



Case study: **Farm Nelepeč**
Environmentally friendly production and animal welfare

Farm Nelepeč

Environmentally friendly production and animal welfare

Ivo Zdráhal

Mendel University in Brno, Department of Regional and Business Economics

email: ivo.zdrahal@mendelu.cz

| | |
|------------------------------|-----------------------|
| Country | Czech Republic |
| Region | South Moravia |
| Farmer | Veronika |
| Age | 33 |
| Gender | female |
| Education | University /masters |
| Experience | 16 years |
| Specialisation | Milk, organic farming |
| No. of family members | 6 |

Region

The farm lies near the town of Tišnov, in the Brno-venkov district. This area has a mild climate with four distinct seasons. The average daily temperature in this region is 10°C, and the average annual rainfall is 600 mm. The landscape in this area is hilly, but the soil is fertile and well-drained, making it suitable for a variety of crops. Tišnov, with a population of 9,000, blends its agricultural heritage with developing industrial and tourism sectors. Traditionally, farmers here cultivate crops such as wheat, barley, and potatoes and raise livestock. Tourism also plays a significant role in this area, attracting visitors with its natural beauty and historical monuments. Spa resorts and wellness centres occur in this region. Overall, the Tišnov area is a diverse and economically developed region. The area is part of the South Moravian Region, which is one of the most economically developed regions in the Czech Republic. The region has a well-developed transport infrastructure that facilitates the movement of goods and people in and out of the region. It is a good place to live and work, with much to offer visitors. Brno, the second largest city in the Czech Republic, is only 30 km from the farm. Brno is a large food market with a high purchasing power among its residents, and it also attracts tourists to the Tišnov region for recreation and excursions.

Farm history, resources, technology and production of the farm

Just like other farmers in the Czech Republic, the family also experienced nationalisation of their property in the post-war period. At the end of 1948, Nelepeč got its own unified agricultural cooperative. The family's newly purchased tractor got nationalised in 1951. The

farm had to pay rent for other machinery it owned. In 1957, the farm joined the cooperative, and its assets, including livestock and fields, were confiscated. From then until the revolution in 1989, the farm was state-owned. Since 1991, the farm in Nelepeč has been back in the Kropáček family's possession. The family regained its previously nationalised property. In the same year, the family transitioned to organic farming (it was among the first three farms in transition in the Czech Republic after the revolution), and the farm has remained organic to this day. Initially, the family farmed with only four cattle, but they gradually expanded their herd, enabling them to resume farming and continue their 17th-century agricultural tradition.

*Picture 1 – Nelepeč Farm
Source: Farm website*



In the 1990s, it was a logical intention for the farming family to expand the farm's area to ensure sufficient feed for the livestock. Currently, the farm manages approximately 90 hectares of land (40 hectares of arable land and 50 hectares of pasture for cattle). The crop structure on the arable land consists of cereals, potatoes, and green manure crops. The needs of livestock production predominantly determine this structure. The farm also cultivates 2 hectares of orchards and 2.5 hectares of forest, including fruit from its own orchards as part of its production range.

The farm's animal production focuses on milk, which is the main economic activity. The farm breeds Czech Fleckvieh cattle, which is a traditional Czech breed. Czech Fleckvieh cattle have several desirable traits, including high milk yield and higher protein and fat content (4.5% or more). Currently, the herd consists of around 60 cattle (30 dairy cows and 20 heifers). The farm uses a "closed herd" or "closed group" system, meaning the animals stay in a closed, isolated environment with no new animals brought in from outside. All animals in the herd are born and raised in this closed environment and remain there until they die through natural death or slaughtering. In the 1990s, the average annual milk yield per cow on this farm was around 3,000 litres. However, over time, milk production increased, and even today, careful breeding and husbandry practices (including heifer selection) aim to achieve higher yields while emphasising animal welfare. Cow productivity could be even higher, but a deliberately slow herd-replacement process is underway, and some cows are older than 10-14 years. Currently,

the average herd milk production is 350-400 litres per day. In recent years, the total annual milk production has reached approximately 150,000 litres. Cows get milked twice a day (morning and evening). There are plans to introduce a milking robot. Meat income from selling calves is only a supplementary activity. Another secondary source of income comes from services (especially in crop production) provided by the Nelepeč farm to other farms that often lack modern technological equipment. The whole family is involved in the activities (work) on the farm. The farmer's father, with the help of her younger brother, takes care of crop production, including mowing and drying meadows, silage production, and hay and straw baling. The mother oversees milking and calf care. For the last four years, the farmer has focused on processing farm products, and two workers help her in the farm's dairy. During the peak season, the family also occasionally employs temporary workers who help in the fields.

