



Case study: **Pasieka Gucio (Apiary Gucio) Honey, apitherapy and a deeply enriching experience**

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Honey, apitherapy and a deeply enriching experience

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Country	Poland
Region	Kuyavian–Pomeranian Voivodeship
Farmer	Romuald
Age	54
Gender	Male
Agrarian education	No agrarian education / electrician
Experience in farming	17
Farm Specialization	Beekeeping
No. Household members	6

Description of the region

The Gucio Pasieka farm is located in a small village of Podgórzyn, in the Kuyavian-Pomeranian Voivodeship, in the north-central part of Poland. The village has a population of several hundred people but blends with the neighbouring city of Żnin, with a population of about 14 thousand citizens and is the centre of the Żnin district. The local community stretches over an area of 250 km² and has an urban-rural character. Agricultural land constitutes about 80% of the total area and forests about 6%. The farm is located in Pałuki, a beautiful region with 130 lakes, forests and fields of nectar-rich plants, e.g. rapeseed. The S5 expressway runs right next to the Żnin and goes to Bydgoszcz to the north and to Gniezno to the south and further southwest to Poznań, so it is well connected. In the neighbouring community – Gąsawa – there is a world-famous Lusatian stronghold and settlement in Biskupin. In history the trade, especially in salt and amber, played a significant role in the development of the region, and the inhabitants probably participated in trade connected with the famous "amber route", which led from the Adriatic to the Baltic Sea. Beautiful nature and rich cultural heritage combined with developed infrastructure are important attractions of the Żnin community and makes it a strong tourist attraction. The summers are quite comfortable in the Żnin region, while winters are rather cold, snowy and windy. During the year, the temperature ranges from -4°C to 24°C, rarely falling below 13°C or exceeding 30°C. In summer, daily maximum temperatures are around 22°C, ranging from 14 to 30°C, and daily minimum temperatures are usually 12°C, ranging from 5 to 18°C. More intense rainfall lasts for a little over 3.5 months,

from mid-May to early September. The lowest rainfall is recorded in April. In terms of rain, the average rainfall generally remains quite similar throughout the summer, amounting to around 50 millimetres, usually ranging from 14 to 107 millimetres, with the heaviest rainfall recorded in July on an annual basis. The growing season usually lasts about 175 days and starts around April 25 and ends around mid-October. Agricultural production mostly consists of the cultivation of cereals (mainly wheat, barley), sugar beets and potatoes. The animal production in the region is typically focus on pigs and poultry. The average farm has an area of about 20 ha, which is higher than the average in the country.

Farm history, resources, technology and production of the farm

The Gucio apiary is run by Romuald and his wife Beata, supported by their children. The Gucio apiary is a multi-generational apiary with a history spanning more than 80 years. The first 19 Warsaw-type hives were bought by Romuald's father in 1951. In the following years, the apiary had between 20-40 hives. Romuald was not immediately convinced to follow in his father's footsteps, but in his later teenage years he became interested in beekeeping, and this interest later became his passion. Together with Beata, they first bought 10 hives, two of which unfortunately did not survive, but the remaining eight performed well and this later became an incentive to further develop the apiary. At the moment, it has 79 bee hives. The farm itself is placed on 2 hectares of land, which are used as permanent grassland and intended for plants dedicated to pollinating insects. The farm is shown in the pictures (Picture 1 and 2).

Picture 1 - Pasieka (Apiary) Gucio I
Source: Pasieka Gucio



Picture 2 - Pasięka (Apiary) Gucio 2
Source: Pasięka Gucio



The farm is well managed, and when making decisions, the farming family uses its competence, experience and social capital gained in other areas. Romuald is a member of the Polish Beekeeping Association and Beata is a member of the Rural Housewives' Association. Romuald often reads the industry magazine "Pasięka" to follow the latest trends in the industry. The farming family is constantly testing new, interesting and innovative ideas to differentiate the farm from other apiary farms. There are many other apiary farms in the region and competing each other. The farmer perceives following resources as the most critical to keep the current business model: 1) own (the owner and his wife) labour resources, skill and competencies; 2) unique experience and competences gathered over the years; 3) a special breed of honey bee

Buckfast bee (domestic crossbreed of *Apis mellifera* subsp.), which is an advanced crossbreed of seven European and African bee breeds and which has numerous advantages, such as high honey and pollen yield, gentleness, resistance to diseases and good wintering; 4) technical infrastructure and well-organised production processes; 5) financial resources.

