

Strategic Transformation in Agriculture and Rural Space (STARS)

Pilot 1

Supporting the Transformation
of Producer Organizations for a
Competitive, Sustainable, and
Resilient Agri-Food Sector in Croatia

GUIDANCE NOTE

April 2021

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1

Rationale

This work represents the final stage of the analytical and strategic advisory work completed in the agri-food sector of Croatia under the STARS project. The STARS project was officially launched by Croatia's Ministry of Agriculture (MoA) and the World Bank in October 2018 with the objective to improve the capacity for evidence-based strategic planning by the Ministry. The project was developed in four interrelated stages: i) diagnostic analysis of agriculture, rural development and aquaculture in Croatia; ii) formulation of the National Agriculture and Rural Development Strategy; iii) development of an action plan, and iv) identification of priority areas for more in depth guidance, formulated as pilots. The sector diagnostic results were used as the evidence base for reaching out to sector stakeholders to gather their inputs regarding the key challenges facing Croatia's agri-food sector and the MoA policy priorities for the 2020-2030 period. A nation-wide survey completed as part of the stakeholder outreach in March-June 2019 identified the difficult business environment and weak linkages with domestic and international markets as the top two (2) challenges facing agricultural producers and agribusiness SMEs in Croatia. These and other stakeholder inputs were subsequently reflected in the strategic objectives pursued by the MoA under its proposed National Agriculture and Rural Development Strategy (NARDS 2020-2030), which are to (i) increase the productivity and climate resilience of agricultural production; (ii) strengthen the competitiveness of the agrifood system; (iii) renew the rural economy and improve livelihoods in rural space; and (iv) stimulate agri-food innovation. Based on the evidence from the

analytical work, the inputs from stakeholders and the priorities defined in the NARDS, two pilots were defined to further explore options for improving sector performance through strengthening linkages of agricultural producers to markets (Pilot 1) and through spatial planning for optimizing sustainable production (Pilot 2). The pilots were launched in March 2020 and applied the same approach as the one used for the STARS project overall, which is to use best practice methodologies for designing and implementing interventions that are both evidence-based, stakeholder-driven, and market-oriented (i.e. going “beyond the farm”). This report presents the work carried out under Pilot 1.

Strong producer organizations are a key lever for building a competitive, sustainable, and resilient agri-food sector in Croatia. Under the NARDS 2020-2030, facilitating improved market linkages between small and medium-sized producers and buyers in strategic domestic and international segments has been defined as a critical need to improve the overall competitiveness of Croatia’s agri-food sector. In particular, the lack of adequate post-harvest (cold chain) logistics infrastructure, equipment, and support services for the aggregation, processing, distribution, and/or marketing of domestic products has been elevated as a major bottleneck to building well-functioning agri-food value chains that strengthen the economic position of domestic producers and enable the efficient distribution of agri-food products in Croatia and beyond. By organizing the production, aggregation, processing, distribution, and/or marketing of agri-food products, strong producer organizations play a fundamental role in efficiently linking small and medium-sized producers to local and international agri-food chains and access higher value market segments. At the same time, producer organizations can strengthen producers’ bargaining position vis-à-vis other agri-food chain actors; help them negotiate longer-term contracts, obtain more regular orders, and secure advance payments; facilitate access to value-adding, but capital-intensive infrastructure, equipment, and services; and increase their capacity to manage a growing set of challenges affecting agri-food chains.

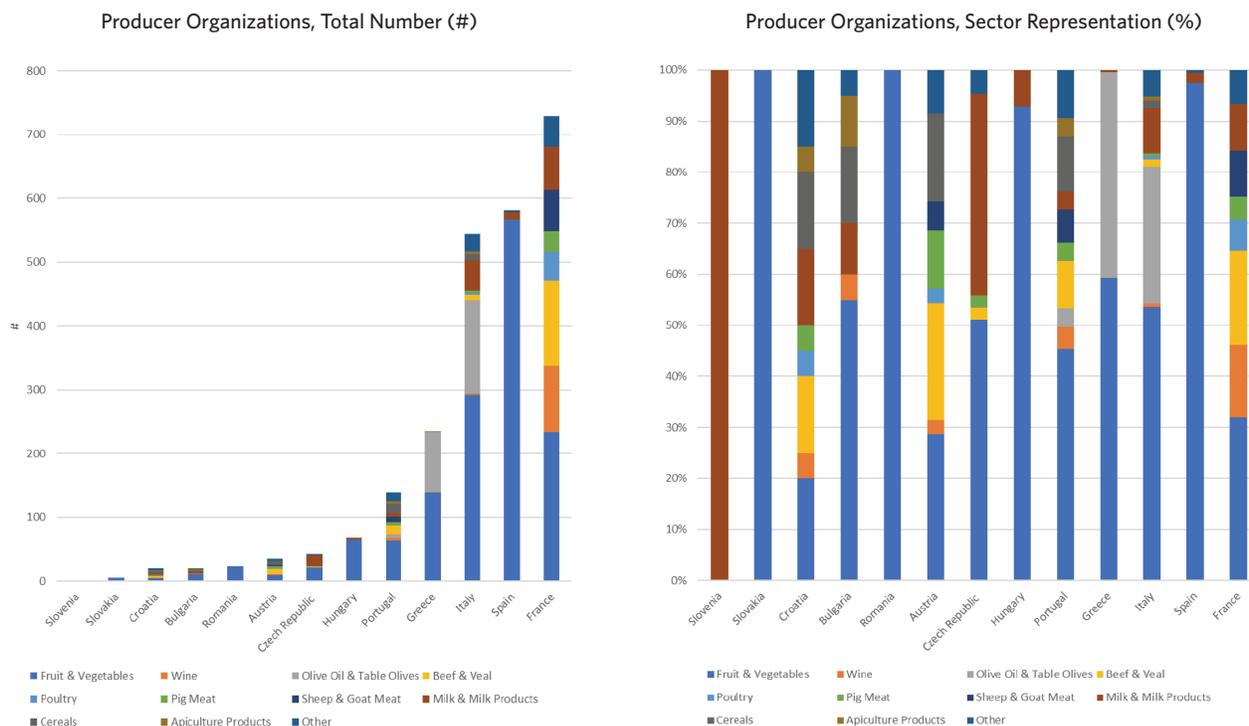
By facilitating members’ access to relevant knowledge, innovations, and technologies in particular, producer organizations can help their members better respond to market demand shifts, comply with stricter food safety and quality standards, adapt to increased competition from imports, and increase their productivity in a context of growing climate and environmental risks and impacts. The agri-food chain disruptions caused by the COVID-19 pandemic have further underscored the need to strengthen the efficiency, sustainability, and resilience of the agri-food sector in Croatia by improving the entrepreneurial capacity of producers, ensuring access to healthy and nutritious (fresh) food, and diversifying and strengthening market linkages between producers and buyers downstream the value chain.

But agricultural producers remain insufficiently organized in Croatia due to a variety of structural factors. According to the latest available data, only 2% of Croatia’s fruit and vegetable production and 0.04% of the country’s raw milk production in 2018 was marketed through producer organizations compared to an EU average of 47.3% and 25.4% respectively.¹ This is not surprising given the very small number of producer organizations in Croatia compared to other EU countries (Figure 1). This is partly due to the legacy from a centrally coordinated organization of producers during the socialist era and the subsequent abrupt transition to a market economy, which have had an adverse impact on producers’ level of trust towards collective organizations and their role in agri-food chains. In addition, the emergence of efficient and effective producer organizations in Croatia that demonstrate their potential benefits to unorganized producers has been constrained by existing power imbalances in Croatian agri-food markets, in particular the dominant role played by industrial processors and large wholesalers/distributors in the agri-food chain, which impose important barriers for entering and/or penetrating domestic and international markets. In fact, nearly two thirds (62%) of agri-food sector turnover are currently generated by only 1.3% of the agri-food enterprises in Croatia.² Additional barriers for producer organizations are imposed by the exist-

1 EC - Agri Adding Value Indicators (europa.eu)

2 European Commission; European Investment Bank (2020). FI Compass EAFRD: *Financial Needs in the Agriculture and Agri-Food Sectors in Croatia*. Available at <https://www.fi-compass.eu/publication/publications/financial-needs-agriculture-and-agri-food-sectors-croatia>

FIGURE 1. Total Number and Sector Representation of Recognized Producer Organizations in Croatia and other EU Member States



Source: World Bank calculations using DG AGRI Inventory of Recognized Producer Organizations in the EU's Agricultural Sector.⁶

Note: Data for Croatia shows the situation as of March 4, 2021. Data for other EU Member States shows the situation as of July 1, 2017.

ing business environment in Croatia. According to the World Bank's latest Enabling the Business of Agriculture Report (2019), commercially-oriented (for profit) producer organizations cannot be established in Croatia without a minimum capital requirement.³ However, the capitalization and access to finance of producer organizations is limited by their current non-profit legal status. When outreach efforts with the producer organizations started under the pilot project in May 2020, only one (1) out of the seventeen (17) producer organizations registered with the MoA was legally structured as a for-profit business (LLC) and four (4) as a cooperative, whereas the remaining producer organizations were constituted as either associations or non-profit organizations (a complete list of the current number of active

and registered POs is provided in Annex 1).⁴ Despite grant support provided by the MoA to new and existing agricultural producers and producer organizations (see Section 2), the recent financial needs assessment completed by the European Commission and the European Investment Bank (EIB) finds that access to finance in the Croatian agri-food sector is generally constrained by (i) a high lending risk perception from banks, unfavorable lending conditions in terms of cost and collateral requirements and uncertain expected returns on investments in comparison to the cost of capital, given the limited economic margins and the volatility of sales prices; and (ii) insufficient capacity for business development planning and maximizing the resource use of the companies themselves.⁵ Without access to finance

3 Country Scores - Enabling the Business of Agriculture (worldbank.org).

4 An overview of the current status and profile of existing producer organizations in Croatia (as of March 4, 2021) has been included in Annex 1.

5 European Commission; European Investment Bank (2020). FI Compass EAFRD: *Financial Needs in the Agriculture and Agri-Food Sectors in Croatia*. Available at <https://www.fi-compass.eu/publication/publications/financial-needs-agriculture-and-agri-food-sectors-croatia>

6 Inventory of recognised producer organisations in the EU's agricultural sector - Datasets (europa.eu).

for capital investments, however, agricultural producers and producer organizations cannot develop the type of value adding activities that would provide increased technical and economic incentives for setting up new or joining/expanding existing producer organizations.

An evidence-based, stakeholder-driven, and market-oriented approach is required to design and implement support measures that help accelerate the transformation of Croatian producer organizations.

Existing producer organizations in Croatia find themselves at a critical juncture. In addition to addressing the different challenges and constraints affecting the agri-food sector, highlighted above, producer organizations in Croatia have embarked on a major transition process to become competitive for-profit enterprises. In July 2020, the MoA published its new Rulebook on Producer Organizations, which stipulates that the “Association” as a non-profit organization is no longer an accepted legal form for a Producer Organization.⁷ This is a step in the right direction for developing successful, market-oriented producer organizations and a competitive agri-food sector in Croatia. In fact, a recent EU-wide study on producer organizations found that ensuring consistency between the legal form of a producer organization and the nature of its objectives, coupled with a capability to take consensual business decisions, plays a major role in the long-term success of the organization.⁸ Other key success factors for producer organizations identified in the study included (i) sufficient scale and homogeneity within the producer organization’s membership (in terms of size, age, and product range); (ii) the selection and professional development of adequate managerial and administrative staff; (iii) strong business organization and management systems that help resolve conflicts and build farmers trust in and loyalty to both the producer organization and their peers; (iv) an entrepreneurial culture focused on continuous improvement and innovation; and (v) the development of close and long-term partnerships with other operators in the agri-food chain.⁹ As part of an ongoing transformation process, the role of existing producer organizations in Croatia

will therefore have to shift from one that is mainly limited to helping members access public funds/resources, achieving cost savings through joint procurement of inputs and services, and sharing basic information towards one that is centered on building competitive advantages through differentiation in strategic market segments, managing business operations in an efficient, effective and transparent manner, actively recruiting new members in line with the producer organization’s mission and strategic objectives (especially younger producers who generally tend to be more collaborative than older producers), and closely managing relationships with both members and buyers so as to deliver products, services, and innovations that respond to their specific needs and expectations.

A successful transformation of Croatian producer organizations would be instrumental to achieving a number of strategic objectives and initiatives pursued by the Government of Croatia.

As part of the economic priorities identified in its Government Program for the period 2020-2024, the Government of Croatia (GoC) aims *inter alia* to increase the value of agricultural production by 30%, increase the number of producer organizations to 30, and build 20 regional cooling, storage and distribution centers for fruits and vegetables, all the while protecting the environment, transitioning towards clean energy, managing waste, and building the circular economy. In addition, under the economic component of the proposed draft of the National Recovery and Resilience Plan (NRRP), the GoC has established, in line with its strategic vision for the agri-food sector formulated in the proposed NARDS, a general objective to establish conditions for a more sustainable use of natural resources and more competitive agriculture. Key reform areas identified in the proposed NRRP to improve the use of natural resources and strengthen the food supply chain include *inter alia* (i) the establishment of a network of logistical infrastructure to strengthen the production chain in the fruit and vegetables sector; (ii) the digital transformation of agriculture; (iii) improvements in the food donation system; and (iv) land consolidation

7 The Rulebook prescribes that all producer organizations that are organized as an Association today transform into one of the accepted legal forms defined in the Rulebook—a cooperative, a limited liability company (LLC), or a joint stock company—within a period of 24 months.

8 European Commission (2019) *Study of the best ways for producer organisations to be formed, carry out their activities and be supported*. Directorate-General for Agriculture and Rural Development. Brussels.

9 Ibid.

and monitoring. Specific investments accompanying these reforms include *inter alia* (i) the construction and equipping of logistically distributed fruit and vegetables centers; (ii) smart agriculture; (iii) traceability system; and (iv) the infrastructural equipping of food banks and intermediaries in the food donation chain. Meanwhile, under the Integrated National Energy and Climate Plan for the period 2021-2030, the GoC also aims to establish collection and logistics centers for biomass and bio-refineries to develop the bioeconomy in rural areas. Finally, in the context of the ongoing preparation of the Territorial Strategy for Pannonian Croatia, rural value chains, skill development needs, machinery, and transportation are being assessed as potential intervention areas. Supporting the successful transformation of Croatian producer organizations into market-oriented players with strong connectivity and diversified market linkages to domestic and/or international agri-food chains could make important contributions to these different strategic objectives and initiatives. In particular, producer organizations could help advance the national and territorial development objectives and initiatives by (i) providing efficient and value-adding (cold chain) logistics infrastructure, equipment, and related support services to their member producers; (ii) facilitating the transfer of new knowledge and skills, best management practices, and innovative (digital) technologies that sustainably improve producers' productivity and build their resilience; and (iii) connecting producers to domestic and/or international distribution networks that enable access to new growth opportunities in strategic market segments.

