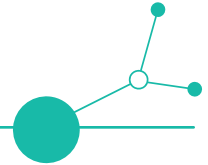


SHORT FOOD SUPPLY CHAINS CHARACTERISTICS AND NEEDS IN AUSTRIA

Short report summary





Food4CE

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1. Executive summary

In Austria, Short Food Supply Chains (SFSCs) are well-established, with a significant portion of farmland dedicated to organic farming. The demand for organic in Austria is high. SFSCs benefit producers by allowing them to retain a greater share of revenues. However, challenges such as transportation, order management, and warehousing remain.

This report provides an overview of the logistics characteristics and needs of Short Food Supply Chains (SFSC) in Austria, based on web research as well as a survey sent to about 80 Alternative Food Networks (AFNs). The response rate was around 20%. The survey focused on order processes, warehouse processes, transport processes, and other logistics issues such as returns, packaging, and IT tools.

The analysis showed that the processes are well established despite remaining challenges in some areas. However, it must also be emphasized at this point that AFNs and SFSCs are usually small entities for which the costs and benefits of digitalization and automation may be disproportionate.

The results showed that efficient ordering, storage, and transportation are critical for AFNs' supply chain processes, with most receiving small quantities of orders multiple times a week, primarily via online systems for better integration and reduced errors. Storage prioritizes temperature control, with shelves and plastic crates in reusable systems being commonly used. Transportation remains a challenge, with many AFNs handling short-distance deliveries in-house using vans or bikes. Reverse logistics focuses on returning packaging for sustainability, though digital tools like real-time tracking are still underutilized. Cooperation among AFNs brings economies of scale and competitiveness, while consumer demand for organic, regional products drives market evolution. Improved marketing, awareness, and political support are essential for AFNs' growth.

While AFNs face logistical and operational challenges, particularly in transportation and digitalization, their focus on sustainability, local production, and cooperation offers significant potential for growth. By improving marketing, enhancing visibility, and leveraging political support, AFNs can further capitalize on the increasing consumer demand for organic and regional products, establishing themselves as integral players in a resilient and sustainable food system.

About the Food4CE project:

Food4CE is a European project funded by the INTERREG Central Europe Programme, aimed at supporting Alternative Food Networks (AFNs) in their efforts to create sustainable and resilient food supply systems. Within Food4CE 5 local and 1 Transnational Innovation Hub (IH) will be established and will focus on advancing AFNs logistics efficiency through the development of innovative tools and solutions.

Two innovative tools, the Knowledge Transfer Platform and the Matchmaking Platform will be developed within the project. The former is intended for sharing logistics best practices and solutions, while the latter is intended for creating new B2B logistics solutions and services. The aim is to facilitate knowledge transfer and exchange between different regions and actors, and to create a unique mutual support network for AFNs in Central Europe.

Food4CE will also provide jointly developed regional action plans for each participating region and transnational (CE) policy guidelines for AFN support. The project aims to establish a sustainable and lasting AFN support mechanism, which will continue working even after the project end.

By establishing local and transnational Innovation Hubs and developing innovative tools and solutions, Food4CE project aims to facilitate knowledge exchange and cooperation between different actors and regions, leading to a sustainable and lasting AFN support mechanism.



2. Short Food Supply Chains (SFSC) characteristics and needs in Austria

A growing number of European consumers prefer local food due to its perceived higher quality and positive environmental impact. Direct sales benefit producers by allowing them to retain a greater share of revenues, which explains the rise of short food supply chains (SFSCs) across EU Member States. 15% of EU farms sell more than half of their production directly to consumers, but these are mainly small farms. Only 3 percent of farms above 100 ESU¹ engage in direct sales (COMMISSION STAFF WORKING DOCUMENT on various aspects of short food supply chains, 2024).

In Austria, more than a quarter of farmland is dedicated to organic farming. The demand for organic products has been rising steadily, with 95 percent of Austrian shoppers buying organic food. Supermarket chains in Austria have capitalized on the organic trend, with over 90% (Augère-Granier, 2024) of food retail occurring in large supermarket chains. (AMA Marketing, 2024)

SFSCs are well established in Austria for supplying private customers. In 2019, organic food sales in Austria totaled EUR 2.060 million, with 15% sold through direct sales and specialist shops. Austria's agricultural policy has preserved its structure, resulting in lower industrialization and intensification compared to other EU countries (AMA Marketing, 2024).

Austria's agricultural tradition transitioned from subsistence farming to market-oriented production in the late 1950s and 1960s. This shift led to increased yields but also negative environmental effects. In the 1990s, Austria began promoting organic farming, contributing to the growth of SFSCs (Goller, 2016).