These key resources are accompanied by conscious agro technical decisions related to crops that are directly dedicated to bees. It is also worth emphasizing that in order to obtain rare honey (dandelion, acacia, buckwheat), the farmer transports the bees to multiple different locations. This is an activity that requires good planning and coordination both in terms of the seasonal schedule of placing the hives in the specific locality and the organization of work at the time of honey harvesting. These important skills and competencies allow to the Pasieka Gucio to offer divers portfolio of products and services.

Gucio Apiary is a specialised production unit focused only on the honey and honey-derived products. This specialization is a conscious strategy in response to the intense competition in the honey market in Poland and its surroundings. The apiary utilizes its potential to almost its fullest extent (apiaries with up to 80 bee hives are subject to simplified administrative regulations), therefore, further development is basically linked to the quality and diversity of its supply. These conditions led Pasieka Gucio to focus on high-quality honey and related products, which can be sold at a higher price than those available in supermarkets. Acquiring and retaining customers remains a key challenge, but this is made easier by having a wide range of products.

The farms portfolio of products consists of different types of honey and honey-derived products – bee bread, bee pollen, propolis (Picture 3, 4 and 5). When it comes to the honey offer, it is worth emphasizing that it is really exceptionally rich - the apiary has honeys on sale almost at any time: 1) acacia (light, mild honey that remains in liquid form for a long time); 2) phacelia (light honey with an interesting, slightly herbal aroma); 3) buckwheat (with a characteristic dark colour and intense taste); 4) tilia (exceptional in taste and aroma, which is

Picture 3 – Products offered by the Pasieki (Apiary) Gucio

Source: Pasieka Gucio.



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perfectly associated with the scent of a blooming tilia tree in the summer); 5) dandelion (a unique and rare type of honey, which is the fruit of the work of bees on early spring dandelion flowers); 6) rapeseed (characteristic, creamy and delicate honey, very popular due to the large rapeseed crops in Poland); 7) honeydew (made from honeydew collected by bees, not from flower nectar) and 8) multifloral (a fusion of flavours and aromas).

Pasieka Gucio also offers honey-derived products, such as bee pollen, bee bread and propolis, as well as multi-flower honeys with additives, including honey with bee bread, bee pollen, raspberries or lemon and ginger. Bee pollen is collected by bees during flights to flowers, then transported to the hive and stored in the cells of the comb. It has the form of colourful loose balls and is a kind of reserve in the comb – young or adult bees can reach it for food. From a human perspective, it is valuable because it contains vitamins, minerals and protein, and also has antibacterial, antifungal, anti-inflammatory, antioxidant and anticancer effects.

Bee bread is produced as a result of the collection and processing of flower pollen by bees. It is a rich source of protein, contains many vitamins and minerals, fatty acids, digestive enzymes. Propolis is a viscous substance produced by bees from plant resin and, as the name suggests, bees use it to protect and seal the hive from external factors (microorganisms that threaten their health and life). It is a valuable natural product for humans, because it has anti-inflammatory and antibacterial effects, supports the body in fighting infections, supports the immune system and soothes inflammation and accelerates wound healing processes.

Picture 4 - Other products offered by Pasieka (Apiary) Gucio – Bee pollen (left), Propolis (right)
Source: Pasieka Gucio



Another interesting product is the so-called multi-flower creamed honey. It can be a feast for the palate, combining the richness of flavours and aromas of various flowers from which bees collect nectar. The creaming process makes the honey exceptionally velvety and easy to spread, making it an ideal addition to everyday meals. This honey is characterized by a delicate, floral flavour with a subtle fruity note. All of the honey products listed are characterized by a beneficial effect on the human body. Gucio Apiry has well recognized this potential and meets

the diverse needs and preferences of consumers, providing the market with a wide range of products.

Picture 5 – Products offered by the Pasieki (Apiary) Gucio - Acacia honey(left), Dandelion honey(middle), Honey with lemon & ginger(right)

Source: Pasieka Gucio.



In addition, the Gucio apiary offers its customers a unique opportunity to experience beehive-therapy / apitherapy (Picture 5). This rare service is completely free for the apiary's customers and enjoys interest, although the popularity of this form of apitherapy in Poland is currently low. On the farm there is a wooden house where the client can lie down and enjoy the warm air, the smell of honey and propolis, micro-vibrations and acoustic effects and the biofield generated by bees, whose hives are mounted just under the bench and suitably secured. Treatment in the beehive-therapy house has relaxing and therapeutic applications. According to various studies, this form of apitherapy allows for the treatment of various ailments such as: diseases of the cardiovascular, respiratory, movement, nervous systems, diseases resulting from reduced immunity, metabolic and hormonal diseases, as well as psycho-emotional diseases.

