manages more than 530 hectares of agricultural land, including 100 hectares in transition to organic farming. Specialising in the cultivation and processing of poppy seeds into a wide range of products - from poppy oil to chocolates to cosmetics - lays the foundation for a high-value-added strategy. This model rests on the philosophy of “tradition, innovation, cooperation”, which reflects in all aspects of the business. The key to success is to correctly target customer groups that value the quality, origin and story of products. The first group is consumers oriented towards healthy nutrition and organic products. These customers are looking for organic-certified foods with a clear origin, free of chemical additives, and with guaranteed quality. Poppy seeds are attractive to them due to their high levels of calcium, omega-3 fatty acids, and antioxidants, which support bone health, the nervous system, and digestion. For this group, not only the product itself is important, but also its story – they want to know where it comes from, how it was grown and what its impact on the environment is.

The second segment consists of farm shops and speciality stores that offer regional products with higher added value. Customers who prefer quality over quantity and are willing to pay a higher price for authentic food often visit these stores. For the PEMAK SK farm, cooperation with these stores is crucial, as it expands its reach to urban markets and allows it to present products in an environment that emphasises their ecological and artisanal character.

The third segment is the Slow Food community and foodies who value the philosophy of “good, clean and fair”. These are people interested in traditional recipes, craftsmanship, and the cultural dimension of food. For them, shopping at a community market is an experience – an opportunity to meet the producer, taste new products and discuss sustainability. This

segment's customers are exceptionally loyal and often become brand ambassadors, which positively impacts its reputation.

Slow Food Karva Earth Market: A Manifesto of Sustainability, Tradition and Community Development

Nowadays, as globalisation and the industrialisation of the food sector lead to uniformity of tastes, loss of biodiversity, and the marginalisation of small producers, the need to return to local, sustainable, and ethical forms of food production is increasingly coming to the fore. One of the most prominent manifestations of this philosophy is the Slow Food movement, founded in Italy in 1986 as a response to the rise of fast food culture. Its goal is to promote food that is good, clean and fair – that is, tasty, ecologically produced and at a fair price. In this spirit, so-called Earth Markets are being created all over the World, which represent the concrete implementation of Slow Food principles. One of them is the Karva Earth Market, located in the village of Kravany nad Dunajom in southwestern Slovakia.

Picture 3 – Slowfood in Karva – vendors
 Source: Facebook profile Pemak



The Slow Food movement rests on three fundamental pillars:

1. **Good** – food must be tasty, nutritious and prepared with respect for culinary traditions.
2. **Clean** – production must not harm the environment; it must be ecologically sustainable.
3. **Fair** – fair compensation to producers, and consumers must have access to transparent information.

Markets in Karva are community markets that apply these principles in specific regions. They aim to create a space where local producers and consumers meet, where biodiversity,

traditional crafts and regional identity are supported. The Karva Earth Market originated as an initiative of the local community, in cooperation with Slow Food and the Slow Food Foundation for Biodiversity, in 2023. The venue – the Danube Promenade in Kravany nad Dunajom – is symbolic: it is a space where cultural and natural landscapes meet, where the Danube creates unique conditions for agriculture, fishing and recreation.

Since its inception, the market has been held regularly, most often during the summer months. Each event is thematically focused – for example, on seasonal fruits, traditional recipes, handicrafts or ecological innovations. The market has become not only a place of sale but also a platform for education, discussion, and cultural exchange. The Karva Earth Market has several specific features that set it apart from regular farmers' markets. The selection of producers takes place in accordance with Slow Food principles. Vendors must meet the criteria for organic, local, and ethical production, meaning the products are free of chemical pesticides, seasonal, and organically packaged. Customers are mainly health-oriented people, gourmets and members of the Slow Food community who appreciate the quality, origin and story of the products. Families, tourists and locals looking for authentic food and experience visit the market regularly. The number of producers is unspecified, but they are a group of small farmers and artisans who undergo a selection process. The market's success lies in supporting the local economy, building trust between farmers and consumers and regularly organising events that combine sales with cultural and educational activities.