2

Supporting Business Development Planning by Producer Organizations



The structure of this Guidance Note follows a stepwise approach to supporting producer organizations in the preparation of Business Development Plans (BDP), as a means for moving from the concept of organization to its operationalization. Annex 2 provides a detailed chronological overview of the different business development planning steps undertaken in the context of the pilot project and which inform the structure of this Guidance Note. First, the Note presents market trends and issues facing producer organizations at both the micro-level (see Section 3.1) and macro-level (see Section 3.2). Secondly, it ranks market-oriented producer organizations in Croatia with high development potential on the basis of transparent evaluation criteria (see Section 4.1). Thirdly, the “soft” organizational development needs of high potential producer organizations are reviewed from both a business organization and management as well as a knowledge, innovation, and technology perspective (see Section 4.2). In addition, models for designing and implementing “hard” capital investments in producer organizations’ production, aggregation, processing, distribution, and/or marketing assets are evaluated in light of international best practices regarding the development of “micro hubs” (see Section 4.3). Importantly, the potential role of producer organizations as so-called “micro hubs” is reviewed for both food and dairy products, which face different logistical and storage/cold chain challenges. Subsequently, Section 5 outlines the different steps for engaging producer organizations in the formulation of BDPs using the evidence-based and stakeholder-driven approach developed in Sections 3 and 4. Finally, Section

6 presents both specific actions and higher-level policy recommendations for supporting the formulation and implementation of the producer organizations' BDPs, including those centered on developing micro hubs, under the NRRP and future national CAP Strategic Plan.

The methodological formulation of long-term Business Development Plans with support from technical advisors can help both existing and aspiring producer organizations manage their individual growth and development trajectory.

Integrated Business Development Plans (BDPs) prepared with support from technical advisors and in line with the guidance provided in this note lay out, on the basis of detailed analyses of both domestic and international market trends and issues, producer organizations' medium-term business development strategies and implementation plans for responding to key challenges and opportunities affecting the market segments in which producers currently operate and the agri-food sector more broadly. Concretely, the BDPs help existing and aspiring producer organizations (i) align their medium-term (5 years) objectives with their long-term mission, goals, and strategic positioning in the market; (ii) identify and sequence specific investments, technical assistance, and working capital required to achieve their medium-term objectives; (iii) map out potential public and private funding sources; and (iv) monitor implementation progress towards strategic targets on the basis of standardized Key Performance Indicators (KPIs). The BDPs thus are a tool for existing and aspiring producer organizations to strategically engage a range of stakeholders in their proposed growth and development trajectory, including current and future members, government agencies, development banks, private financial institutions, companies/buyers in strategic market segments, research organizations,

technical advisors, and local communities. By doing so, the BDPs help producer organizations establish the most appropriate organizational/legal form for pursuing their long-term mission and goals, develop their entrepreneurial capacities for managing their organization as a business and implementing specific capital investments, and mobilize the (financial, technical, physical, human, natural, and social) resources required for the effective implementation of all their planned activities, which can support broader economic development in rural areas.¹⁰

Business Development Plans also provide a basis for policymakers to tailor the design of financial and technical support measures to the business development needs of Croatian producer organizations.

Under the Common Agricultural Policy's (CAP) previous programming period (2014-2020) and the current transition regulation (2021-2022), the principal financial support measures put in place by Croatia's Ministry of Agriculture (MoA) to directly support either the creation or development of producer organizations include (i) payments supporting sector interventions implemented under the Common Market Organization (CMO);¹¹ and (ii) rural development measures implemented under the Rural Development Program (RDP).¹² Under the ongoing reform of the CAP, the sectoral scope of the CMO in the EU, which is currently limited to fruits and vegetables, wine, hops, beekeeping, olive oil, and table olives, is expected to be expanded to cereals, livestock, and dairy. In addition, the reformed CAP is expected to strengthen support instruments aimed at addressing cross-cutting issues related to (i) access to finance (through Financial Instruments); (ii) agricultural knowledge, innovation, and technology (through AKIS Plans); and (iii) climate and environmental approaches

¹⁰ The development of a business plan is not sufficient to stimulate and support the formation and strengthening of aspiring POs. It is one element of the complex process of establishing producer organizations. Hence, this pilot provides guidance on business planning as means to support POs develop, but there are other factors that influence the emergence of more and strong POs.

¹¹ Sector interventions implemented under the previous programming period and the current transition regulation encompass the Operational Programmes in the Fruits and Vegetables, Wine, and Apiculture Sectors.

¹² Under Version 9.1 of Croatia's Rural Development Plan (2014-2020), measures targeting producer organizations encompass Measure 1.1. (Support for vocational training and skills acquisition), Measure 3.2 (Support for information and promotion activities implemented by groups of producers in the internal market), Measure 4.1 (Support for investments in agricultural holdings), Measure 4.2 (Support for investments in processing/marketing and/or development of agricultural products), Measure 9.1 (Setting up of producer groups and organizations in the agriculture and forestry sectors), Measure 16.1 (Support for the establishment and operation of operational groups of the EIP for agricultural productivity and sustainability), and Measure 16.4 (Support for horizontal and vertical co-operation among supply chain actors for the establishment and development of short supply chains and local markets, and for promotion activities in a local context relating to the development of short supply chains and local markets).

(through Enhanced Conditionality, Eco-schemes, and Agri-Environmental and Climate Measures). In the medium and long term, the planned activities and related resource requirements incorporated in future BDPs that are prepared in line with the guidance provided in this note would offer a blueprint for (i) aligning the design of financial support measures for producer organizations included in Croatia's future CAP Strategic Plan with the sustainable development needs of Croatian producer organizations; and (ii) moving the design of technical support platforms, networks, systems, and partnerships included in Croatia's AKIS Plan towards a more user-centered model. In the short term, future BDPs could help the MoA, Ministry of Regional Development and EU Funds (MRDEUF), county governments, and producer organizations identify specific investments that are eligible for grant support provided under the NRRP. By doing so, the BDPs would help the MoA with the effective targeting and implementation of national and EU support measures focused on transforming producer organizations and the broader agri-food system in Croatia. This is important not only from the perspective of inclusion of small and medium-sized agricultural producers into viable economic units (as producer organizations), improving their resilience through stronger and more diverse market linkages, as well as integrating climate and environmental concerns in their business development strategies and operations, but also in terms of improving competitive behavior within the agricultural sector and maximizing the potential that Croatia holds in developing its agri-food sector.

3

Analyzing Market Trends and Issues facing Producer Organizations in Croatia



Producer organizations' contribution to building a competitive, sustainable, and resilient agri-food sector critically depends on their capacity to respond efficiently to key domestic and international market trends and issues. Producer Organizations must understand the market segments and buyers/consumers they serve in order to tailor their activities and effectively respond to market demands and needs. Conducting a market appraisal is an essential first step to evaluate key trends and issues shaping domestic and international market demands and needs and it was carried out under the pilot. Importantly, trends and issues with respect to market demands and needs must be considered at both the micro-level and macro-level. *Micro-level* analyses focus on individual factors affecting decisions of producer organizations, in particular preferences of buyers in potential domestic and international market outlets/segments. On the other hand, *macro-level* analyses focus on general economic factors affecting decisions of producer organizations, in particular the size, growth potential, and competitive dynamic of the overall sector/industry in which the producer organization operates. Both dimensions must be considered in order to identify the key *Threats* (T) and *Opportunities* (O) in producer organization's operating environment.

3.1 Micro-Level Trends & Issues

Individual factors affecting decisions of producer organizations were analyzed from both demand and

supply perspective under the pilot project. Key questions addressed from the *demand perspective* included (i) how sourcing policies and processes of key buyers in strategic domestic and international market segment are currently organized; and (ii) how these sourcing policies and processes affect buyers' relationships with local producers and producer organizations. On the other hand, key questions addressed from the *supply perspective* included producer organizations' current capacity to (i) produce, aggregate, process, distribute, and/or market agri-food products; and (ii) organize and manage their business operations. Given that the COVID-19 crisis has affected the entire agri-food chain, questions evaluating the crisis' impact from both the demand and supply perspective were also integrated in the research and analysis completed under the pilot project.

3.1.1. Demand Perspective

A survey tool was developed and implemented to assess individual factors from a demand perspective. The preparation of a market (demand/supply) survey involves the following steps: (i) selection of geographic and product/value chain scope; (ii) design of the survey tool; (iii) selection of the type and number of market participants; (iv) implementation of the survey (i.e. dissemination of questionnaires, follow-up interviews etc.); (v) analysis of survey data and other market information; and (vi) preparation of a survey report with results, insights, and conclusions. Under the pilot project, a Demand Survey was completed that had a national scope because the existing marketing strategies of small and medium-sized producers and producer organizations in Croatia are mostly focused on the domestic market. Given their limited scale and levels of organization, most Croatian producers and producer organizations are currently unable to meet the minimum volume and quality standards required to access export markets. However, given the demand limitations in the domestic market, opportunities for entering and/or further penetrating export markets should be duly evaluated as part of market analyses conducted for producer organizations that have already

reached the minimum scale and level of organization required for accessing export markets. Furthermore, the Survey encompassed both "fresh/perishable" and "stockable" products and targeted key market participants/buyers in three (3) strategic market segments, including (i) supermarkets in the retail segment; (ii) hotels in the HoReCa segment; and (iii) schools in the public procurement/institutional segment.¹³ These segments were targeted because the domestic tourism sector provides producer organizations opportunities to "export" their products locally and gain visibility with potential customers in future export markets. Although producer organizations' bargaining power vis-a-vis supermarkets that form part of large, international retail chains likely remain limited, independent and regional/local retail chains may offer producer organizations more leeway. Schools were targeted specifically in the public procurement/institutional segments because the MoA is mandated to support the implementation of school schemes under the CAP that improve students' access to food. The questionnaire used for the Demand Survey is included in Annex 3. The questionnaire was disseminated to four (4) organizations representing the HoReCa segments, five (5) retailers, and four (4) county governments (Sisačko-moslavačka County, Osječko-baranjska County, Zagrebačka County, and Grad Zagreb). These counties were prioritized under the pilot project as they currently house the largest producer organizations (by turnover), which could serve as potential "anchors" for the development of future micro hubs, including those potentially serving buyers in the public procurement/institutional segment (see Section 4.1).¹⁴ The county governments subsequently disseminated the survey to a total of 40 schools, including kindergartens, elementary schools, and high schools. Ultimately, the Demand Survey was completed by two (2) HoReCa organizations (OMH - Association of Small Boutique hotels, Adriatic Luxury Hotels - Dubrovnik), three (3) retail chains (Spar, NTL, Metro), and twenty-nine (29) schools (17 kindergartens, 8 elementary schools, and 3 high schools). This section provides an overview of the results of the Demand Survey that was completed under the pilot project.

13 The survey initially covered hospitals as well, but due to the low response rate (only one completed the survey) this buyer type was excluded from the final report.

14 (1) PO *Posavina i Moslavina* (Cereals) - US\$2.72 Mln - Sisačko-moslavačka County; (2) PO *Udruga Brezovica* (F&V) - US\$1.28 Mln - City of Zagreb; (3) PO *Zagrebački voćnjaci* (F&V) - US\$0.9 Mln - Zagrebačka County (Note: PO *Zagrebački voćnjaci* has dissolved since the completion of the Supply Survey); (4) PO *Ecogos* (F&V) - US\$0.38 Mln - Osječko Baranjska County.

a) Retail (Supermarkets) Segment

Sourcing Policies and Processes. Most retail chains who participated in the Demand Survey have centralized their sourcing policies, but processes tend to differ between perishables and non-perishables. Retailers negotiate mostly long-term contracts with their suppliers. Key factors guiding sourcing decisions across retail chains include (i) price-quality ratio; (ii) quantity; (iii) certification; (iv) packaging; and (v) origin/location of the product. Most products sourced by retailers are non-perishables. Individual retail chains may source between 8 and 10.5 thousand tons of perishable products (primarily fresh fruit and vegetables, meat, milk) per month, whereas the amount of non-perishables (primarily oil, flour, and sugar) can range between 6.8 and 13 thousand tons. Central warehouses managed by retailers tend to store mainly non-perishables, while storage space dedicated to perishables is minimized by maximizing direct distribution to individual retail stores. While prices for perishables are adjusted daily through daily orders, prices for non-perishables are adjusted annually as part of the annual contracting process. Payments are made within 30-60 days upon product delivery. Retail chains generally use both direct (e-mail) communication and their internal information systems, including on-line tenders, to manage their relationship with suppliers. Retail chains generally have no interest in using external digital marketplace platforms and manage their own internal traceability systems.

Relationships/Partnerships with Local Producers. Most retail chains currently source most (perishable & non-perishable) products domestically both directly from local producers and from intermediaries (wholesalers/distributors). Products from local producers are mainly sourced in bulk. A part of these bulk products is used and marketed under retailers' private brands. In general, retailers prefer to source directly from domestic producers when possible. In the case of perishable products, however, local sourcing is largely contingent on the level of organization of producers. In general, retailers find the level of organization insufficient, in particular among fruit and vegetable producers. Despite a growing interest in domestic sourcing in the wake of the COVID-19 pandemic, the most important constraints to increasing sourcing of (especially) perishable prod-

ucts from local producers identified by retailers are the inadequate price-quality ratio, limited or varying quantities (especially of fresh fruit, vegetables, and meat), and (to a lesser extent) certification levels currently offered by local producers who remain insufficiently organized. The development of well-functioning producer organizations could facilitate local sourcing by retailers primarily by enabling (i) greater transparency regarding available product volumes and quality; and (ii) improved coordination between retailers and suppliers to respond to market trends.

Key COVID-19 Impacts. The COVID-19 pandemic increased consumer demand for non-perishables (especially flour, oil, yeast) and relatively low-cost perishable products and proteins such as chicken meat. Negative impacts on the retail sector took the form of disruptions and delays in the delivery of imported goods, increased input prices, and reduced in-store traffic/sales due to public health restrictions. These impacts have increased retailers' interest in local sourcing.

b) HoReCa (Hotels) Segment

Sourcing Policies and Processes. Independent (boutique) hotels source products individually, whereas hotel groups implement centralized sourcing policies. Long-term contracts are not negotiated with suppliers. For both perishable and non-perishable goods, procurement is done frequently and warehousing is kept to a minimum. The price-quality ratio is a key factor guiding sourcing decisions of both independent hotels and hotel groups. While timely delivery is also a key factor for independent hotels, product volumes is more of a factor for hotel groups. Monthly volumes of perishable products (primarily F&V, yoghurt, cheese, fresh meat and fish) for a hotel group can average around 45 tons, while the monthly volumes of non-perishables (primarily canned F&V, pasta products, rice, frozen fish and meat) can average 98 tons. Payments are made within 15-30 days upon product delivery. Both independent hotels and hotel groups use direct (e-mail) communication to manage their relationship with suppliers. However, only hotel groups have internal information systems/software to support their procurement processes and manage internal traceability systems. Meanwhile, only independent hotels would be interested in using external digital marketplace platforms.

Relationships/Partnerships with Local Producers.

Local products represent only a negligible share of the products sourced by both independent hotels and hotel groups. Both currently source most of their products through intermediaries (wholesalers/distributors), with most products being imported. Only hotel groups source a small part directly from producers (+/- 2,500 tons annually of mostly F&V, milk, and meat products). The unattractive/inadequate price-quality ratio is the most important deterrent to local sourcing for both independent hotels and hotel groups. In addition, a lack of information regarding available products and product volumes is identified as a constraint by independent hotels, whereas insufficient product volumes constitute a significant barrier for hotel groups. However, both independent hotels and hotel groups demonstrate an interest in sourcing more local products to promote local gastronomy. Centralizing information regarding local product offerings, improving the organization of local producers, and ensuring efficient distribution would facilitate increased local sourcing by independent hotels. On the other hand, sufficient product volumes, more attractive price-quality ratio, and offerings that respond to market demand in a timely manner would further facilitate the process at the level of hotel groups.