The proof of the interesting and rich offer at the Gucio Apiary is the award the apiary received in 2018, i.e. the Cup of the Chairman of the City Council in Żnin for the most interesting beekeeping offer presented at the XXII Pałuki Agricultural Fair (25-26.08.2018). Producing the portfolio of products is time-consuming and also requires work in challenging working conditions. Thus, the farm is keen to develop its technical infrastructure, machines and devices, and in recent years has also increased investments in renewable energy sources (photovoltaic panels and a heat pump). As the owner says, beekeeping is a pleasant and rewarding occupation, although of course it also involves many challenges. But the fact that the owners plan to buy more land and invest in infrastructure for honey production (including a honey extractor) is a manifestation of the desire to develop the farm.

Reasons for integrating in the Short Food Supply Chain

Honey is available at a cheap price of around PLN 20-25 (USD 5,5-7) for a large jar (about 1 kg or 1 litre) in large-scale stores (e.g. supermarkets, where many consumers do their regular shopping) in Poland. This honey is often made as a mixture of honey from the EU countries and non-EU countries. There isn't often obligation to comply with strict sanitary or veterinary standards in non-EU countries as the EU imposes on its beekeepers. This is a very challenging benchmark for Polish honey producers, especially on those emphasising the high quality of honey. Those honey producers cannot compete in terms of price with a large non-EU producers and importers. It is worth adding that honey wholesale buyers operate in EU countries, but they offer very low prices to honey producers. It is usually in the range of PLN 10-20 (USD 2,8-5,6) per 1 kg of honey (this price applies to a high-quality honey). In this context, it is worth emphasizing that in Poland there are many apiaries. The honey market is highly fragmented and highly competitive, and one beekeeper has no influence on prices.

Picture 6 - Beehive-therapy house in Pasieka (Apiary) Gucio

Source: Pasieka Gucio



Honey has a long historical tradition to be sold directly from the farmer to the consumer. This form of sale fits the product of honey very well, even between the apiary and its nearest neighbours. Most consumers have probably bought or received honey directly from a

beekeeper at least once. Selling honey through a long chain is also possible and usually takes the form of honey being delivered by the farmer to a collection point, but at a low price, which often does not even cover the production costs. For this reason, it is very common practice that beekeepers participate in short supply chains, mainly implementing direct sales strategy. From the perspective of Pasioka Gucio, integration in short food chains resulted from several reasons:

- customer interest in high-quality honey from a trusted beekeeper, not from an industrial apiary that is impossible to recognize,
- consumers searching for a wide range of honeys and related products, the availability of which in large-scale stores is usually very limited (usually 1 type of honey),
- the possibility of obtaining a higher price for honey, and therefore higher revenues and income, even taking into account higher production costs,
- the possibility of involving family members in the apiary's activities.

Specific Way the Farm Engages in the Short Food Supply Chain: Customer segments, channels and customer relationships

As already mentioned in this case study, honey is a product that was always been sold directly from farmer. Pasioka Gucio also applies direct sale from farms and the customers are usually the members of broader family, friends, neighbours or tourists. Nonetheless, the direct sale from the farm was not able to ensure the sale of the entire production of the farm. Therefore, the Gucio Apiary has also developed other distributional channels for its honey. Pasioka Gucio also started the system of deliveries directly to consumer households (or to groups of consumers). Besides direct sale and deliveries, the Pasioka Gucio also sells a significant share of its honey during fairs, festivals, and various social events. While selling and distributing honey and its various other products, Pasioka Gucio also uses the support of relatives from a broader family who live in large cities (Warsaw, Poznań) or even in smaller district cities. There are much larger markets and more potential consumers with higher buying power in these cities when compare to villages and towns near Pasioka Gucio farm. Therefore, the farm benefits from an exposure to larger markets. Last but not least, the farm promotes and sells its products through modern marketing channels such as the "Wiejska e-skrzynka" ("village e-foodbox") and "Polski e-bazarek" ("Polish e-bazaar") platforms.