Picture 4 - Slowfood in Karva
 Source: Facebook profile Pemak



The Karva Earth Market has a significant impact on the local economy by supporting small producers who would otherwise lack access to large markets. The money stays in the community, thereby increasing the region's economic resilience. This effect is visible, for example, in farmers who, thanks to the market, sell their products directly to consumers without intermediaries, thereby achieving higher margins and a more stable income. At the same time, the market strengthens social ties - it becomes a place to meet, exchange experiences, and build trust. Examples include seniors selling homemade products and young farmers seeking new forms of employment, thus creating space for intergenerational dialogue and the renewal of community spirit. This benefit goes beyond the economic level and contributes to social inclusion.

Environmental sustainability is at the core of Karva Earth Market's philosophy. The products sold at the market are:

- without chemical pesticides and fertilisers,
- seasonally and locally, thus reducing the carbon footprint,
- ecologically packaged or without packaging,
- made with consideration for soil, water, and biodiversity protection.

The market also serves as a platform for ecological innovations – for example, showcasing permaculture techniques, composting, renewable energy sources, or zero-waste concepts. The Karva Earth Market is also a cultural event. In addition to selling food, it hosts concerts, theatre performances, exhibitions, and community activities. The market thus contributes to revitalising public space, strengthening regional identity, and preserving cultural heritage. Many products sold at the market carry intangible cultural heritage – such as traditional recipes, food processing techniques, regional varieties or handicrafts. The market thus plays an important role in preserving cultural diversity.

PEMAK distribution channels

PEMAK SK uses three main distribution channels that complement each other, creating a synergistic effect. The brick-and-mortar store in Komárno, located at Jókaiho 32 in the Lux Centrum area, serves as a showroom where customers can not only purchase products but also learn about their origins. The space design is to support personal contact, present the farm's philosophy and educate consumers. In addition to sales, tastings, discussions, and presentations of new products are held here, which strengthen the relationship between the farmer and the customer.

Picture 5 – Pemark store

Source: Facebook profile Pemark



The online store extends the farm's reach nationwide. Online sales enable convenient shopping, the presentation of the entire assortment, and the communication of the brand's value propositions. In the digital environment, visual identity, high-quality product photos and content that emphasises ecological practices and the health benefits of poppy seeds are important. The online channel is also a platform for marketing campaigns, newsletters, and customer interaction via social networks.

Participation in community markets, especially the Slow Food Karva Earth Market, is one of the farm's most prominent expressions of its philosophy. This market directly connects farmers with consumers and creates a space for tasting, education, and trust-building. It has not only a commercial but also a cultural and social dimension – supporting regional identity, preserving traditions and spreading awareness about sustainable agriculture.

Customer relations

The key to PEMAK SK's success is transparency and brand storytelling. The farm actively communicates the values of organic farming, the health benefits of poppy seeds, and its sustainability philosophy. It organises tastings, workshops, and discussions at markets, thereby strengthening customer loyalty. This approach creates a community that sees purchasing products as supporting the local economy and ethical business practices. Customer relationships grow because of personal contact, education, and digital communication. Personal contact takes place through meetings at markets, in-store tastings, and product presentations. Education includes information about organic practices, the health benefits of poppy seeds, and the Slow Food philosophy. Digital communication through e-shop, social networks, and newsletters maintains contact and provides up-to-date information.

The Slow Food Karva Earth Market is a platform for showcasing organic products, educating consumers and building regional identity. Participation in the market allows farmers to showcase the results of organic farming, discuss with customers and raise awareness about sustainability. Product innovations, such as poppy seed chocolate, chocolates, poppy seed wine or natural cosmetics with a high poppy seed oil content, increase brand appeal and enable revenue diversification. Educational activities that inform customers about the origin of products, organic practices and the health benefits of poppy seeds strengthen trust and loyalty.