Key COVID-19 Impacts. The COVID-19 pandemic has had a major impact on the financial performance of Croatia's hotels. According to Croatia's financial agency (FINA), the combined turnover of companies in the tourism and hospitality sectors in Croatia fell by 45.1% year-on-year in the first nine months of 2020.¹⁵ Through the demand survey, independent hotels reported a decline of up to 70% in turnover in addition to increased operating costs and shortages in a number of products as the main principal impacts of the COVID-19 pandemic.

c) Public Procurement (Schools) Segment

Sourcing Policies and Processes. Schools generally procure in bulk relatively small volumes of both perishable

and non-perishable products. While overall volumes procured by schools are low, there are wide ranges in the monthly volumes sourced by different categories of schools.¹⁶ Schools negotiate long-term (1 year) contracts with their suppliers. Products tend to be procured centrally, on a weekly basis, and (on-site) storage is kept to a minimum. In the case of high schools, however, procurement is conducted in a decentralized manner, at least once and sometimes twice a week, and they do not have any (on-site) storage. In the case of high schools, products sourced are limited to fruits since they generally do not offer school lunches. Payments are made either by cash upon delivery or within 30-60 days after delivery. Price and food safety are the most important factors guiding sourcing decisions by schools, although decisions by high schools are also guided by available volumes of fruit. Orders are placed either by phone or by e-mail and most schools use internal traceability systems. Interest in using external digital marketplace platforms is either mixed (in the case of kindergartens and elementary schools) or non-existent (in the case of high schools).

Relationships/Partnerships with Local Producers.

Sourcing is typically done through intermediaries, although a number of schools also source mainly perishable products directly from (large) domestic producers (e.g. milk/meat from *Vindija*, vegetables from *Vidovec*, and chicken products from *Zelina*). Procurement of local products by schools is minimal mainly due to their higher cost, insufficient volumes, and/or inconsistent quality (food safety). However, most schools would be interested in sourcing more from local producers if (i) cost competitiveness was improved; (ii) quality (food safety) was assured/certification declared; (iii) information regarding local product offerings was centralized; (iv) the volume and range of product offerings expanded; and (v) food distribution/delivery was more efficient.

Key COVID-19 Impacts. While some kindergartens closed and others experienced food supply disruptions,

¹⁵ Croatia approves 1.5 bln kuna (198 mln euro) Covid-19 support for tourism, sport cos (seenews.com).

¹⁶ Monthly volumes of perishable products procured by individual *kindergartens* can range between 150-1,500 kg of F&V, 50-500 l of milk, and 20-200 kg of meat, whereas the volumes of non-perishable products can range between 25-75 kg of flour, 15-120 l of oil, 15-30 kg of cornflakes, 20-120 kg of pasta, 10-20 kg of beans, and 13-130 kg of sugar. Monthly volumes of perishable products procured by individual *elementary schools* can range between 130-350 kg of F&V, 80-330 l of milk, and 25-100 kg of meat, whereas the volumes of non-perishable products can range between 20-60 kg of flour, 10-40 l of oil, 20-30 kg of pasta, 10-25 kg of beans, and 20-35 kg of sugar. Monthly volumes of fruit procured by individual *high schools* range between 170-480 kg.

for most kindergartens the impact of the COVID-19 pandemic's first lockdown period has been minimal. On the other hand, as elementary schools were partially closed, their sourcing activities were limited during the COVID-19 pandemic's first lockdown period. As high schools were fully closed, there were no sourcing activities undertaken during the COVID-19 pandemic's first lockdown period.

3.1.2. Supply Perspective

A survey tool was developed and implemented to assess individual factors from a supply perspective.

Under the pilot project, a Supply Survey was completed that targeted all seventeen (17) producer organizations in Croatia that are officially registered with the Ministry of Agriculture at the time of initiation under this pilot in May 2020. The questionnaire used for the Supply Survey is included in Annex 4. Ultimately, twelve (12) producer organizations completed the questionnaire including three (3) producer organizations from the fruit and vegetables (F&V) sector (PO *Ecogos*, PO *Zagrebački voćnjaci*, PO *Udruga Brezovica*), two (2) producer organizations from the dairy sector (PO *Drava - Sava*, PO *Udruga proizvođača mlijeka Međimurja*), four (4) producer organizations from the beef and pig meat sector (PO *PZ Baby Beef*, PO *Savez uzgajivača simentalskog goveda ZG*, PO *Panonia Beef*, PO *PZ Slavonski svinjogojac*), two (2) producer organizations from the industrial crops sector (PO *Posavina i Moslavina*, PO *Opz Otok*), and one (1) producer organization from the wine sector (PO *Škrlet*). This section provides an overview of the results of the Supply Survey that was completed under the pilot project. Producer organizations that did not complete the survey include PO *PZ UPO CENTAR - SIMENTALAC* (milk and dairy products), PO *DRAVA-SAVA* (milk and dairy products), PO *MLIJEČNI PUT HRVATSKE* (milk and dairy products), PO *GOMOLAVA JABUKA* (fruit and vegetables), PO *Udruga Domaći brojlerski uzgajivači* (poultry), PO *Klaster pčelara "Podravina" Đurđevac* (beekeeping).

a) Production, Aggregation, Processing, Distribution, and Marketing

Production Structure and Scale. The current structure of producer organizations in Croatia is biased towards livestock and dairy production. Of the total of twelve

(12) producer organizations that completed the questionnaire, half (6) are engaged in the animal sector. The other remaining sectors include Fruit and Vegetables (3), Industrial Crops (2), and Wine (1).

Capital Assets. Only POs involved in crop production (i.e. wine, F&V, and industrial crops) currently use certain capital assets (e.g. warehouse, vehicles, packaging lines etc.) that are either owned by individual members or rented from third parties and which support value adding activities such as transportation, quality sorting/management, cleaning, (cold) storage, (basic) processing, and packaging. On the other hand, POs have generally good access to Croatia's road transportation networks.

Relationships/Partnerships with Buyers. The relationships between POs and buyers are generally defined by formal contracts that stipulate product quality and volume requirements. In certain sub-sectors, intermediaries use private standards to manage their contractual relationships with POs. This includes International Sustainability & Carbon Certification (ISCC) and genetically modified organisms (GMO)-free standards in the industrial crop sub-sector. On the other hand, GlobalGAP, Organic, and International Featured Standard (IFS) have been introduced in the F&V sub-sector. Payments are typically made within 30-60 days upon delivery of the product. None of the POs market their products directly to consumers, and most rely on intermediaries in the value chain. Key intermediaries include wholesalers and processors in domestic markets and importers in export markets. Only F&V POs market final products to consumers via domestic retailers. With the exception of one F&V PO, none of the surveyed POs have established linkages with the HoReCa segment.

Key COVID-19 Impacts. The COVID-19 pandemic has had a differentiated impact on Croatia's POs. The disruption in the production and marketing of products has been minimal for industrial crop POs, which have a relative diverse set of marketing outlets (animal feed producers, livestock operations, wholesalers, processors, etc.). In addition, the impact has been limited on F&V POs since most of them supply the retail sector, which has been less affected by COVID-19-related restrictions than the HoReCa segment. On the other hand, livestock and, especially, dairy POs experienced negative impacts

in the form of higher production costs, lower product prices due to a declining demand for higher value products, and export restrictions on live animals. The dairy POs have yet to formulate specific actions in response to these negative trends. Lastly, reduced demand from the HoReCa segment negatively impacted the sales volume of the Wine PO.

b) Business Organization & Management

Membership. Producer organizations who participated in the assessment have a relatively small number of members. On average, producer organizations have 34 members with the smallest producer organization representing only 7 members and the largest producer organization representing 195 members. By comparison, 38% of recognized producer organizations across the EU have less than 100 members, while 90% have less than 1000 members.¹⁷ Producer organizations in the animal sector are primarily used as a vehicle to jointly procure inputs, coordinate sales transactions, and disseminate/exchange basic information with members (e.g. inputs, market developments, production methods, etc.). None of the POs offer fee-based services as a key part of their business model. Most of the services provided by the POs to their members are free of charge. Transportation of products is generally outsourced by the POs and amounts to 5-8% of the total costs incurred by the organizations. All of the POs see potential to increase their service offerings to their members. With the exception of the planting of fruit tree crops, no centralized production planning to ensure year-round activities and offer matches market demands. Only F&V POs tend to monitor the production process of individual members.

Marketing. Members of POs in Croatia mostly market their products independently, not through the PO and by using intermediaries. Only five (5) POs (PO *Udruga Brezovica*, PO *Zagrebački voćnjaci*, PO *Posavina i Moslavina*, PO *Savez uzgajivača simentalskog goveda ZG*, PO *Udruga proizvođača mlijeka Međimurja*) constitute their members' primary vehicle for marketing their products. Meanwhile, most POs do not buy inputs outside their membership to optimize the use of their available assets. As a result, most POs, except in the F&V

sub-sector, struggle to match their supply with demand in strategic market segments, including the Retail, HoReCa, and the Public Procurement segments. With the exception of the Wine PO and one F&V PO, Croatian POs currently sell mainly unbranded products in bulk to buyers.

Money. Annual turnover of Croatian POs remains low as revenues of members' core business are only partially generated through the producer organization. Most revenue generating POs have an annual turnover between 6 and 8 million Kuna (+/- EUR 790,000 - EUR 1 million). The largest POs by turnover have an annual turnover between 15 and HRK 19.6 million (+/- EUR 2 million - EUR 2,6 million).

Management. Most POs who participated in the survey (6) are organized as an association. Only one is currently structured as a business (LLC). The remaining POs are structured as a "cooperative" (4) or "non-profit" (1). A majority of POs have either no human resources at their disposal (3) or only 1 employee (4). No producer organization has more than 6 employees. Use of (digital) technology tools is largely absent.

3.2 Macro-Level Trends & Issues

General economic factors affecting the sectors/industries in which producer organizations operate must be analyzed from the perspective of the entire agri-food chain. General economic factors affect production, processing, trade and consumption trends and issues along domestic and international agri-food chains. Key macro-level questions to be analyzed from the *production perspective* include current production structure (number, size, and type of producers), volumes, yields, and prices. On the other hand, key questions to be analyzed from the *processing perspective* focus on the industry structure and competitive dynamics in domestic and/or international markets, while questions to be analyzed from the *trade perspective* include the volume, value and origins/destinations of different types of agri-food imports and exports. Finally, key questions to be analyzed from the *consumption perspective* include per capita consumption volumes, expenditure levels, and

¹⁷ European Commission (2019) *Study of the best ways for producer organisations to be formed, carry out their activities and be supported*. Directorate-General for Agriculture and Rural Development. Brussels.

uses of different types of agri-food products. An example of different macro-level trends and issues affecting the dairy sector in Croatia has been included in Box 1 below.

Both national and international public databases and reports can be consulted to assess general economic factors affecting decisions of producer organizations.

A range of data sources that could be consulted for analyzing macro-level trends and issues facing producer organizations include:

- **Production:** Croatian Bureau of Statistics, Eurostat, EU Short- and Medium-Term Outlooks for Agricultural Markets, EU Market Observatories (milk, meat, sugar, crops, fruit and vegetables, wine), FAOSTAT data on production, OECD-FAO Agricultural Outlook, World Bank, value chain analysis by research institutions and international organizations, agricultural sector reviews by international organizations
- **Processing:** Croatian Bureau of Statistics, Chambers of Commerce, register of enterprises, enterprise surveys, Eurostat (Structural Business Statistics), FoodDrinkEurope, UNIDO, FAOSTAT data on processing
- **Trade:** Eurostat (Comext), EU Short- and Medium-Term Outlooks for Agricultural Markets, UN Comtrade, WITS, FAOSTAT data on trade, World Bank, WB Logistics Performance Index
- **Investment:** FAOSTAT data on investment, Word Bank, UNCTAD
- **Consumption:** EU Short- and Medium-Term Outlooks for Agricultural Markets, Croatian Bureau of Statistics, Chambers of Commerce, Eurobarometer, FoodDrinkEurope, World Health Organization, market research reports

BOX 1. Example of Macro Trends and Issues affecting the Croatian Dairy Market

Production. The number of farms, the number of milking cows and the output of the dairy sector in Croatia has been declining over the years, whereas the milk production in the EU is growing. Over the past decade (2008–2018) total annual milk production declined approximately 25% to around 600,000 tons. Many farmers have ceased production due to age, lack of succession and lack of possibilities to scale up to economically viable units. It is estimated that around 75% of the total milk production is delivered to the processors. The remaining 25% of the production is either sold directly as raw milk to local consumers or is used for household consumption and feeding calves on the farm. There were less than 5,000 milk suppliers in 2018, about 1,200 (20%) delivered over 80% of the domestic milk processed (380,000 tons), while the remaining 3,700 dairy farmers delivered 80,000 tons of domestic milk. Although the dairy farm structure is dominated by smaller farms with less than 10 cows, most of Croatia's output comes from farms with more than 50 cows. The total number of dairy cows is estimated at 130,000 with an average annual production of 4,600 kg per cow. This is significantly lower than the EU average of 7,280 kg per dairy cow. The dynamics of farm gate price for milk is in line with EU market dynamics, although at a 3,5% lower level. Over the past 2 years, the monthly average EU farm gate price for milk fluctuated between EUR 32.93/100 kg and EUR 36.21/100 kg (actual fat and protein content, excl. VAT).

Processing. The Croatian dairy sector has a well-organized basic structure of milk storage and collection, as milk processors have supported investments in milk cooling facilities on the farm of mostly larger livestock operations, whereas small farms that do not have access to the same cold chain logistic infrastructure. Dairy farming provides a year-round cash flow to these larger operations through the sales of milk to the processors who generally have a long-term relation with supplying farmers. The dairy processing industry is highly consolidated, with approximately 75% of the delivered raw milk in Croatia being processed by the 2 largest companies, Dukat and Vindija. 10 processors cover more than 95% of the raw milk market. Processors operate mainly on a 'one on one' basis with individual farms and with Producer Organizations.

Trade. Only 50% of the raw milk sourced by the Croatian dairy sector is sourced locally (from domestic producers), the lowest in the EU. Annually between 50,000 – 100,000 tons of raw milk is imported by the processing industry (mainly from Slovenia, Hungary and Slovakia) and around 40,000 tons is imported as processed product, mainly cheese and packed milk.

Consumption. The per capita annual consumption of milk and milk products is estimated at approximately 230 kg milk equivalent. Fresh milk consumption in Croatia shows a downward trend, whereas the consumption of other milk products and especially added value products is increasing.

4

Assessing the Development Needs of Producer Organizations in Croatia



Producer Organizations' development needs must be assessed from both a governance and asset management perspective in order to inform future business development plan activities.