The EU's Green Deal strategy "From farm to fork"² emphasizes supporting local food and short supply chains. Measure 16 under the Austrian Rural Development Programme LE14-20 supports the cooperative development of short supply chains and local markets.

The sector of tourism drives the development of SFSCs in Austria, with regionality and denomination of origin playing significant roles.

2.1. Research overview

Due to the strong focus of Austrian consumers on organic farming, Austria offers a versatile market for AFNs. Social and political developments in recent years, such as the Covid pandemic, supply chain problems and international crises, have increased the demand for regional products and the desire for traceability of origin even more. Almost all Austrians have bought organic food at least once in the past six months, with 95% of all organic buyers (AMA Marketing, 2024). Consequently, it is important that domestic food producers have a high level of logistic knowledge in order to be able to handle the complexities of administration and distribution. Only if consumers' expectations in terms of service quality are met, they will support the producers' shift towards a more sustainable agriculture.

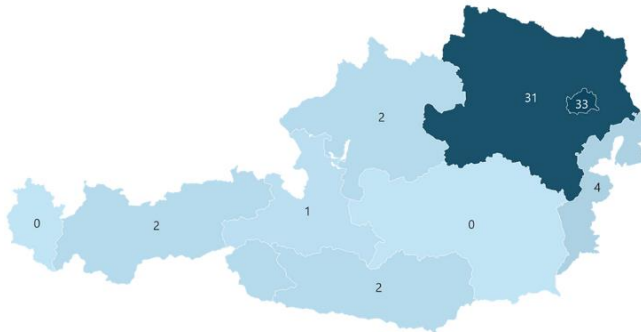
In the web research, 75 AFNs were identified throughout Austria. 33 AFNs originate from Vienna, accompanied by 31 from Lower Austria, and the rest emerging from other parts of Austria. Due to the large number of AFNs in Austria, the focus was placed mainly on the Eastern region.

¹ The European Size Unit (ESU) expresses the economic size of a farm; it corresponds to approximately 1.3 ha of cereals or one dairy cow or 25 sheep or an equivalent combination of these.

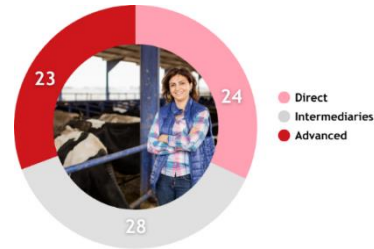
² https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en



Geographical location



Level of complexity



The AFNs mentioned above were not only identified but also assigned to different complexity levels. A distinction was made between:

- Direct** Direct farmer-customer relationship (direct sales) with minimum two partners cooperation
- Intermediaries** Solution with intermediaries
- Advanced** Advanced AFNs with IT platforms and/or common branding

The attempt was made to achieve as balanced a distribution as possible in order to reflect all levels of complexity of AFN. 22 advanced, 25 intermediaries and 28 direct AFNs could be identified in Austria.

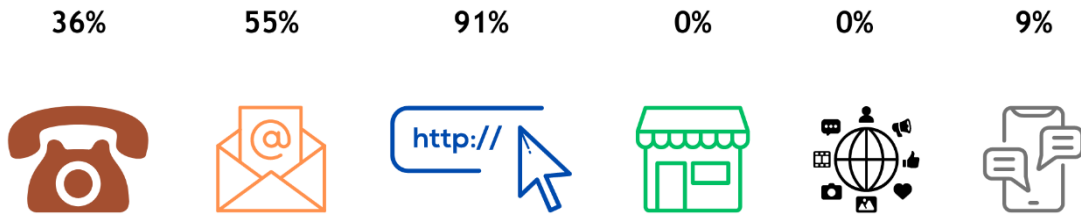
2.2. An analysis of SFSC logistics characteristics and needs

Questionnaires were sent to about 80 AFNs which mainly contained detailed logistical questions. The response rate was around 20%. The questions in the survey were clustered around the topics of order processes, warehouse processes, transport processes and other logistics issues (returns, packaging and IT), as well as questions dealing with threats, weaknesses and opportunities. Results of these questions are introduced in the continuation.

2.2.1. Order processing

Ordering goods is an important step in initiating processes in the supply chain. The regularity of incoming orders, fluctuations by season or order quantities are key factors influencing logistics and the utilization of production factors.

Online ordering is already being widely used as it offers the opportunity to transfer orders directly into a system - without media discontinuity - which helps to reduce potential errors and speed up work processes. However, due to the level of investment in IT, automating a system only makes sense once a company's turnover reaches a certain size.