Reasons for Integrating in the Short Food Supply Chain

Changes in the milk commodity value chain in the Czech Republic forced the Nelepeč farm to make changes. Significant challenges included recurring drops in milk prices, the weak negotiating position of such a small farm in the milk value chain, and the low interest of industrial dairies in organically certified milk. Organic milk went to a dairy in the region; however, the price it received was the same as for conventional milk. For example, in 2009, milk prices on the Czech market fell significantly. Although changing customers is not usually flexible in the dairy industry (due to long-term contracts), the Nelepeč farm was able to switch to another dairy in the region. As a result of this certification, the Nelepeč farm even received a price premium for its organic milk, helping stabilise the farm's economic situation. Unfortunately, after a change in the management of this dairy, it reduced this price premium per litre of organic milk. In the following years, the selling prices of organic milk from Nelepeč returned to levels comparable to those of conventional farms despite meeting all the requirements for organic milk certification, and the milk having excellent purity and an above-average fat content (around 4.5%). These facts forced the farm to re-evaluate its strategy and seek alternative development paths, especially regarding the selling of milk, its main product. During this period, the farmer completed her university education and became more involved in the daily operation of the farm, including its management. Already in her diploma thesis, she posed the question of the future development of the family farm with a focus on on-farm milk processing. She initiated the establishment of a farm dairy to process farm milk. This mini-dairy began processing milk and producing fresh cheese, curd, yoghurt, yoghurt drinks, etc. The farmer managed to create a stable customer base for these products.

Specific Way the Farm Engages in the Short Food Supply Chain

She established the farm dairy in 2019. With this step, the farmer began to realise the entrepreneurial idea of producing regional dairy products. This step enabled the farm to gain more value from the milk it produced than it did when supplying milk to dairies. The farmer summarises it this way: *"At home, we often talked about how it would be best to process milk*

directly on the farm and produce and sell our own products rather than just selling the milk to a dairy. The way to move the family farm 'further' in our case was to become a dairy farm. When promoting our products and communicating with customers, we emphasise that we are an organic farm and do not use any industrial fertilisers or plant protection products in the fields, distinguishing us from many other farms and foods typically offered, for example, in supermarkets."

The value proposition of the Nelepeč farm is high-quality, uniquely flavoured dairy products, made from milk produced on a farm practising environmentally friendly production methods and ensuring outstanding animal welfare.

This value proposition is attractive to several individual customer segments who buy food from this farm and prefer it to other market alternatives. The value proposition solves the customer's problem and satisfies their need (desire for a unique product) and is an aggregation or package of benefits that the farm offers to customers.

The farm dairy produces pasteurised milk, various-flavoured fresh cheeses, grilled cheeses, yoghurts, yoghurt drinks, curd cheese, curd desserts, and a caramel yoghurt dessert. The range is broad, but the farmer still tries to vary it to keep it interesting for customers and ensure the offer remains diverse and doesn't become boring. For example, the farmer is currently pursuing the implementation of technology to produce hard, mature cheeses. Production at the dairy always starts on Mondays so that a fresh batch of dairy products is ready every week. An unusual speciality is cheesecakes and platters, for which the farmer is very creative. "Our fresh cheeses, yoghurt drink, grilling cheese, and chocolate curd dessert have received the Brno Region Original Product award." Her products regularly win awards at regional product competitions. In 2022, the farmer's special yoghurt dessert with salted caramel and chocolate, called "Tučibomba," received the Regional Food of the South Moravian Region award, and the spreadable cheese balls won the Golden Taste of South Moravia award. For its innovativeness, Ekofarma Nelepeč ranked among the top five in the Association of Private Farming of the Czech Republic's Farm of the Year 2022 competition.