Public financial support measures have been used to incentivize the process of unifying producers into forming producer organizations. This approach, however, has brought little success to the consolidation of these organizations into strong economic production units that attract a growing number of producers, suggesting that financial incentives to organize producers alone are not sufficient to develop revenue generating (for associations) or profit-maximizing (for business) activities in the context of competitive markets. International experience suggests that in addition to access to financial incentives provided under different public support measures, successful producer organizations attract new producers/members by providing them sufficient (i) economic incentives, especially increased bargaining power and access to new, higher value market segments; (ii) social incentives, especially governance structures that ensure participatory, transparent, and accountable business decision-making processes as well as effective conflict resolutions mechanisms; and (iii) technical incentives, especially access to market information/business intelligence, value adding infrastructure/equipment, and productivity enhancing knowledge, innovations, and technologies.¹⁸ In other words, the successful constitution and growth of a pro-

¹⁸ European Commission (2019) *Study of the best ways for producer organisations to be formed, carry out their activities and be supported*. Directorate-General for Agriculture and Rural Development. Brussels.

ducer organization has not been the result of public support measures, but rather the means for a group of producers to achieve broader economic, social, and technical objectives in a competitive market environment. In this context, evidence-based, stakeholder-driven, and market-oriented business development planning is critical for success in the long-term. As part of this planning process, a comprehensive assessment of both the organizational development and asset management/capital investment needs of producer organizations is preliminary to defining the scope of required development support and the identification of specific investment projects. Concretely, organizational development needs refer to the “soft” structures, policies, processes, standards, and systems that guide producer organizations’ business organization and management as well as their use of knowledge, innovation, and technology. On the other hand, asset management/capital investment needs cover the “hard” investments in value adding production, aggregation, processing, marketing, and/or distribution infrastructure and equipment owned and/or managed by the producer organizations on behalf of their members. Both perspectives must be considered to evaluate key *Strengths* (S) and *Weaknesses* (W) in producer organizations’ current entrepreneurial capacities.

4.1 Identifying High Potential Producer Organizations

High potential producer organizations must first be identified that can serve as key supply-side “anchors” for buyers in strategic market segments of agri-food value chains. The data and information collected using the Supply Survey are used to rapidly assess the development potential of existing producer organizations. The rapid assessment is typically implemented on the basis of objective evaluation criteria. Annex 5 presents both the evaluation criteria used and scores provided as part of the rapid assessment under the pilot project. Importantly, from the total number of 12 producer organizations surveyed in Croatia, only eight (8) market-oriented producer organizations (i.e. producer organizations whose members implement joint sales and marketing activities either partially, primarily, or fully through the producer organizations) were scored as having high potential under the pilot project. These include PO *Udruga proizvođača mlijeka Međimurja*,

PO *PZ Baby Beef*, PO *Savez uzgajivača simentalskog goveda* (SUSG), PO *Posavina i Moslavina*, PO *Opz Otok*, PO *Ecogos*, PO *Udruga Brezovica*, and PO *Škrlet*. The remaining producer organizations were excluded since their responses to the Supply Survey showed that their role is currently limited to the dissemination/exchange of information to members and enabling the joint procurement of inputs (PO *Drava – Sava*, PO *Panonia Beef*, PO *PZ Slavonski svinjogojac*) or they were removed from the MoA register (PO *Zagrebački voćnjaci*). Their existing business models were thus insufficiently aligned with the value chain development objectives pursued under the pilot project.

4.1.1. Selecting and Weighing Evaluation Criteria

A limited set of evaluation criteria was used to rapidly assess the potential of existing producer organizations to serve as key supply-side “anchors”. The evaluation criteria used under the pilot project represent a sub-set of those covered by the international assessment tool that was used under the pilot project to conduct a comprehensive assessment of producer organizations’ existing business organization and management capacity (see Section 4.2.1.). In particular, the evaluation criteria shortlisted for the identification of high potential producer organizations included producer organizations’ current (i) membership size; (ii) services provided to members; (iii) collective sales and marketing arrangements; (iv) specialized employees; (v) brand presence; (vi) turnover; (vii) accounting systems; (viii) flexibility for scale up provided by their legal status; (ix) leadership dynamism; and (x) vision/business plan. Weights were also assigned to each of these criteria to reflect their relative importance in light of the lessons learned from international development experiences.

4.1.2. Scoring Producer Organizations against the Weighted Evaluation Criteria

The total weighted scores obtained by producer organizations enabled their ranking by their development potential. Annex 5 presents the total weighted scores obtained by each Producer Organization. Table 1 below ranks the development potential of the eight (8) producer organizations with existing collective marketing arrangements in Croatia on the basis of their total weighted scores.

TABLE 1. Ranking the Development Potential of Current Producer Organizations

Producer Organization	Total Weighted Score
PO <i>Udruga Brezovica</i> (Fruit & Vegetables)	116
PO <i>Posavina i Moslavina</i> (Cereals)	96
PO <i>Savez Uzgajivaca Simentalskog Goveda</i> (Livestock)	94
PO <i>Udruga Proizvodac a Mlijeka Medimurja</i> (Dairy)	93
PO <i>Ecogos</i> (Fruit & Vegetables)	87
PO <i>PZ Baby Beef</i> (Livestock)	78
PO <i>OPZ Otok</i> (Cereals)	69
PO <i>Škrlet</i> (Wine)	59

4.2 Assessing Organizational Development Needs

Organizational development needs were assessed from both a business organization and management perspective as well as a knowledge, innovation, and technology perspective. The three (3) producer organizations that achieved the highest total weighted scores in terms of their development potential (see Table 1) were selected for an in-depth assessment of their specific organizational development needs under the pilot project. They include PO *Udruga Brezovica* in the fruit and vegetables sector, PO *Posavina i Moslavina* in the cereals sector, and PO *Savez uzgajivaca simentalskog goveda* in the livestock sector. All three selected producer organizations are constituted as associations. The assessments considered aspects related to the producer organizations' (i) business organization and management; and (ii) knowledge, innovation, and technology systems.

4.2.1. Business Organization and Management

International assessment tools were used to assess producer organizations' existing business organization

and management capacity and needs. Development needs of producer organizations can be evaluated using a range of standardized assessment tools (see Figure 2 below). The three (3) producer organizations selected under the pilot project were assessed using the ACDI/VOCA's "M4" Assessment tool (<https://www.acdivoca.org/what-we-do/tools/m4/>). This tool was selected mainly because it (i) enables producer organizations to self-assess the strengths and weaknesses of their existing business organization and management capacities - thus promoting improved ownership of their development needs/agenda; (ii) is user friendly, and (iii) is available free of charge.

International assessment tools help evaluate and benchmark the performance of producer organizations in a standardized manner. The assessment tool was applied to the three (3) selected producer organizations through (2-3 hour) interviews with representatives of each producer organizations. Annex 6 provides a comparative analysis of the individual assessment results. The main findings of the comparative analysis are summarized below.

Membership. The three selected producer organizations perform well in terms of managing relationships with their members, in particular in terms of their outreach activities with members, monitoring of members' participation levels, and collection of membership fees. However, there remains room for improvement in terms of their efforts to recruit new members and provide (fee-based) services that address the needs of members at risk.

Marketing. PO *Udruga Brezovica* and PO *Posavina i Moslavina* perform well in terms of their marketing capacity, in particular as regards the level of participation of their members, their contracts with buyers, and the number of collective sales conducted by the producer organization. However, PO *Savez uzgajivaca simentalskog goveda* displays important marketing capacity constraints overall. The producer organizations have limited storage capacities.

Money. Although the selected producer organizations have basic financial management systems in place (e.g. bank accounts, balance sheets, accounting procedures), there remains room for further strengthening the pro-

FIGURE 2. Overview of Producer Group Curricula and Assessment Tools

	Curricula				Tools		
	ALP	EDC	ABC	SMFM	M4	SCOPE Basic	SCOPE Pro
Capacity building	✓	✓	✓	✓	✓	✓	✓
Benchmarking	n/a	n/a	n/a	n/a		✓	✓
Market system analysis			✓	✓		✓	✓
M&E	✓	✓	✓	✓	✓	✓	✓
Validation of CSR program	n/a	n/a	n/a	n/a		✓	✓
Facilitate access to markets	✓	✓	✓	✓	✓	✓	✓
Facilitate access to finance	✓		✓	✓	✓	✓	✓
Self-assessment of progress	n/a	n/a	n/a	n/a	✓		

Source: AMEA.

ducer organizations' internal accounting capacity and annual audit processes.

Management. The selected producer organizations have a paid manager, board, and supervisory committee in place. However, their management capacity could be strengthened further, especially with respect to the implementation of standard operating procedures.

4.2.2. Knowledge, Innovation, and Technology

A survey tool was developed and implemented to assess producer organizations' existing knowledge, innovation, and technology capacity and needs. The questionnaire used for the Knowledge, Innovation, and Technology Survey is included in Annex 7. The questionnaire was disseminated to members of the eight (8) market-oriented producer organizations in Croatia by the leadership of each producer organization. A total number of 32 questionnaires were completed as part of the survey process.¹⁹ While the

survey was not based on a representative sample, a number of trends and issues with respect to producer organizations' current capacity and needs related to agricultural knowledge, innovation, and technology emerge from the findings. The detailed survey results are included in Annex 8, with the main findings summarized below.

Information and Communication. Other members of the producer organization (21%), the internet (18%), and input suppliers (15%) represent the most important sources of information guiding respondents' production decisions. Together they account for more than 50% of potential sources. Radio (3%) and TV (5%) are the least important sources, whereas public advisory services only account for 11%. Similarly, the most important sources of information guiding respondents' marketing decisions include other members of the producer organization (24%), other producers outside the producer organization (18%), buyers (17%), and the internet (17%). On the other hand, public advisory services represent only 4% of all the options.

¹⁹ The Knowledge, Innovation, and Technology Survey took place shortly after the devastating earthquakes hit the Sisak area in December 2020 and were significantly felt throughout continental Croatia where all eight (8) producer organizations are located, which may have influenced both the response rate and responses.

Training & Knowledge Exchange. Participation levels of respondents in training programs is low. 61% of respondents has not participated in any form of training over the past year (2019). Those who did participate did so mainly in seminars provided by public advisory services, in particular seminars covering subsidy/support programs and organic production. However, there is a lot of knowledge exchange between producers, especially those that are member of the same producer organization. Producers are generally satisfied with their knowledge related to production and marketing. However, they identify a number of key areas for improvement, in particular business management (including bookkeeping), sales and marketing, use of new inputs/technologies, soft business skills, and technical knowledge in production. They would welcome a greater field presence of advisors, more lectures/trainings, and demonstrations of innovations and good production practices to close these knowledge gaps.

Advisory Services. 76% of all respondents use public advisory services (the same usage level as private consultants) and the average rating of public advisory services is relatively positive: 3.2 on a scale from 1-5 (compared to 3.3 for private advisory services). In particular, respondents value the good seasonal lectures, provision of administrative information, and expertise of specific individual advisors. On the other hand, key areas for improvement at the level of public advisory services include the limited accessibility of public advisors who are mainly occupied with administrative activities, the lack of specialized knowledge related to new technologies and innovations, and overall lack of personnel. With regard to private advisory services, respondents value their high professionalism, specialized, and proactive approach, but the cost of private advisory services is considered high.

Research, Technology, and Innovation. Respondents are generally satisfied with the yields/return in production generated by the technologies they use. At the same time, they express an interest in introducing new farm equipment, inputs, and technology solutions, including digital technologies. Especially fruit, vegetable and wine

producers express a need for introducing new technologies and more innovative solutions in comparison to dairy, beef and crop producers. At the same time, these producers believe public advisory services do not have the specialized knowledge needed to support them in the process. Interestingly, 75% of respondents has not implemented any innovations in the last 2 years and the innovations of those who have were focused mainly on farm equipment. Key constraints to implementing innovations identified by respondents include high cost, insufficient financial resources, frequent policy changes, and heavy administrative burdens.

Agri-Environment and Climate. Agri-environmental and climate change-related issues were hardly elevated by respondents. In general, a conventional approach (productivism) to agricultural development seems to prevail. The only green agenda items in which respondents expressed an interest in the context of their knowledge, innovation, and/or technology needs included renewable energy, precision agriculture, and organic production.

4.3 Assessing Possible Capital Investment Models

4.3.1. Transforming Producer Organizations into Multi-Functional Micro Hubs

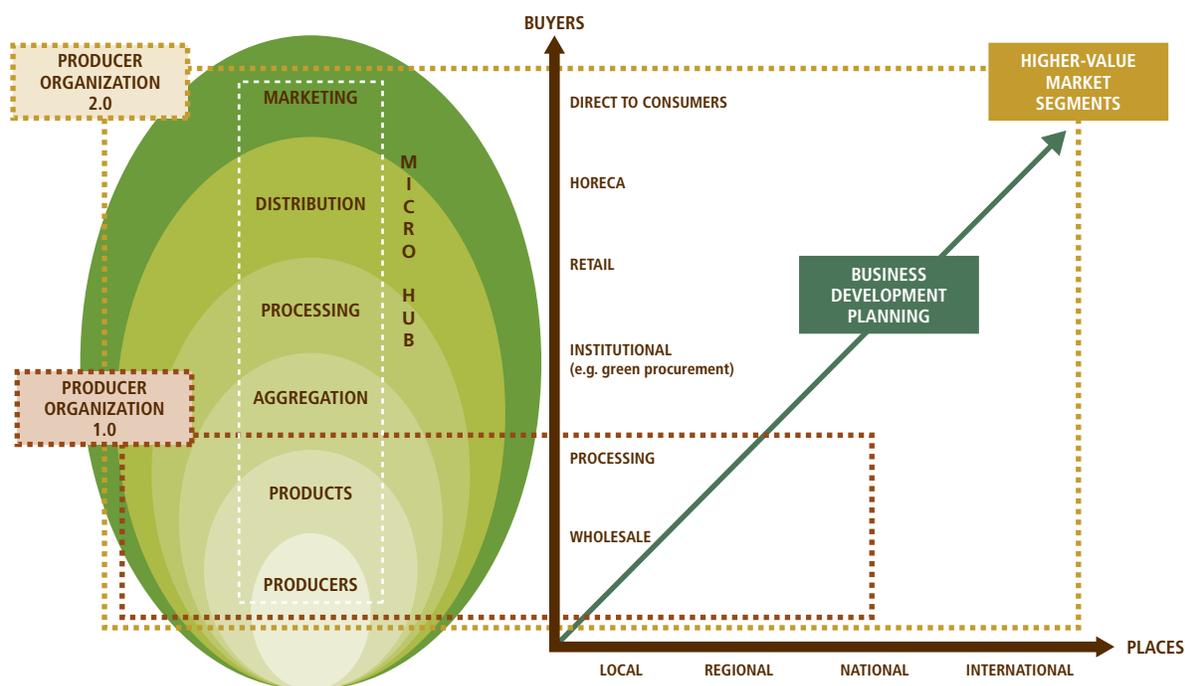
Producer organizations can close capital investment gaps by transforming into multi-functional micro hubs. A micro-hub in the agri-food chain can be defined as *"a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."*²⁰ While this definition may not fully capture the diversity of functions assumed and market segments served by micro-hubs, it does describe the primary role of a micro-hub that is common to the majority of hubs, which is to function as a (first mile) link in domestic or international logistical chains to help convey products to mid-scale buyers who in turn provide the products

20 Barham, J.; Tropp, D.; Enterline, K.; Farbman, J.; Fisk, J.; and Kiraly, S. (2012) *Regional Food Hub Resource Guide*. U.S. Dept. of Agriculture, Agricultural Marketing Service. Washington, DC, p. 4.

for sale to the end consumer.²¹ Key features of producer organizations that function as a micro hub include (i) a business management team that actively coordinates supply chain/delivery logistics, including on-farm pick-up, transportation, (cold) storage/warehousing, inventory management, and liability insurance; (ii) support activities on the supply side with producers in areas such as sustainable production practices, production planning, season extension, washing/sorting/grading, basic and value added processing, (re-)packaging, branding, certification, and food safety (among others); and (iii) market development and client relationship management activities on the demand side by brokering contracts, processing payments, as well as marketing and promotion efforts with other distributors, processors, wholesale buyers, and even consumers.²² They often provide community services as well through food bank donations, educational programs, health-awareness campaigns, and youth employment

programs.²³ Capital investments in specific micro-hub (cold chain) logistics infrastructure, equipment, and services that support the aggregation, processing, distribution, and/or marketing of agri-food products must be carefully assessed as part of producer organizations' business development planning process. In general, the scope and nature of these investments must be driven by the needs of key buyers in existing and/or new market segments which the producer organization wants to serve in the future. Figure 3 shows the conceptual framework for supporting the transformation of existing producer organizations in Croatia into micro-hubs through the business development planning process. It shows that existing producer organizations in Croatia (1.0) generally bring together a number of producers and different product categories to serve mainly the wholesale and processing segments on the domestic market. However, their market access/reach remains limited since they do not directly own and/or manage

FIGURE 3. Conceptual Framework for Transforming Producer Organizations into Micro Hubs



Source: World Bank Staff.