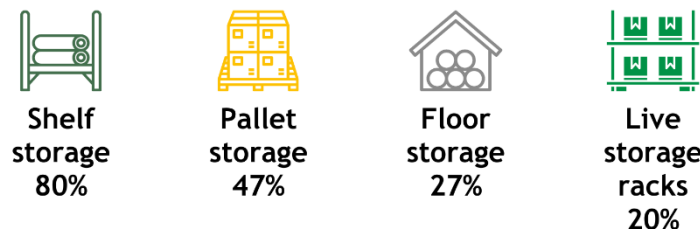


Most of the orders are made online (91%), followed by e-mail with 55% and telephone with 36%. However, the total order volumes are relatively small, resulting in high order-picking efforts, especially during seasonal peaks.

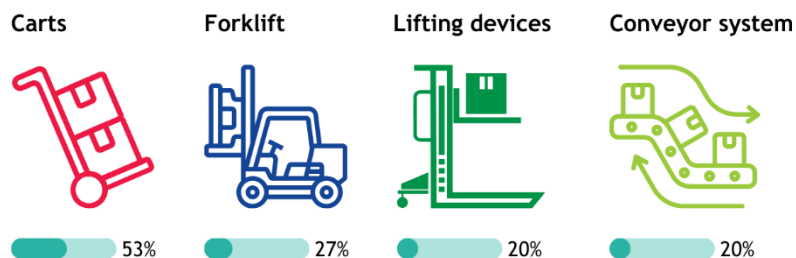
2.2.2. Warehousing

When storing food, there are two aspects that complement each other: hygiene and cleanliness during storage and temperature requirements. From an economic point of view, the right storage quantity helps to avoid tying up too much capital while still maintaining delivery readiness. The “first in, first out” (FIFO) principle for storage and retrieval ensures that the older products are removed from the warehouse first, while the best-before and use-by dates must always be checked. The packaging must correspond to the food and be properly labelled.

The survey revealed that storage on shelves is predominant mode for AFNs, followed by pallet storage. Colli flow racks are also used by one fifth. This type of storage ensures clarity, fast retrieval, good use of space, short access routes, ergonomic design of the grip area and supports the FIFO principle.



Although AFN warehouses are mostly smaller warehouses, storage aids are an important support. More than half of the AFNs that took part in the survey use carts, but 20% do not use any storage aids.



Even before Euro pallets, crates (containers) are most frequently used in warehouses. These crates (containers) are usually made of plastic but can also be made of wood. Plastic crates are also frequently used as part of closed reusable systems.



Although a large proportion of AFNs receive their orders online, paper picking is still predominant. The results of the survey lead to the conclusion that many orders are not forwarded to a scanner but printed out.



73%



80%



20%

The handling of frozen goods is still underrepresented in the AFN. The requirements in this area are high (hygiene, costs, expertise, etc.), which poses too great of a challenge for many small businesses.

2.2.3. Transport processing

Transportation is not one of the core competencies of a food producer, so outsourcing is an option. The challenge lies in identifying partners capable or willing to accommodate the typically modest delivery quantities and fulfil the specific requirements of Alternative Food Networks (AFNs) adequately. Additionally, outsourcing severs the direct contact between producers and end customers during the transfer of goods. Consequently, nearly 90 % of surveyed AFNs opt for either complete or partial in-house supply chains, with approximately one-third relying, at least in part, on external service providers.

Internally



88%

Externally



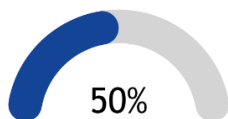
63%

Personal collection

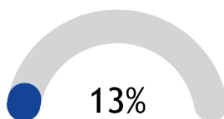


25%

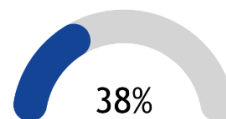
The reliance on in-house resources, such as vehicles and personnel, is likely attributed to the fact that half of the surveyed AFNs operate within a delivery radius close to their production sites, making self-managed logistics more feasible and cost-effective. Half of the AFN transport their goods in parameter less than 50 km, and two thirds less than 100 km.



Up to 50 km



Between 50 and 100 km



Above 100 km

2.2.4. Digital competence

Digitalization should play an important role in Alternative Food Networks (AFNs) in Austria. It enhances transparency, sustainability, and efficiency along the supply chain. Comprehensive information along the supply chain is essential for building trust and ensuring environmental, economic, and social sustainability. Digital platforms facilitate knowledge sharing and self-organization within AFNs, leading to more sustainable



purchasing and consumption behaviors. Additionally, digitalization supports the logistics of AFNs, making them more organized and efficient.