Despite its success, this strategy faces several challenges. Market organisation and marketing require resources that are not always available. Not every consumer is willing to pay a higher price for quality products, which requires education and a change in habits. Legislative barriers often favour large producers at the expense of small farms. Despite these obstacles, the short supply chain model has great potential. It strengthens the farm's economic resilience, promotes environmental sustainability, and creates space for cultural and community development. In a time of climate crisis, rising input prices and globalisation of the food market, this approach represents a path to stability, quality and justice.

Conclusion

The case study of PEMAK SK and its founder, Bálint Pém, is an inspiring example of how modern, ecologically responsible, and economically viable agriculture can thrive in the conditions of southern Slovakia. The combination of tradition, innovation and cooperation has created a farm that is not only a producer of quality poppy seeds, but also an active participant in community life and a bearer of the Slow Food philosophy.

One of the key aspects of PEMAK SK's success is its emphasis on a short supply chain, which enables the manufacturer to have direct contact with consumers. In the case of PEMAK SK, the short supply chain is implemented mainly through two main channels: a brick-and-mortar store in Komárno and a community market in the village of Karva. The brick-and-mortar store allows direct customer contact, provides information about product origins, and supports the local economy. The market in Karva, organised in the spirit of the Slow Food philosophy, creates space for personal meetings, tastings, and the building of trust between the farmer and the consumer. These sales models are key to maintaining freshness, quality, and transparency in the food chain. Reducing logistics costs supports the freshness and quality of products and builds trust between the farmer and the customer. Markets like the one in Kave, where the company regularly presents itself, are living proof that local food has its place in the modern food system. The short chain also allows for better price control, increasing the farm's economic stability.

PEMAK SK's approach to soil, crop diversification, biodiversity protection, and sustainability shows that even in a small region like Patince, a model in line with global challenges – climate change, loss of soil fertility, and the need for local food self-sufficiency. Its emphasis on education, cooperation with research institutions and openness to innovation make PEMAK SK not just a farm, but also a centre of knowledge and development. Participation in the coffee market and involvement in the Slow Food movement confirm that entrepreneurship in agriculture can be both a cultural and social act. The story of PEMAK SK is proof that agriculture has a future when built on respect for the land, people, community and values that go beyond economic profit.

Figure 1 – Business model Canvas
Source: Author

Key partners	Key activities	Value Propositions	Customer relations	Customer Segments
<p>Family (support and cooperation)</p> <p>Association of Young Farmers (ASYF) Universities and research institutions</p> <p>Slow Food Movement</p> <p>Artisans and local processors</p>	<p>Growing poppy (blue, white, ochre)</p> <p>Organic farming Development of our own harvesting adapter</p> <p>Processing of poppy and product production</p> <p>Participation in community markets (Coffee)</p>	<p>We offer high-quality poppy seeds with a low alkaloid content that meet the strictest food standards.</p>	<p>Direct contact in the markets</p> <p>Direct contact in a brick-and-mortar store</p> <p>Customer education</p> <p>Online sales via e-shop</p>	<p>Consumers looking for quality and organic products - customers interested in healthy nutrition (share 50-60%)</p> <p>Farm shops (share 20-30%)</p> <p>Slow Food Community (share 10-15%)</p>
	<p>Key resources</p> <p>Own agricultural land in Patince</p> <p>Family farm and technology</p> <p>Knowledge and experience with the Bálinta Péma brand</p> <p>PEMAK SK Ecological certificates</p>		<p>Channels</p> <p>Market in the online store</p> <p>Farm shops in Slovakia</p> <p>Slow Food Network</p> <p>Personal recommendations and community networks</p>	

Cost structure	Revenue streams
Costs of Organic Farming	Sales of poppy seeds (consumer, pharmaceutical industry)
Technology and Adapter Development	Sales of processed products
Production of products (chocolate, oils, wine) Participation in markets	Online sales
Marketing and distribution	Market sales Organic products with higher added value

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