21 USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II, p. 9.

22 Barham, J.; Tropp, D.; Enterline, K.; Farbman, J.; Fisk, J.; and Kiraly, S. (2012) *Regional Food Hub Resource Guide*. U.S. Dept. of Agriculture, Agricultural Marketing Service. Washington, DC, p. 4.

23 USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II, p. 9.

any logistical assets supporting the joint aggregation, processing, distribution, and/or marketing of agri-food products. By identifying and implementing capital investments in specific micro-hub (cold chain) logistics infrastructure, equipment, and services in the context of their business development plans, future producer organizations (2.0) and their members obtain the capacities/assets required to access higher value market segments at home and/or abroad.

Micro-hubs, while connected to macro-hubs, operate at a different scale and fulfill different functions in the agri-food chain.

In general, micro hubs function independently and are located close to (production) landscapes where members are located/clustered.²⁴ They are distinct from macro-hubs that are connected to larger distribution centers and platforms, which are located closer to urban (consumption) centers. In general, macro-hubs can improve the competitiveness of the entire agri-food sector in a specific region or at the national level by providing spaces where different agri-food chain players, including large producers, producer groups, wholesalers, traders, retailers, and/or processors, have access to key marketing, sanitary and phytosanitary controls, logistics, information, and/or innovation support infrastructure and services. Although distinct in terms of their scale of operation, micro- and macro-hubs are interconnected since macro-hubs usually aggregate products coming from micro- hubs, independent large producers, and/or wholesalers/distributors before being traded to buyers coming from large retail chains, HoReCa sector, open air markets and independent retailers looking for volumes, quality and varieties of fresh products. Importantly, advanced (3PL/4PL) global logistics players (e.g. Kuehne + Nagel, Hellmann, etc.), which have cutting edge solutions for perishable products, could further optimize the entire logistics chain by helping individual micro-hubs connect to macro-hubs both at home and/or abroad. If planned effectively, a national network of micro- and macro-hubs can provide essen-

tial links to other (macro-)hubs in the EU and beyond and be an integral part of the development of competitive and resilient agricultural sector.

The transformation of producer organizations into multi-functional micro-hubs can play a key role in building more competitive, sustainable, and resilient agri-food sector in Croatia.

Capital investments in micro-hub (cold chain) logistics infrastructure, equipment, and support services provided by producer organizations or other service providers downstream the value chain (see Box 3 in Section 4.3.4) could strengthen both the economic, social, environmental, and risk management performance of agri-food value chains.

- **Competitiveness.** Micro-hubs can promote more competitive agri-food value chains by enabling small and medium-sized producers to (i) achieve economies of scale at the product level that allow producers to reach high-volume buyers in strategic market segments, while controlling operational costs; (ii) access value adding services that generate new value propositions for strategic market segments; (iii) directly link to buyers in strategic market segments, reducing the role of intermediaries in the value chain; and (iv) access knowledge, skills, and finance required to improve input use efficiency and ensure compliance with public and private food safety, hygiene, and quality standards, including traceability and labeling requirements. At the same time, they enable buyers in strategic market segments to (i) access more consistent volumes and quality of (fresh) local agricultural products to meet consumer demand; and (ii) reduce transaction costs by sourcing from a single source as opposed to a large number of individual producers.
- **Sustainability.** Micro-hubs can promote more environmentally sustainable and inclusive agri-

²⁴ Both literature and international experience show that, given their different roles in the agri-food system, micro-hubs dealing with the first mile aggregation and basic processing of agricultural products from individual (small and medium-sized) farms are typically located close(r) to the place of production, whereas macro-hubs dealing with regional, national, and/international distribution of agri-food products are located close(r) to the destination market(s)/consumers. In specific cases/contexts, different micro hubs could be physically integrated in the same macro-hub, but in general the geographic distribution is as described above. Extensive stakeholder consultations would need to take place at the regional level to identify whether consolidation of different micro-hubs in one macro-hub makes sense given the different market segments served by producers and producer groups as their logistical infrastructure needs will vary considerably.

food value chains by (i) facilitating producer access to knowledge, skills, and finance required for the adoption of sustainable production practices and technologies; (ii) reducing post-harvest food losses and improving food safety, hygiene and quality; (iii) integrating renewable energy use and energy efficiency improvements in new logistics infrastructure development; (iv) improving scale efficiencies and reducing energy use in the distribution process; (v) strengthening the negotiation position of small and medium-size producers and hence ability to receive fair and consistent pricing for their products; (vi) generating higher revenues for small and medium sized producers through increased production of value added agri-food products and improved access to more profitable market segments; and (vii) supporting the development of MSMEs in rural areas that deliver support services to the hub through backward and forward linkages (e.g. ICT, transportation, training/advisory etc.).

- Resilience.** Micro-hubs can promote more resilient agri-food value chains by (i) increasing capacities along the supply chain to collect, store, manage quality and safety, transfer, and process perishable goods, especially fresh fruits and vegetables, milk, and meat; (ii) improving the capacity of producers to manage price and demand shocks; (iii) reducing logistics costs for producers; (iv) diversifying marketing options for producers and local sourcing options for buyers; (v) distributing products directly to end buyers/customers, including in low-income and low-access communities;²⁵ (vi) facilitating cooperation and information flow/sharing between producers and buyers; (vii) supporting the development of (digital) integrated data management platforms that allow real-time monitoring of production plans, expected yields, stock levels, inventory, and deliveries; and (viii) supporting producer compliance with public and private food safety, hygiene, and quality standards.

4.3.2. Identifying Potential Locations and Infrastructure Designs for Micro Hubs

Potential locations for micro hubs are mainly driven by existing production structures and the distance to the main markets served by the hub.

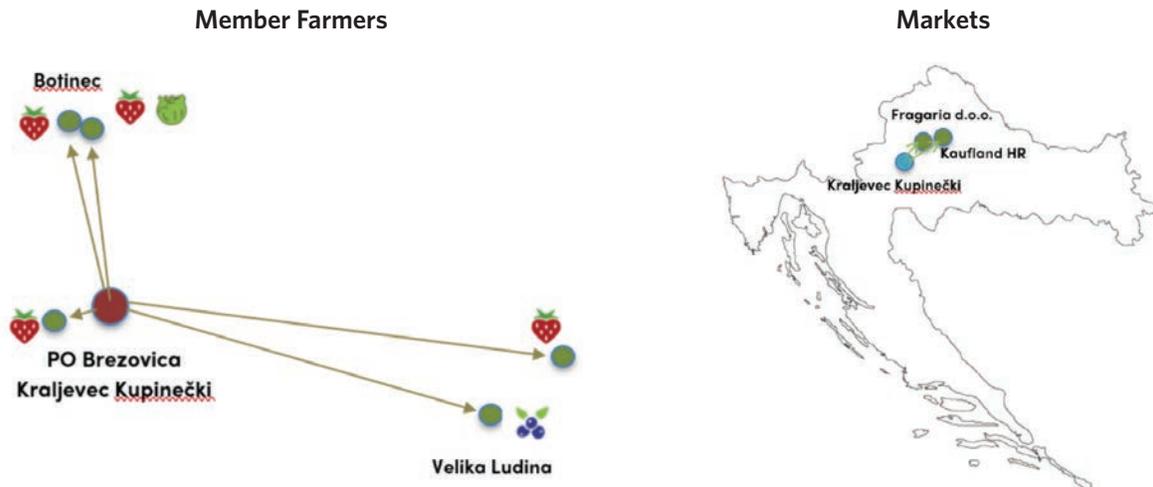
The principal criteria guiding the location of a micro-hub include (i) close proximity to production areas; (ii) the presence producer organizations (or groups of producers); and (iii) distance/delivery efficiency to customers. In fact, the producer organizations selected under the pilot project tend to organize farmers from the same geographical area, which produce similar crops and serve domestic and/or international markets in relatively close proximity (see Map 1). Additional criteria to be considered when identifying potential locations for micro hubs include (i) zoning regulations; (ii) the current and potential production capacity of the site/landscape; (iii) space to grow if increased demand requires it; (iv) existing infrastructure gaps in terms of aggregation and storage facilities; (v) proximity and connection to major road/transport networks; (vi) the product volumes and quality attributes required by anchor buyers; (vii) available land and/or facilities (e.g. existing warehouses); (viii) potential environmental and social impacts, including attitudes/level of interest of local communities; (ix) construction and development constraints (e.g. geotechnical survey, high voltage line, connection to public utilities such as electricity, sewage, and water); and (x) job creating potential.

Infrastructure designs of micro hubs are driven by the functions assumed by the hubs to meet the needs of current and future market segment(s) served by the micro hubs.

Micro hubs that can take both a physical and/or virtual form (see Section 4.3.4.1). A physical micro (food) hub site (in the US) is typically a warehouse of about 3,000-10,000 sq ft with room for multiple climate zone, coolers, walk-in freezer, dry-storage space, and office space, and which participates in relatively short supply chains.²⁶ The specific design of the facilities must take into account/accommodate (i) current and potential volumes of agricultural products; (ii) easy entry/parking/exit of both staff and delivery

25 The 2019 National Food Hub Survey in the US found that more than half of the micro food hubs in the US are located in low-income and low-access communities.

26 USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II, p. 29.

MAP 1. PO Udruga Brezovica

Source: AGRIVI.

vehicles; (iii) paved areas and smart building lay-out ensuring efficient product and work flows both inside and outside the facility; (iv) indoor and outdoor storage for various equipment; (v) food safety considerations, in particular the mitigation of contamination risks; (vi) separation of storage and fulfillment spaces; (vii) specific requirements for the optimal (cold) storage of fresh products; and (viii) logistical considerations, including load bearing requirements, climate control, and storage- and packaging-space requirements.²⁷ Importantly, the amount of storage needed in the food hub depends on the logistical agreements between the hub and its producers/suppliers: a “just in time” delivery model does not require significant storage space, whereas larger amounts of space are required if the hub needs to be able to store products for several days.²⁸ The amount and type of equipment needed for the hub depend on (i) its intended product portfolio (produce, fruits, meat, dairy, etc.); (ii) the needs of the market segments targeted by the hub; (iii) the scale of the operation and the services it will offer to members; and (iv) available equipment (e.g. for washing, packing, cooling, and storage) at the level of the hubs’ member producers/suppliers.²⁹

²⁷ Ibid, p. 31.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ovans, A. (2015) *What is a Business Model?* Harvard Business Review. Available at [What Is a Business Model? \(hbr.org\)](http://hbr.org)

4.3.3. Assessing Business Model Options for Micro Hubs

Different business models can be contemplated for transforming producer organizations into multi-functional micro hubs. Producer organizations’ business models are driven by (i) the type of customers/buyers served by the producer organization; (ii) the customer/buyer needs addressed by the producer organization; (iii) the type of products and services provided by the producer organizations in response to customer/buyer needs; (iv) producer organizations’ cost structure, pricing/revenue streams, and channels for delivering products and services (profitably) to customers/buyers; and (v) the unique value proposition created by all the products and services provided by the producer organization compared to those offered by its competitors.³⁰ Producer organizations must make clear decisions with respect to each of these drivers when assessing their current and/or future business models as these decisions ultimately define the strategic position the producer organization intends to occupy in the market. A coherent and clearly defined strategic position helps producer organizations identify the critical logistics infrastructure and support services needs that must be addressed in order to build

competitive advantages vis-a-vis competitors. Producer organizations' decisions regarding its strategic positioning are guided by (i) the mission and long-term goals of the producer organization; and (ii) the *strengths* (S), *weaknesses* (W), *opportunities* (O), and *threats* (T) that affect the current performance of the producer organization. A SWOT analysis for a specific producer organization can be completed on the basis of (i) the information related to (external) opportunities and threats collected as part of the market analysis (see Sections 3.1. and 3.2.); and (ii) the information related to (internal) strengths and weaknesses collected as part of the organizational development needs assessment (see Section 4.2).

Critical (cold chain) logistics infrastructure and support services needs can differ significantly depending on the nature of the agri-food value chain.