Despite all these opportunities and advantages of digitalization digital tools are not yet used very often. Almost all AFNs use ordering systems, but applications such as real-time tracking or RFID are still rare, especially with small AFNs. However, due to the level of investment in IT, automating a system only makes sense once a company reaches a certain size.

2.2.5. Business practices



Transparency and traceability in the supply chain, as well as open communication channels with customers, are at the forefront of AFN's business activities. To reduce the distance between producers and consumers in their supply chain, direct procurement is the method of choice, followed by local procurement, but online platforms are also important to ensure the quality and freshness of their products. AFNs perform proper storage and temperature control, follow strict supplier selection with certifications and standards, and sometimes use traceability systems.



Quality is also an important point, so transparent expiration dates and regular quality assurance tests are a must. To promote sustainable practices within supply chains, companies take a wide range of measures, from eliminating intermediaries to efforts to prevent waste. Local producers and suppliers have the greatest influence on the further development and strengthening of a short food supply chain, followed by consumer awareness and engagement. Financial support appears to play a subordinate role.

2.2.6. Challenging areas for AFNs

Transport



53%

Warehousing



27%

IT tools



27%

Reverse logistics



20%

Ordering



33%

Packaging



27%

Based on the feedback from farmers, the greatest challenges they face are as follows:

Transport: 53% of farmers identified transport as their biggest challenge. This includes issues related to the logistics of moving products from farms to markets or customers.

Warehouse: 27% of farmers reported challenges related to warehousing. This includes storage space, inventory management, and maintaining the quality of stored products.

IT Tools: 27% of farmers indicated that IT tools are a challenge. This could involve the use of software and technology for managing various aspects of their operations.

Reverse logistics: 20% of farmers identified reverse logistic processes as a challenge. This includes the return of unsold or damaged products and the management of waste and recycling.

Ordering: 33% of farmers mentioned that managing orders is a significant challenge. This could involve difficulties in tracking, processing, and fulfilling orders efficiently.

Packaging: 27% of farmers also highlighted the packaging process as a challenge. This involves the materials, methods, and labour required to package products for sale or distribution.



These insights provide a clear picture of the areas, where farmers face the most difficulties and can help in developing targeted solutions to address these challenges.

2.3. Challenges and opportunities for SFSC

Economies of scale, which lead to more efficient logistics services and cost reductions, particularly benefiting smaller enterprises, are a significant advantage. To reach this, cooperations can be made which also help in pooling financial and human resources, making AFNs more cost-effective and sustainable. Additionally, cooperations can mitigate the seasonal effects in arable farming.

Consumer demand for organic and regional products has driven changes in agricultural production and food offerings in Austria for about 40 years. This trend is expected to continue as consumer preferences evolve. However, many AFNs are not well-known among consumers, leading to high-quality and sustainable products not receiving the attention they deserve. Therefore, investing in marketing strategies is crucial to raise awareness about AFNs.

The political level plays a decisive role, especially in the light of the COVID-19 pandemic and efforts related to Environmental, Social, and Governance (ESG) Goals at the EU level. These efforts emphasize the importance of a resilient and sustainable food supply, requiring adjustments from businesses and active political support. On the national level, the "Federal Ministry for Agriculture, Forestry, Regions and Water Management" and the "Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology" play central roles in promoting and supporting AFNs. However, small networks often struggle with changing regulations and bureaucratic burdens.

In summary, key factors for the sustainable development of AFNs include collaboration, consumer market power, marketing enhancements, political support, and appropriate infrastructure. Current challenges, especially in the context of COVID-19 and ESG goals, present opportunities for increased collaboration among businesses, consumers, and political stakeholders to establish AFNs as an integral part of a resilient and sustainable food system for the future.

2.4. References

- [1] AMA Marketing. (2024, 09 18). Retrieved from <https://amainfo.at/presse/pressemitteilungen/bio-umsaetze-wachsen-weiter>.
- [2] Augère-Granier, L.-M. (2024, 09 18). Short food supply chains and local. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/586650/EPRS_BRI\(2016\)586650_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/586650/EPRS_BRI(2016)586650_EN.pdf)
- [3] COMMISSION STAFF WORKING DOCUMENT on various aspects of short food supply chains. (2024, 09 18). Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A52013SC0501R%2801%29>
- [4] Goller, A. (2016). Die österreichische Ernährungsentwicklung - ein gesunder dynamischer Prozess?