The farmer sells her farm products in various ways. Customers can buy her products directly at the farm, at farmers' markets, and a small portion of the production is also supplied to smaller shops in the region and to restaurants. Due to the farm dairy facility's registration under Czech regulations, she can sell up to 35% of her production off the farm. She also collaborates with a smaller shop in Tišnov, where she has her own refrigerator with products. Part of the production also goes to a farmers' shop run by another female farmer from the agricultural association. Veronika praises her membership in the Association of Private Farming, which has enabled her to collaborate with colleagues and participate in national events. However, customers can also visit her farm directly.

The customer base is split into several distinct segments, with the largest being Environmentally Conscious Mothers (30%), who are highly motivated by health and local/organic food for their children and often visit in groups linked to forest educational

programs, and Middle-Aged People with Empty Nests (30%), who are financially stable, less price-sensitive, and prioritise spending on health, personal interests, and quality products after their children become independent. Other significant segments include Young Couples Who Go on Trips (10%) seeking products aligned with an active, health-conscious, and ethical lifestyle; Nuns (10%) living nearby; and Senior Citizens (5%) who travel from places like Brno to buy basic items like milk and curd cheese, driven by nostalgia for the full-fat, traditional taste of the farmer's products. The remaining 15% includes sales to a restaurant for a speciality sour cream/yoghurt product and to other local partner shops.

Picture 2 – Mini-dairy at Nelepeč farm
 Source: Farm website



The value proposition is communicated to the customer 1) through direct contact between the customer and the farmer and her family when the customer arrives at the farm to buy a product in the self-service shop, 2) the farmer also relies on mass forms of marketing (website, television and radio interviews, cooking shows) and social media (Facebook). In this farm's value proposition, it is important to communicate not only the product itself but also its manufacturing. Approximately 40% of the raw milk gets processed in the farm's mini-dairy (a), and the remaining approximately 60% goes to a local dairy located approximately 35 km from the farm. The dairy collects the milk daily, buying it as conventional milk and not paying any premium for organic quality. As the farmer states: *"Now I'm not too keen on processing all the*

milk produced on the farm on the farm itself, although I think I would be able to sell the processed products from our farm. But I have a child now, and as soon as the child is sick, it's a problem. Or if I were sick or one of the two girls I employ in our on-farm dairy. We wouldn't have anywhere to put the milk then. So I still keep selling to the dairy as a kind of insurance, so that if something happens, or if we want to go on vacation, we can stop producing in our farm dairy." About 70% of the products made from the 40% milk reach customers through the farm's self-service shop. The reason for choosing a self-service shop was that customers can arrive at different times, and the farmer does not always have to be present on the farm. The arrival of a customer also meant that the farmer had to leave her work and attend to the customer. With the implementation of the self-service shop, the farmer can decide whether to attend to customers personally. Thus, the farmer or other family members remain in contact with customers and can communicate the value proposition to them or even show them the farm and the conditions of the dairy facilities.

Picture 3 – Self-service shop at Nelepeč farm
 Source: Farm website



Interestingly, not all processed dairy products from the farm are necessarily labelled with the organic mark and sold under this brand. The reason is the presence of other added products (e.g., dried tomatoes or spices) that are not always organically certified, so the final product is not certifiable as organic under the legislation. Nevertheless, the farmer includes a note on the packaging stating that the product was made from organic milk and communicates this to customers. If she were in a long food supply chain, she would not be able to present the products to customers and explain their value in this way. As the farmer states, *"I don't think customers look at the organic label that much. It seems to me that it's enough for them to walk around here, pet the cows, or see them grazing in the meadow, and they don't care if the cheese has certification."* For the rest of the customers, whom the farmer or her family do not meet personally, they must rely on communication through mass forms of marketing, social media, and references. As the farmer says, *"I give a lot of interviews, and they then spread widely. For example, when the Herbář (TV show) aired, people called me even from Prague asking where they could buy my products, and my email was full. Or when we were on the show Kluci v akci (culinary show), it wasn't like when Herbář was on, but even so, there were*

a lot of people in the yard saying they were coming for curd cheese because they saw it on TV. So that also works, but you have to, for example, win a regional food award with the product to get into such a show. I also cooperate with the local action group Brána Vysočiny, which is one of these local action groups. And they make promotional materials, they made a map of producers, but there are so many of these maps now that I think people must get lost in them because everyone wants to make their own map. And then I don't even know which maps we are in or not."