Development needs for logistics infrastructure and support services can differ widely between agri-food value chains. Production systems and related logistical arrangements in food value chains are fundamentally different from those prevalent in dairy value chains, whereas aquaculture value chains in Croatia face a distinct set of development challenges and opportunities altogether (see Box 2). Therefore, Sections 4.3.4. and 4.3.5. distinguish between producer organizations that operate as micro *food* hubs versus those that operate as micro *dairy* hubs. In fact, the dairy value chain is one of

BOX 2. Transforming Producer Organizations in Croatian Aquaculture Value Chains into Micro Hubs

There are 4 (four) registered POs among fishermen in Croatia. One of them, PO R.Z. Omega 3, brings together 16 cooperative traders and companies from Kali who have 21 fishing boats, 14 of which are centralized and fish only for the needs of the cooperative. This PO is the first one among fishermen in Croatia and a leader in the production of frozen fish (with an annual turnover of about EURO 10 million). The PO capitalized its association by building a production plant in the Šopot business zone near Benkovac, using more than HRK 25 million from EU funds. On the other hand, there are no POs among aquaculture producers in Croatia. In the past 20 years, financial incentives to stimulate organization among aquaculture producers led to the formulation of some cooperatives (e.g. Cooperatives „Malostonska kamenica“ and „Mirna luka“ from Dubrovnik-Neretva county). Despite these being voluntary, open, autonomous and independent for-profit organizations governed by their members, financial incentives for organizing into a cooperative were not sufficient to maintain this form of organization in the absence of a common interest for future benefits, a long-term business development plan, and a management framework to sustain the organization. Meanwhile, associations, as a form of free and voluntary coalition of several members without the intention of making a profit, are more widespread among aquaculture producers in Croatia. The largest —“Klaster Marikultura”—is an association of growers of marine organisms, which includes more than 90% of mariculture producers in Croatia, that has been successfully operating for almost 15 years. The association operates through the work of 3 groups: tuna farmers, white fish farmers and shellfish farmers, without further organizational structures among these sub-groups. In freshwater aquaculture, warm water fish producers and cold water fish producers are organized only through the Chamber of Commerce. There is one cooperative of trout producers in the country. Although most of the producers are aware of the existence of the Ordinance and Guidelines for the formation and approval of POs, this form of organization is not yet used among aquaculture producers of Croatia. The limited experience with cooperatives and the loose associations that currently exist reinforce the traditional approaches in the industry where small producers compete against each other in local markets, rely on existent niche markets, and there is a general aversion to change, such as innovation in product or supply channels. Yet, they are all interested in growing their production, expanding the domestic market, and exploring export markets, something they can't do individually. There is increasing interest in forming POs among aquaculture producers in Croatia. This interest spans a diverse group of producers: (i) existing well-organized small associations (e.g. mussels and oyster producers) that would like to improve their competitive position and sell directly to the domestic market rather than through distributors; (ii) large aquaculture companies bringing together their current business partners (e.g. carp, grass carp, catfish, pike, perch producers); (iii) producer groups within a specific geographic area (e.g. mussels and oyster producers in Mali Ston bay located in Dubrovnik-Neretva county) that are currently competing among each other on individual basis, and (iv) multi-product organizations where breeding and aquaculture are combined. Different situations, problems, business histories and challenges call for diversified approaches to the formulation of producer organizations. Each group represents different technical and technological characteristics of the aquaculture sector, socio-economic characteristics of the region, target market, competition, technological and business education and vision of future business development. Analysis of underlying characteristics of the different groups, a clear vision for business development, and guidance on regulatory requirements for POs are critical steps in the process of organizing producers. Management structure, leadership, knowledge about financial resources, market opportunities, internal cooperation among members are equally important ingredients for success. However, without the entrepreneurial capacity for formulating and effectively implementing the organization's business development plan, financial incentives alone will not be able to change behavior over the long-term. There is a great potential for this to be done right in Croatia.

the most complicated, vulnerable and capital-intensive food production system. The particular characteristics of milk production and milk processing highly influence the structure of the route to market, capital and labor needs, and the organization and management of business operations. Specifically:

- Dairy animals need to be milked at least twice a day, seven days a week. Apart from a natural seasonal pattern in milk production, there is a constant flow of milk to be managed;
- Dairy farming requires labor input on a year-round basis, depending on the rate of adoption of technology;³¹
- Milk is highly perishable and needs refrigerated storage and timely conservation through processing as refrigerated storage of raw milk before processing is only possible up to 72 hours,³² which requires a dense structure of storage, cooling and logistics for raw milk as well as for processed milk and milk products;
- Milk generally cannot be marketed to consumers as a raw product and needs processing, which requires investment in processing facilities before bringing the product to market;
- Most market propositions/products valorize only part of the milk components (standardized fresh milk leads to excess butterfat, making cheese brings whey as a by-product etc.); the full valorization of all milk components requires a portfolio of market outlets, including business to business outlets;
- Most dairy products have a limited shelf life, which not only requires a cold chain facility, but also leads to inevitable food loss.³³

4.3.4. Producer Organizations as Micro Food Hubs

a) Possible Business Models

Model 1: Farm-to-Consumer Model

Farm-to-Consumer hubs are platforms that enable the development of short supply chains by connecting farmers directly with end consumers. Findings of the 2019 National Food Hub Survey in the United States (US) showed that nearly 22% of hubs were primarily farm-to-consumer and this percentage has remained stable over the years.³⁴ Examples of this business model include subscription-based Community Supported Agriculture (CSA), virtual food hubs where consumers order local food using an online platform and pick up at a central location (see Box 3), and box delivery enterprises that provide an online grocery experience emphasizing local food products. Interestingly, during the COVID-19 pandemic, a number of firms in Croatia (e.g. Glovo, Wolt, Bolt, Pauza, etc.) have used advanced IT systems to deliver food products (mostly meals from the restaurants) to the doorstep of consumers in large urban centers, which may open opportunities to directly connect local farmers and producer organizations to this segment in the future. In general, direct-to-consumer food hubs have the following characteristics:³⁵

- Based on the sale of fresh produce.
- Manage small volume orders.
- Distribute directly to the end consumers or customers pick up items from various drop-off locations.
- Operated by a mix of staff and volunteer labor.
- Limited use of information technology to ensure traceability and manage production, inventory, orders, and sales.
- Offer limited technical support services for producers.
- Usually charge retail prices for their products.

31 Farms that are almost fully operated by manual labor can milk 10-15 cows per person whereas highly mechanized and automated farms handle around 75 - 100 cows per person.

32 Council Directive 92/46/EEC of 16 June 1992 laying down the health rules for the production and placing on the market of raw milk, heat-treated milk and milk-based products.

33 Food losses vary with the product and market type, from low losses in ripened cheese and industrial products to higher losses in fresh consumer products, the latter up to 10-20%.

34 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

35 USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II, p. 9.

BOX 3. La Ruche Qui Dit Oui

“La Ruche Qui Dit Oui” (alamaison.laruchequiditoui.fr) is a French IT company based in Paris, which was created in 2011 when it opened its first virtual hub in Toulouse. Also known in English as a Food Assembly, combines a virtual platform for managing orders and payments with various both public and private spaces rented by La Ruche where customers can pick-up their orders delivered by local producers. The concept has grown in popularity and more hubs opened have opened since 2011. The organization is now present in most French cities and the company has operations in 6 European countries (France, Belgium, Spain, Italy, Luxemburg and Germany). The guiding purpose of the organization is to link farmers, local agri-food producers, and craftsmen with consumers in urban areas through a digital platform (for transactions) and in-person pick-up and/or delivery of goods. Each “hub” is an in-city distribution location, which is rented for the specific “market” day, where producers bring their products and consumers come to pick them up. The actual purchase of the goods happens beforehand, online, and payment is processed electronically. The physical spaces serve the purpose of physical exchange of the goods, as well as a place where consumers can meet the producers of the goods they have purchased. Each space is organized/coordinated by one representative of La Ruch and 2-3 others who either volunteer or are hired to support on the “market” day. The revenue model is based on commission from the sales, with 80% going to the producer and 20% split between the Company and the person in charge of the hub. The producer is responsible for food safety and quality, transport, preparation of order, and delivery to the pick-up location. There are 2 main approaches to marketing: i) by the company via their social networks and advertisements, and ii) local marketing, done by the person managing the hub. The market platform is user friendly and customers can order their products online while producers can sell what they produce without intermediaries through an integrated inventory system. When the time of pick-up approaches (once a week), the producer will get a list of all the products that have been ordered and the customers will have a list of what they ordered with a system generated identification order number, which they use to then pick up their goods in person during the “market” day (if not delivered directly by the local producers). The customers of the platform are typically people interested in the origin of their food and how it was produced; they pay attention to the ingredients but often do not have other options than shopping in the main supermarket chains. The food sold through the platform is not industrially produced, but local, fresh, seasonal, (mostly) organic, and produced in small quantities. The producers supplying each hub are local, on average within a relatively small radius from the pick-up location. Fresh produce is seasonal. Fish and meat are also sold, a wide range of dairy products, honey, bread, other agri-food items (such as soups, deserts, etc.), drinks and more. Currently the company works with 10,000 producers in more than 6 countries and has more than 210,000 active consumers, doubling during the COVID pandemic.

Model 2: Farm-to-Business/Institution Model

Farm-to-business/institution hubs are platforms that focus on the wholesale distribution of products to other actors downstream the agri-food chain, such as hotels, restaurants, and catering (HoReCa) businesses, public institutions (e.g. schools, universities, cafeterias, hospitals, assisted-living facilities, food banks etc.), food processors, and retailers, including supermarkets, independent convenience, and specialty stores. Findings of the 2019 National Food Hub Survey in the United States (US) showed that 39% of hubs had a business model that was primarily wholesale.³⁶ Examples of this business model include Small Wholesale Distributor Food Hubs that focus on selling to HoReCa businesses and

smaller retailer (local supermarket chains, convenience, specialty stores) and Institutional Distributor Food Hubs that target larger institutional buyers (schools, hospitals, universities). In general, farm-to-business/institution hubs have the following characteristics:³⁷

- Offer a larger variety of products that help expand the seasonality of sales, including light processing (slicing/dicing, bagging), preservation (canning, pickling, fruit preserves, smoked meats), or product transformation of value-added goods (yoghurts, cheeses, sausages, sauces, purees, etc.).
- Require larger minimum orders.
- Deliver products to end buyers.
- Rely on specialized staff to manage inventory and product delivery.

36 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

37 USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II, p. 23.

- More sophisticated use of information technology to ensure traceability and manage production, inventory, orders, and sales.
- Often offer technical support services for producers (e.g. production planning, third-party certification of food safety and sustainable production practices, strategies for extending their season etc.).
- Pricing negotiated between suppliers and buyers and stipulated in formal agreements.

Model 3: Hybrid Model

A hybrid hub combines functions of different operational models. These hubs may sell products to wholesale buyers while also running a direct-to-consumer business. Or they may sell value added products to retail chains, while selling primary products to processors. Combining different operational models may enable the hub to sustain their operations and reach a larger, more diverse customer base than the separate models could reach on their own. Findings of the 2019 National Food Hub Survey in the United States (US) showed that nearly 30% of hubs had a hybrid business model.³⁸

b) Possible Ownership & Management Models

While there is a diversity of possible legal structures, most market-oriented micro food hubs are structured either as a business/for-profit organization (LLC) or a cooperative. Findings of the 2019 National Food Hub Survey in the United States (US) showed that the majority of market-oriented micro-food hubs are structured either as a for-profit (LLC) (36%) or basic (producer or consumer) cooperative (17%).³⁹ The micro food hubs accounting for the remaining shares are structured either as a nonprofit organization (40%), have no formal legal structure (5%), or have some other legal form (2%). Globally, concession models and private company models have been implemented as alternative legal forms for micro-food hubs. Annex 9 provides a list of examples representing different operational and ownership and management models for micro food hubs.

4.3.5. Producer Organizations as Micro Dairy Hubs

a) Possible Business Models

Model 1: Dairy Farm- to-Dairy Industry/Business

Dairy Farm-to-Dairy Industry/Business hubs are platforms that help dairy farmers deliver milk to processing facilities owned and managed by dairy industry. It is currently the dominant model in the Croatian dairy sector. In general, Farm to Dairy Industry/Business hubs have the following characteristics:

- A central point of contact for processors to settle arrangements concerning contractual conditions, pricing etc.;
- Co-ownership of specific market propositions (e.g. origin or other quality attributes such as organic etc.);
- Joint procurement of services and supplies for dairy farmers;
- Organize activities related to knowledge & skills improvements of dairy farmers;
- Organize aggregation activities on behalf of the processor (e.g. quality or logistics related, payment to individual farmer etc.).

Model 2: Dairy Farm-to-Market

Dairy Farm-to-Market hubs are platforms that integrate production, processing, and marketing activities. It builds on a total farmer-owned and farmer-driven approach with direct access to the market, which may include milk and/or dairy products delivered to retailers, HoReCa and/or consumers. In general, Dairy Farm-to-Market hubs have the following characteristics:

- Investments in the processing and marketing of milk and dairy products;
- Full ownership of market propositions;
- Joint procurement of services and supplies for dairy farmers.
- Organize activities related to knowledge & skills improvements of dairy farmers.

38 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

39 Ibid.

Model 3: Hybrid Model

Hybrid models are common and can help resolve issues in both the start-up or scale-up phase towards a Dairy Farm-to-Market model. This model combines core characteristics of dairy hub models 1 and 2 and has a crucial additional function: managing the marketing of the steady supply of milk volumes. Specifically, it opens the possibility for farmers to market part of their milk in a higher value segment (e.g. retail, HoReCa, consumer) and to market 'surplus' milk as a commodity without 'cannibalization' of the higher value proposition.

b) Possible Ownership & Management Models

While there is not one single best solution, the cooperative is by far the most common and successful ownership and management model implemented in the dairy sector. Although there are only two (2) producer organizations and approximately 1% of milk production is handled through cooperatives in Croatia, cooperatives have a market share between 50 - 100% in milk processing in larger milk producing member states of the EU. Moreover, studies show that in countries where dairy cooperatives have a large market share, farmers receive a higher milk price than in countries where cooperatives cover a small share of the dairy market.⁴⁰ Although the cooperative form can bear the sentiment of certain political influence or even state organized enterprises, cooperatives as referred to in the context of micro hubs are entrepreneurial, business-driven enterprises that are farmer-owned and farmer controlled. Meanwhile, most of the larger dairy cooperatives in the EU are "extended" cooperatives that have organized activities related to processing and marketing of milk in separate legal business entities of which the cooperative is the (only or majority) shareholder (in an LLC) or partner (in a Joint Venture). The basic cooperative is most likely the preferential model in a start-up and scale-up phase, whereas the extended cooperative model can be considered at the time business is expanding and partnering is needed to create leverage. Annex 10 provides a list of examples representing different operational and ownership and management models for micro dairy hubs.

4.3.6. Key Challenges, Success Factors, and Lessons Learned

A number of key challenges, success factors, and lessons learned with respect to the development of micro hubs can be identified based on international experiences. This section summarizes key findings of the review of international experiences. While the international experience with respect to micro food hub development is biased towards the United States (US), where the model has developed an important track record in recent years, the experience with respect to micro dairy hub development is focused mainly on the European Union (EU) context. The findings are presented in relation to the possible business models and legal forms of the micro hubs. Findings regarding micro food hub development in the US, however, predate the COVID-19 market landscape.