When it comes to promotional activities, the word-of-mouth marketing and recommendations from satisfied customers are still very important. Nonetheless, Pasioka Gucio often advertises its products at fairs, festivals and events, in traditional media such as radio and currently also via social media such as Facebook, through profiles on various websites. The Gucio Apiary therefore communicates, among others, through:

Facebook: https://www.facebook.com/PasiokaGucioPodgorzyn?locale=pl_PL

Village e-foodbox: <https://wiejskaeskrzynka.pl/Pasioka-Gucio>

Polish e-bazaar: <https://polskiebazarek.pl/author/romualdrabkowski/>

Figure 1 – Business Model Canvas

Source: Authors construct based on data from the interview with farmer and its family

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
<p>Polish Beekeeping Association,</p> <p>Village e-foodbox platform,</p> <p>Polish e-bazaar platform,</p> <p>Rural Housewives' Association</p>	<p>Beekeeping</p> <p>Honey production (a very wide range of types)</p> <p>Honey production with additives (fruits, herbs, propolis)</p> <p>Production of numerous honey-derived products – bee bread, bee pollen, propolis</p> <p>Marketing and sales activities</p> <p>For customers of the Pasioka (Apiary) Gucio – a house for beehive-therapy.</p>	<p>Pasioka Gucio offers its customers unique and high quality products and experience that goes beyond honey as a commodity.</p> <p>Farm provides a wide assortment of honey and related products, as well as a unique opportunity to take advantage of beehive-therapy.</p>	<p>Direct contact with customers visiting farm – neighbours, relatives, tourist as well as other customers</p> <p>Virtual contact and interaction with customers from cities - communication via websites, industry portals and Facebook.</p>	<p>Customers interested in high quality honey and unique honey products</p> <p>Customers buying pollen, bee bread and propolis – consumers more aware of their health-promoting properties, people who are ill or use prophylaxis in the autumn-winter period.</p> <p>Customers from the region</p> <p>Customers from cities</p>
<p>Key Resources</p> <p>Own labour resources (the owner and his wife),</p> <p>Unique experiences and skills gathered over the years</p> <p>A special breed of bee (Buckfast)</p> <p>Technical infrastructure</p> <p>Financial resources.</p>			<p>Channels</p> <p>Fairs, festivals, events: 60%;</p> <p>Direct sales: 30%;</p> <p>Delivery to consumer households: 10%.</p> <p>Word-of-mouth</p> <p>Traditional and social media</p> <p>New types of electronic platforms</p> <p>Network of personal contacts</p>	
<p>Crucial costs</p> <p>Fuel and energy expenses,</p> <p>Sugar purchases,</p> <p>Jars and caps,</p> <p>Queen bees,</p> <p>Frames, bodies,</p> <p>Veterinarian,</p> <p>Work clothes and other variable expenses,</p> <p>Fees for access to markets and bazaars.</p>			<p>Revenue Streams</p> <p>Honey sales: 82%;</p> <p>Pollen, bee bread and propolis sales: 15%;</p> <p>Subsidies and other support: 3%.</p>	

Especially "Polish e-bazaar" and the "Rural e-foodbox" are new electronic marketing channels that are shortening the distance between farmers and consumers.

The "Polish e-bazaar" platform allows agricultural producers to post offers of products produced on farms free of charge. This initiative aims to facilitate the sale and purchase of products from local producers, promotes short supply chains and supports agricultural producers in selling both unprocessed and processed products. The Polish e-bazaar platform operates under the patronage of the Ministry of Agriculture and Rural Development. The organisation of the initiative is carried out by the provincial Agricultural Advisory Centres, so it has a nationwide dimension and customer can find a very wide range of agriculture-related products and services in Poland.

The "Rural e-foodbox" is an innovative idea and it is a shopping platform (not a store) intended for direct contact between consumers and many producers at once. It is not a typical e-shop that markets products and looks for buyers.

The e-foodbox responds to the needs and interest of consumers in high-quality local food. The platform was created with the participation of European union funds as a result of a larger project entitled "Innovative model of cooperation of agricultural producers within short supply chains". The initiator was the Kujawsko-Pomorskie Agricultural Advisory Centre in Minikowo, an institution providing support to farmers. The aim of this project was to shorten the food supply chains from farms and directly reach final consumers. An important aspect of this initiative is the idea of collective action to reach effects of synergy and scale to provide benefits to both farmers and consumers. Currently, the e-foodbox integrates together 22 farms, and one of them is Pasięka Gucio. The e-foodbox provides a diverse assortment and the consumer can buy various food products e.g. the honey from Pasięka Gucio, vegetable, fresh and processed fruit, dairy products, eggs, raw and processed meat (hams, sausages), various atypical grains, homemade cakes, mustards, herbs, mushrooms, and even lavender products. The e-foodbox provides customers with the opportunity to create special purchasing groups. This brings together people with a similar attitude to nutrition and expectations towards food products. The Village e-foodbox is becoming important platform connecting the farmer with the consumer without intermediaries and providing easy access to a wide range of products with a guarantee of quality and high production standards (based on product tests) and favourable prices for high-quality products.

After years of operating in short food supply chains, Pasięka Gucio has gained positive experience with this type of marketing strategy and wants to even more intensively use it for its growth and development.

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