As the farmer further pointed out, the shop they supplied in Tišnov closed, but despite closing two of their three shops, sales generated through the small shop are doing incredibly well. So now we only supply to one small shop in Tišnov, where we have relatives. I also give a little to a friend who has a bakery and bakes cakes, so I give her some of my products to diversify her sales. We also used to deliver to the shop at the Ráječek farm. We have also almost stopped doing that because we really sell most of the products ourselves, and we actually sell them at full price. So it's absolutely best to sell it yourself. A lot of people also write to me on social media asking where to find my products in Brno. I wouldn't want to withdraw from them altogether. The offer is also related to our milk production. With several dry cows in the herd, there is less milk available now. But when they start milking again, there will be more, so maybe we will return to those other shops.

A critical success factor for short supply chain sales is to (constantly) innovate the product and differentiate the product portfolio compared to conventional dairy products available in retail chains or on other farms producing dairy products. In addition to traditional marketing tools, social networks (Facebook and Instagram) have become an essential channel for customer communication. The farm is also part of an association and maintains contact with other producers and other stakeholders.

Figure 1 – Business model Canvas
Source: Author

| Key Partners | Key Activities | Value Propositions | Customer Relationships | Customer Segments |
|--|---|---|---|--|
| <p>Municipality of Nelepeč-Žernůvka</p> <p>LAG Brána Vysočiny</p> <p>Association of Farmers</p> <p>Local Government - South Moravian Region</p> <p>Ministry of Agriculture of the Czech Republic</p> | <p>Production of milk that is differentiated</p> <p>Farm processing of milk into farm-made products</p> <p>Farm promotion and product sales</p> | <p>Farma Nelepeč offers high-quality, interesting processed dairy products with a unique taste, made from milk from a farm that practices environmentally friendly production processes and pays close attention to animal welfare.</p> | <p>Farmer does not create a specific sales strategy for each customer segment</p> <p>Direct contact when customers shop at the farm</p> <p>Interaction on social media</p> <p>Currently focused on customer retention</p> | <p>Environmentally minded mothers (30%)</p> <p>Middle-aged empty-nesters (30%)</p> <p>Young couples on vacation (10%)</p> <p>Nuns living nearby (10%)</p> <p>Retirees (5%)</p> <p>Others (15%)</p> |
| | <p>Key Resources</p> <p>Physical resources of the farm</p> <p>Farm milk processing facility</p> <p>Human resources (family labour, external employees)</p> <p>The farmer and her know-how and invention</p> <p>Financial resources</p> | | <p>Channels</p> <p>Milk sales to the dairy (60% milk)</p> <p>Farm processing and sales (40% milk), of which:</p> <p>Self-service shop on the farm (60% processed products)</p> <p>Shop in Tišnov (20%)</p> <p>Restaurant (10%)</p> <p>Shop of another local farm (5%)</p> <p>Shop of a local pastry chef (5%)</p> <p>Communication with customers:</p> <p>Direct contact between the customer and the farmer and her family</p> <p>Social networks (Facebook)</p> <p>Mass forms of marketing (website, media interviews, presentations during cooking shows).</p> | |

| Cost Structure | Revenue Streams |
|---|--|
| Cost of production of milk (below industry benchmark) | Sale of milk to the dairy (60% of milk production) |
| Cost of operating farm dairies | Sale of processed products in a self-service store (60%) |
| Cost of operating sales channels and customer relations | Sale of processed products in a store in Tišnov (20%) |
| Cost structure consistent with a value-driven firm | Sale of processed products in a restaurant (10%) |
| Economies of scale vs. economies of scope | The sale of processed products through a local pastry shop. Sale of processed products through other farms, sale of calves and other products, and field production services |
| | Operational agricultural subsidies |

List of Pictures

| | |
|--|---|
| Picture 1 – Nelepeč Farm Source: Farm website..... | 2 |
| Picture 2 – Mini-dairy at Nelepeč farm Source: Farm website | 5 |
| Picture 3 – Self-service shop at Nelepeč farm Source: Farm website | 6 |

List of Figures

| | |
|---|---|
| Figure 1 – Bussines model Canvas Source: Author | 8 |
|---|---|