⁴⁰ Support for Farmers' Cooperatives, Final Report. Jos Bijman, et al. November 2012, p. 76.

a) Possible Business Models

DIMENSION	SCOPE	
MEMBERSHIP	Cross-Cutting	
	<ul style="list-style-type: none"> ▪ Mobilize members around a shared mission and long-term goals related to improving farmer livelihoods by bringing products to higher value market segments ▪ Adopt a bottom approach to membership engagement to build trust with and between members, promote co-ownership, and high participation levels as competition among members may increase when membership expands ▪ Attract younger members to the organization as they overall tend to be more collaborative than older producers ▪ Use written agreements between producers and the hub to avoid confusion over requirements and maintain transparency ▪ Facilitate access to relevant knowledge, innovation, technology, and finance for members 	
MARKETING	Cross-Cutting	
	<ul style="list-style-type: none"> ▪ Prepare detailed market study and marketing plan centered on a clear value proposition ▪ Exploit local identity, cultural heritage, and know-how of the local market in branding and marketing strategies, including by participating in regional and local food promotion programs organized by public agencies (e.g. regional brands) ▪ Start with small, but scalable investments in value-adding infrastructure and equipment, including the use of leasing/rental arrangements for high fixed-cost assets during the early/start-up phase ▪ Bear in mind that building a strategic position in the market takes many years of hard work and determination of all stakeholders ▪ Build a network of engaged producers and develop a product portfolio that allows the hub to offer product volumes and quality demanded by buyers/consumers throughout the year ▪ Maintain a consistent focus on food safety/quality and/or good agricultural practices ▪ Adaptively manage/balance supplies in light of seasonality of production, adverse weather conditions, and fluctuations in demand due to changes in preferences and volumes ▪ Maintain open communications with members and clients (e.g. website, social media, newsletter, etc.) 	
	Micro Food Hubs (US)⁴¹	Micro Dairy Hubs (EU)
	<p>All Micro Food Hubs: (i) Average number of producers from which hubs purchase products is 48 and least half of the suppliers concern small or medium-sized producers; (ii) Average number of product categories carried by food hubs is 5; (iii) Most hubs supply fresh produce and herbs (followed by eggs, meat and poultry, and other processed food products), but processed produce has been increasing as a percentage of sales; (iv) adding off-season, shelf-stable, or non-perishable items to the product portfolio that can be sold outside the traditional seasons can significantly boost year-round sales totals; (v) Especially direct-to-consumer sales, but also sales to large supermarkets and wholesale distributors have been decreasing, whereas sales to school food services (including colleges/universities) have been increasing, and sales to HoReCa and independent grocery stores/local supermarket chains have remained consistent; (vi) buyer pricing requirements and seasonality of production are the most important barriers to entering the public</p>	<ul style="list-style-type: none"> ▪ All Dairy Hubs: (i) Prevent (seasonal) milk production driven overflow; (ii) Ensure compliance with requirements of Council Directive 92/46⁴² at the level of both the farm and processing unit(s) ▪ Dairy Farm-to-Dairy Industry/Business: (i) Strengthen position and bargaining power farmers in the value chain by radical focus on farm efficiency and product quality to negotiate fair pricing; (ii) Long term success depends on value chain partnerships based on an effective strategic positioning and clear business goals of the industrial processor i.e. building a value chain based on differentiation or focus on cost leadership ▪ Dairy Farm-to-Market: (i) Identify market propositions with higher value (authentic or regional specialties, organic, etc.) and targeting specific groups (demographic profiles, tourists etc.); (ii) Create value for all milk components

41 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

42 Council Directive 92/46/EEC of 16 June 1992 laying down the health rules for the production and placing on the market of raw milk, heat-treated milk and milk-based products. These are hygienic and health requirements on the level of product (somatic cell count, bacterial count) and of production circumstances (processing equipment, storage temperature, animal health etc.) <https://op.europa.eu/en/publication-detail/-/publication/37321618-2366-4497-8b0e-381135dd7492/language-en>

MARKETING	<p>procurement/institutional segment; (vii) Most competition stems from wholesale distributors that are developing local programs and farmers selling wholesale directly; (viii) storage and delivery costs should be kept to a minimum by tightly managing drop-off times and aggregating deliveries with other producers or other logistics service providers; (ix) options and individual circumstances should be weighed carefully when making investments decisions in regards the logistics of trucking and transportation, but depending on the time period, frequency of use, and rental cost renting a vehicle can become more costly than an initial purchase and regardless of whether a hub chooses to purchase or lease a vehicle the average costs over a lifetime are often comparable</p>	<ul style="list-style-type: none"> ▪ Hybrid Hubs: (i) Build and maintain (win-win) relationships with (industrial) processors since active commitment and support of processors is a precondition for success, but may not come automatically as processors might see micro dairy hubs as potential competitors; (ii) Position the micro hubs' activities as complementary instead of competitive to those of industrial processors i.e the hub offers differentiated and region-specific products to niche markets that are generally not served by the industrial processors, unlocks the modernization and rationalization of the entire dairy sector, and strengthen short supply chains
MONEY	Cross-Cutting	
	<ul style="list-style-type: none"> ▪ Establish a solid equity base through member capitalization in the start-up and scale-up phase: a capitalization plan with a defined policy to generate (member) equity and/or (subordinated) member loans is often a pre-condition to attract external capital ▪ Combine/blend financing sources involving grants, concessional loans, social venture capital, private equity, cash contributions, crowd funding, guarantees, and/or in-kind contributions (e.g. land) to improve access to finance for promising initiatives/start-ups with a relatively high-risk profile and important capital investments ▪ Avoid confirmation bias in financial planning and decision making by accounting for both positive and negative scenarios (e.g. sensitivity analyses) ▪ Build cash reserves and monitor liquidity closely to overcome periods of negative cash flow and develop resilience to unforeseen changes ▪ Where possible, legal liabilities and risks due to perishable nature of products, food safety, and transportation should be reduced with insurance and written policies 	
MONEY	Micro Food Hubs (US)⁴³	Micro Dairy Hubs (EU)
	<p>All Micro Food Hubs: (i) Median gross revenues have been increasing and amounted to US\$495,000 in 2019;⁴⁴ (ii) most hubs that are highly dependent on grant funding are nonprofits; (iii) hubs become less dependent on grant funding as their business models become more established, confirming the benefit of early stage capital investment in the form of grants to establish and stabilize hubs; (iv) among hubs that apply for loans or short-term lines of credit, few are denied; (v) nearly all food hub expenses fall (consistently) into 2 categories: product purchases (60%) and payroll expenses (24%); (vi) costs of maintenance and depreciation should be included in equipment budgets; (vii) Different revenue models can be used depending on the business model, but profit centers are generally linked to three core functions (i.e. packing, marketing, and distribution) and each function may have a different revenue model (commission,</p>	<ul style="list-style-type: none"> ▪ All Dairy Hubs: Specialized farms that keep less than 20-30 cows generally have difficulties in applying modern techniques and mechanization and achieving economic viability as investments require a certain economy of scale to generate enough cash flow from the sales of milk ▪ Dairy Farm-to-Dairy Industry/Business: Minimal capital investment need given lack of investment in processing and marketing and cooling equipment is often facilitated by the processor ▪ Dairy Farm-to-Market & Hybrid Hubs: (i) High capital investment needed, including the need to finance initial losses; (ii) dairy cooperatives under these models generally maintain a consistent capitalization policy aimed at having at least an equity base between 30 and 40%

43 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

44 In 2019, 19% of food hubs reported total revenue less than US\$100,000, 23% reported between US\$200,001 and US\$500,000, 26% reported between US\$500,001 and US\$2 million, 15% reported between US\$2,000,001 and US\$7 million, and less than 10% reported revenue of more than US\$7 million each year.

MONEY	margin, markup or fee-for-service); (viii) Different payment arrangements can be negotiated with producers: some hubs allow producers to set their own price and then simply add a margin to cover operational expenses, while others purchase all product outright from producers or set a specific share of revenue to be returned to producers as payment for their product	
MANAGEMENT	Cross-Cutting	
	<ul style="list-style-type: none"> ▪ Prepare a well-defined and long-term business development plan, including a contingency plan ▪ Align ownership and management model with value proposition to members and clients and the market environment in which the hub will operate ▪ Select dynamic, forward looking, and entrepreneurial leadership to overcome initial challenges and manage growth path ▪ Ensure transparency in decision making, in particular in negotiating prices with producers and/or customers ▪ Manage/control costs to meet buyer pricing requirements ▪ Select professional management with sector experience and attract specialized personnel ▪ Find appropriate technology to manage operations and inventory 	
	Micro Food Hubs (US)⁴⁵	Micro Dairy Hubs (EU)
	<p>All Micro Food Hubs: (i) The hybrid model can start off as either a wholesale hub or a BtC hub, but the transition from a wholesale hub is easier due to certifications and regulations that apply to wholesale operations; (ii) Staffing of the hub entails a mix of full-time, part-time, and seasonal employees in both managerial and non-managerial roles, but more than half of paid employees are full-time, year-round nonmanagerial staff as reliable seasonal and/or part time staff can be difficult to find (iii) Mean number of paid employees is 17, while more established hubs tend to employ more people;⁴⁶ (iv) Nearly half of hubs use metrics to track progress toward social and environmental goals</p>	<ul style="list-style-type: none"> ▪ All Dairy Hubs: The hybrid model is most likely the best route to establish a dairy hub in the start-up phase because initially the volumes of milk that can be marketed in a higher value market segments are small and expansion must be managed carefully to prevent overflow of the market ▪ Dairy Farm-to-Market & Hybrid Hubs: Attract specialized personnel for processing and marketing activities who are capable of managing the value proposition from idea to reality

45 Bielaczyc, N., Pirog, R., Fisk, J., Fast, J. & Sanders, P. (2020). *Findings of the 2019 National Food Hub Survey*. Michigan State University Center for Regional Food Systems & Wallace Center at Winrock International. Available at <http://foodsystems.msu.edu/resources/2019-food-hub-survey>.

46 Smaller food hubs in the US with average annual sales of about US\$500,000 or less average two full-time employees, two part-time employees, and three seasonal employees, whereas large food hubs operating at US\$5 million – US\$10 million average 42 full-time employees and 3 part-time employees.

b) Possible Ownership & Management Models

MODEL	EXAMPLES	STRENGTHS	WEAKNESSES
Non-Profit	<p>Micro Food Hubs (see Annex 9) Le Gout d’lci</p> <p>Micro Dairy Hubs (see Annex 10) Dairy Cress Direct Association</p>	<ul style="list-style-type: none"> ▪ Easy to establish ▪ Voluntary and open membership ▪ Democratic control (equal voting rights), member participation and self-governance ▪ Can more easily attract government and private grants ▪ Donations can be tax deductible 	<ul style="list-style-type: none"> ▪ Nonprofit organization that cannot operate a business on behalf of its members ▪ No obligation for members to contribute and/or generate capital ▪ Operational profits cannot be distributed and/or re-invested ▪ Conditions linked to transaction could be negotiated on behalf of members, but actual transactions take place between individual members and the other party ▪ Buyers (e.g. industrial dairy processors) often do not accept associations as a negotiating party for critical topics such as commercial conditions and pricing
Basic Cooperative	<p>Micro Food Hubs (see Annex 9) Laugenrind FruitMasters La Montanita Coop</p> <p>Micro Dairy Hubs (see Annex 10) Noorderland Melk Lembang OMSCo Rouveen Kaasspecialiteiten CONO Kaasmakers Delflandshof Boeren van Amstel</p>	<ul style="list-style-type: none"> ▪ Well-known organizational form among producers that can operate a business on behalf its members ▪ Promote collaboration and understanding of each member’s capacities and skills that may lead to greater synergies and improved returns. ▪ Democratic control (equal voting rights), member participation and self-governance ▪ Directors are members if cooperative and users of its services ▪ Lower operating costs as it can draw upon the expertise and resources of their member-owners ▪ Help build (step by step) equity and working capital reserves mainly from members as opposed to outside investors in start-up and scale-up phase (though equity could be raised from outside sources as well) ▪ Liability of members limited to amount invested in cooperative ▪ Earnings/losses allocated to members on the basis of usage of cooperative vs equity held 	<ul style="list-style-type: none"> ▪ May be ineligible under certain grants programs, which could co—finance investment costs ▪ Subject to higher taxes compared to non-profit ▪ Thresholds for minimum number of members may apply ▪ Time-consuming member participation reduces speed and flexibility to respond to changes in the market ▪ Liability for potential losses or bankruptcy perceived as a disadvantage by members (though limited or excluded liability provisions could be established)
Extended Cooperative	<p>Micro Dairy Hubs (see Annex 10) Arla Foods FrieslandCampina Mukurwe-ini Wakulima Dairy Company</p>	<ul style="list-style-type: none"> ▪ Legal split between the basic cooperative organization and the business entity (Joint Venture or LLC) allows the unit to act with more speed and flexibility in the market 	<ul style="list-style-type: none"> ▪ Extension contingent up the prior development of profitable business activities

MODEL	EXAMPLES	STRENGTHS	WEAKNESSES
LLC	Micro Food Hubs (see Annex 9) Firsthand Foods Polfrut	<ul style="list-style-type: none"> ▪ Any “person”, either natural (an individual) or legal, can be a member ▪ Only a small number of partners required to form an LLC ▪ Attract (private) investors to fund capital investments in start-up and scale up phase ▪ Partners are personally shielded from company liabilities ▪ Pass-through tax advantages/No double taxation ▪ Partners/(Co-)Owners and board of directors can implement business strategies that increase profits for all stakeholders i.e. members, employees, and (co-) owners 	<ul style="list-style-type: none"> ▪ May be ineligible under certain grants programs, which could co—finance investment costs ▪ Subject to higher taxes compared to non-profit ▪ Drafting the agreement can be complex
Private Investor/ Company	Micro Food Hubs (see Annex 9) La Ruche GFA Micro Dairy Hubs (see Annex 10) De Fryske	<ul style="list-style-type: none"> ▪ Can help farmers reach the market in a sustainable partnership model ▪ Capital input provided by an external investor enables farmers to supply/market milk without investing in market development 	<ul style="list-style-type: none"> ▪ Transactional relationship between producers and the private investor/company ▪ Farmers generally unable to capture added value in full, especially if commodity-linked pricing (e.g. milk)
Concession	Food Micro Hubs (see Annex 9) Resen, Strumiça, & Skopje, North Macedonia	<ul style="list-style-type: none"> ▪ Public authorities provide the land and/or facility in concession to a producer organization or private investor (concessionaire) ▪ Concessionaire responsible for design, construction and/or operation of the food hub, respecting certain criteria/regulations imposed by public sector in terms of food distribution, local sourcing, food safety and quality standards 	<ul style="list-style-type: none"> ▪ Weak financial and technical capacities of the concessionaire may constrain investments in and management of the food hub ▪ Public authorities keep the ownership of the land and the food hub at the end of the concession (usually 30 years)

5

Formulating Business Development Plans for Producer Organizations



Different logical steps are required to formulate Business Development Plans in partnership with producer organizations that are both evidence-based, stakeholder-driven, and market-oriented.

An integrated Business Development Plan Template for producer organizations has been prepared under the pilot project and included in Annex 11. Concretely, the structure, content, and language embedded in the Template integrates those embedded in the business planning requirements imposed in Croatia by (i) both commercial and development banks⁴⁷ for financing specific (short-term) investments, including those receiving co-financing under the current Rural Development Program (RDP) (see also Annex 12); and (ii) the Ministry of Agriculture of Croatia for providing (medium-term) grant support under the Common Market Organization (CMO)⁴⁸ and (short-term) grant support under Measure 9 of the current RDP (Setting up of producer groups and organizations in the agriculture and forestry sectors).⁴⁹ In addition, the Template takes into account international

47 Under the pilot project, existing Business Plan Templates used by Croatia's leading development bank (HBOR) as well as leading commercial lenders to the agri-food sector (ErsteBank, Zagrebacka Banka) were collected and integrated in the Business Development Plan Template.

48 The Business Development Plan Template integrates the most recent business planning requirements for grant support provided under the CMO as stipulated by the MoA Ordinance on the Implementation of the National Strategy for Sustainable Operational Programmes of Producer Organizations in the Fruit and Vegetables Sector for the Period 2021-2023.

49 The Business Development Plan Template integrates the most recent business planning requirements for grant support provided under Measure 9 of the Rural Development Plan.

best practice templates used to support the development of successful micro hubs.⁵⁰ This section presents the different logical steps towards the formulation of evidence-based, stakeholder-driven, and market-oriented Business Development Plans in partnership with producer organizations.

5.1 Collect Contextual Information

Additional contextual information must be collected to establish the baseline performance and aspirations of the producer organization. A (first) work session with producer organizations' leadership can be organized by a local technical advisor/agribusiness consultant to (i) discuss mission and long-term goals of the organizations (Section III.A and III.B of the Business Development Template); and (ii) collect basic background information (Section I of the Business Development Template), specific information with respect to the current market segments and competitors of the producer organization (Section II.B and II.C of the Business Development Template), and any additional information regarding the producer organizations' current finances, members, marketing arrangements, and management structure (Section III.D of the Business Development Template) that was not collected as part of the M4 Assessment. If needed, follow-up calls with producer organization's leadership can be organized to address any outstanding questions that could not be covered during the first work session.

5.2 Prepare a SWOT Analysis

A SWOT analysis must be prepared that takes into account all contextual information and the results of the broader market analysis. Once all contextual information has been collected, a draft SWOT analysis of the individual producer organization must be prepared by the local technical advisor/agribusiness consultant (Section II.D of the Business Development Template). Importantly, the SWOT analysis must take into account (i) the outcomes of the market analysis (incorporated in Section II.A of the Business Development Template)

and additional contextual information collected during the first work session (to identify relevant external Opportunities (O) and Threats (T)); the outcomes of the (M4) organizational development needs assessments and the additional contextual information (to identify relevant internal Strengths (S) and Weaknesses (W)). Once completed, a (first) review session must be organized with producer organizations' leadership to validate both (i) the SWOT Analysis; and (ii) all the contextual information supporting the SWOT analysis.

5.3 Discuss Proposed Strategy

The current and future strategic positioning of the producer organization must be clarified first. After all the contextual information and the SWOT analysis have been validated, a (second) work session with producer organization's leadership can be organized by a local technical advisor/agribusiness consultant to review the producer organizations' proposed strategy for responding to the findings of SWOT analysis. A first exercise as part of the strategy formulation process is to clarify the current and future strategic positioning of the producer organization) in a manner that is consistent with the mission and long-term goals pursued by the producer organization, all the contextual information collected about the producer organization, and the findings of the SWOT analysis (Section III.C of the Business Development Plan). By clearly defining the strategic position it aspires to occupy in the market vis-à-vis its competitors, the producer organization will clarify how it plans to compete in the market (cost vs differentiation) and where it expects to compete (total market vs market segments/niches) (see Figure 4.A for Porter's Generic Strategies). Importantly, the scope of the producer organization's strategic position in the market must be defined in terms of (i) the type of customers it serves today and in the future; and (ii) the type of products/services it provides today and in the future to meet customer needs (See Figure 4.B for Porter's Activities Positioning Strategies).

Key changes in the business model required to strengthen the strategic position of the producer

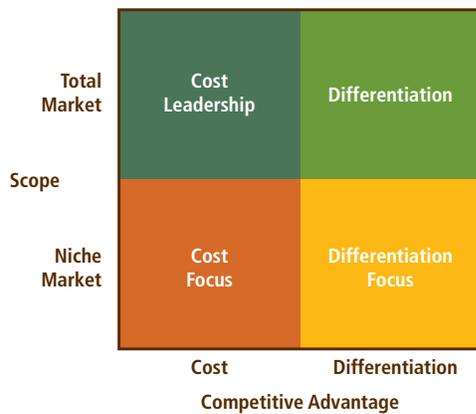
50 Lindsey, T.; Slama, J. (2012) *Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois*, University of Illinois Business Innovation Services; Illinois Department of Agriculture; Illinois Department of Commerce and Economic Opportunity; FamilyFarmed.org, 56pp.

organization can subsequently be defined and translated in a limited set of four (4) strategic objectives.

The BDP must primarily be seen and approached as an instrument to develop sustainable business models. After the current and future strategic position selected by the producer organization has been clarified, a second exercise must be undertaken that is focused on defining the key changes the producer organization must implement in its current business model in order to realize the strategic position it seeks to occupy in the market (Section III. D of the Business Development Template). The business model encompasses various aspects related to the organizations' current finances, members, marketing arrangements, and management structure. Specifically, this includes the product portfolio

and services provided for members, how and where they are promoted and delivered, the means through which they are sold (revenue model), their relative profitability, and how the company is organized in terms of its management team, organizational structure, human resources, and internal processes and systems. The changes required to the business model must be articulated on the basis of the description of the current situation, which was completed when the contextual information was collected. In addition, the changes thus articulated must be fully consistent with both the strategic positioning of the producer organization and its mission and long-term goals. A (second) review session may be organized with producer organizations' leadership after the work session to discuss any inconsistencies and ensure full alignment. Once the required changes to the business model have thus been validated, a limited set of (4) strategic objectives can be formulated that capture/summarize (in one sentence) the combined impact generated by the proposed changes with respect to the different dimensions of the business model.

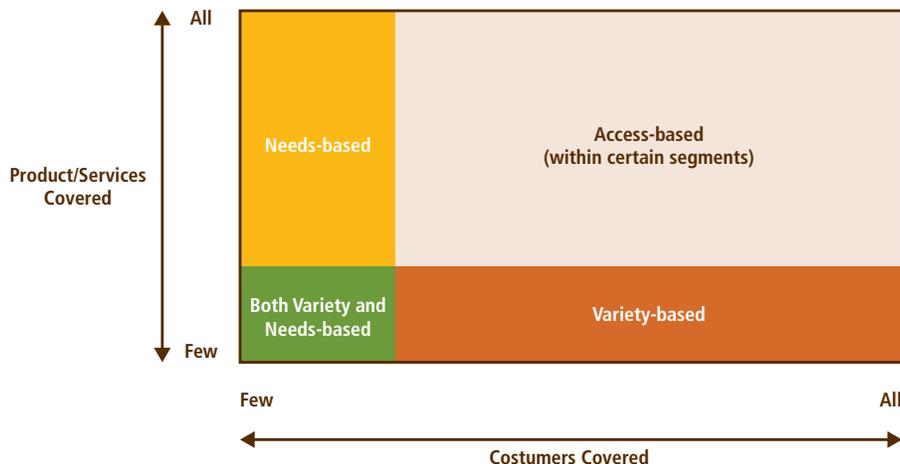
FIGURE 4.A. Porter's Generic Strategies



5.4 Prepare an Implementation Plan

Activities that would help the producer organization execute the changes needed to achieve its strategic objectives must be specified and required resources allocated in a time-bound Implementation Plan. A (third) work session with producer organization's lead-

FIGURE 4.B. Porter's Activity Positioning Strategies

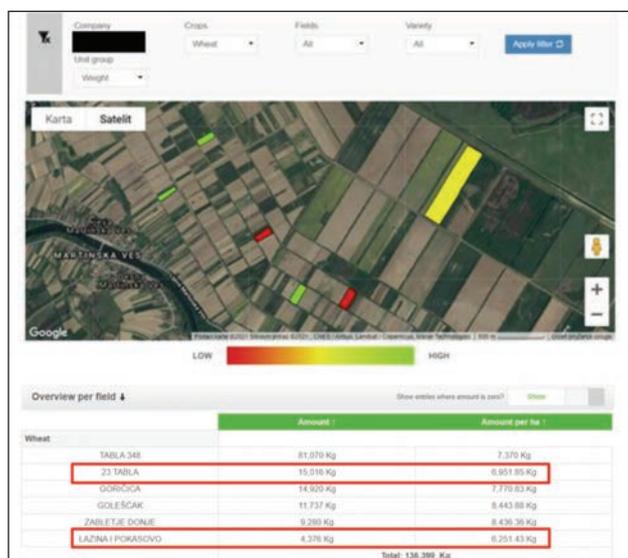


ership can be organized by a local technical advisor/agribusiness consultant to gather inputs regarding (i) the activities planned over the next five (5) years to achieve the strategic objectives of the producer organization; and (ii) related resource requirements and potential funding sources. The Implementation Plan included in the Business Development Template (Section IV of the Business Development Template) basically represents the producer organizations' roadmap of planned activities. The Implementation Plan is composed of three (3) key elements: (i) investments in physical/fixed assets, research/technologies/innovations, product quality and marketing, productive partnerships, agri-environmental/climate measures, and/or risk management; (ii) technical assistance and/or training for improving organizational capacities; and (iii) working capital. In fact, micro hub development is always contingent upon finding the right mix of strategic investments, improvements in knowledge and skills, as well as effective and efficient operations.

The introduction of digital technologies can help inform planned activities and speed up their implementation. The improved transparency in producer organizations' baseline performance and the network-

ing opportunities generated through the introduction of digital solutions can help producer organizations improve both the targeting and accelerate the execution of activities included in the Implementation Plan. Under the pilot project, a digital solution that enables systematic farm data collection and use for decision-making by producer organizations and their member-farmers was introduced during the preparation of the Implementation Plans of selected producer organizations. Specifically, a local farm management software (AGRIVI) was introduced (in the Croatian language) at the level of fifteen (15) members of two (2) producer organizations selected under the pilot project.⁵¹ The introduction of the digital solution enabled the producer organizations and their member-farmers to (i) perform production benchmarking of all participating members on the basis of 2020 season data; and (ii) prepare traceability reports for future buyers/consumers showcasing all relevant farm data for a particular crop by virtue of a QR code that can be placed on either the product or packaging. Concretely, the production data and information thus collected allow farmers to better plan future production activities and related investments by (i) identifying less productive fields (see Figure 5) and analyzing underlying performance drivers, including

FIGURE 5. Identifying Less Productive Fields



Source: AGRIVI.

⁵¹ Members who participated in the pilot project included ten (10) producers from PO *Posavina i Moslavina* and five (5) producers from PO *Udruga Brezovica*.

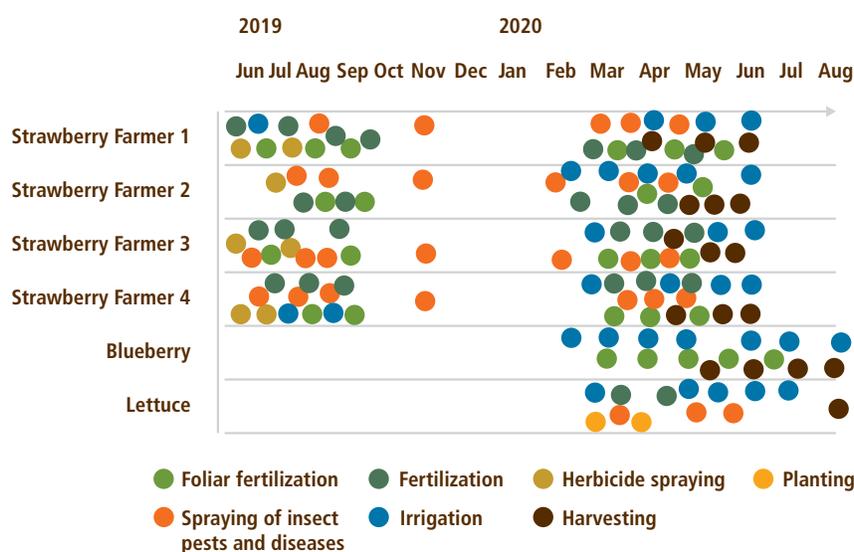
crop varieties, weather conditions (wind, temperature, precipitation), soil conditions (pH), and farm practices (type, quantity, and timing of pesticide and fertilizer use); and (ii) analyzing total production costs and final profitability levels. At the same time, the farm-level data and information allow managers/administrators at the level of producer organizations to compare both the production activities and (yield) performance across individual member-farmers (see Figure 6). The insights thus gained can help producer organizations better align members' individual production plans with changing market demands, which has generally proven to be a key challenge for micro food hubs (see Section 4.3.6). In addition, they can help producer organizations advise lower performing members on how to better align their activities with those undertaken by the best performing members of the group.

Planned activities included in the Implementation Plan must be sequenced carefully. In general, producer organizations should try to identify products and market segments at home and/or abroad that have a potential to be successful in 1-3 years and 3-5 years based on the results of the Market Analysis (see Section 3). Subsequently, they should plan to start with relatively

low risk activities and expand towards higher risk activities as part of a gradual scale-up (see Figure 7.A). Low risk activities supporting increased market penetration of producer organizations' products should be prioritized first (Y1-Y2) ("core innovation"), followed by medium risk activities supporting the development of new products or markets (Y3-Y4) ("adjacent innovation"), while high risk activities supporting the development of new products for new markets should be implemented last (Y4-Y5) ("transformational innovation"). The "golden" ratio for an Implementation Plan is composed of 70% "core", 20% "adjacent", and 10% "transformational" activities (see Figure 7.B).⁵² An example of an Implementation Plan prepared on the basis of a strategic position and marketing strategy that were defined in line with the guidance provided in this note has been included in Annex 13.

The Implementation Plan must ensure that the different activities are linked in a synergistic manner. Maximizing synergies between the different activities undertaken by a producer organization is fundamental to creating a unique value proposition for the producer organization in the market. Once planned activities are sequenced and linked in accordance with these prin-

FIGURE 6. Comparing Members' Production Activities



Source: AGRIVI.

52 Nagji, B.; Tuff, G. (2012) Managing Your Innovation Portfolio. Harvard Business Review. Available at <https://hbr.org/2012/05/managing-your-innovation-portfolio>.

ciples, producer organizations can identify the gaps in existing financial, membership, management, and marketing capacities that would need to be closed to realize the planned activities.

5.5 Evaluate Economic Impacts

The economic viability of the overall Implementation Plan must be assessed using different scenarios. After all planned activities for the Implementation Plan have been identified, the economic impact of the proposed Plan must be evaluated by the local technical advisor/

agribusiness consultant (see Section V of the Business Development Plan Template). The economic impact of the Implementation Plan can be evaluated by estimating the efficiency of the Plan. These estimates can be expressed by calculating the net present value and/or internal rate of return of the combined activities. Importantly, a sensitivity analysis must be undertaken, which evaluates the economic impact of the Implementation Plan under different supply, demand, and price scenarios.

5.6 Finalize Strategic Objectives and Implementation Plan

The strategic objectives and Implementation Plan included in the Business Development Plan must be finalized in line with the results of the economic impact evaluation. The results of economic impact evaluation of the proposed Implementation Plan may demand adjustments in the scope, nature, and/or sequencing of planned activities included in the Plan. Changes in the planned activities may in turn necessitate adjustments in the proposed strategic objectives. A (third) review session may thus be organized with producer organizations' leadership to discuss the results of the economic impact evaluation of the Implementation Plan and agree on necessary adjustments in the Implementation Plan and/or strategic objectives.

FIGURE 7.A. Ansoff Matrix

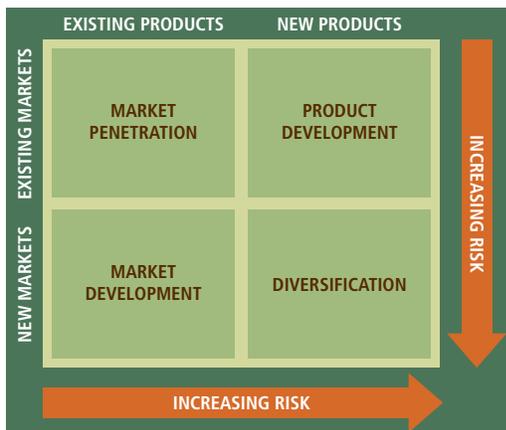
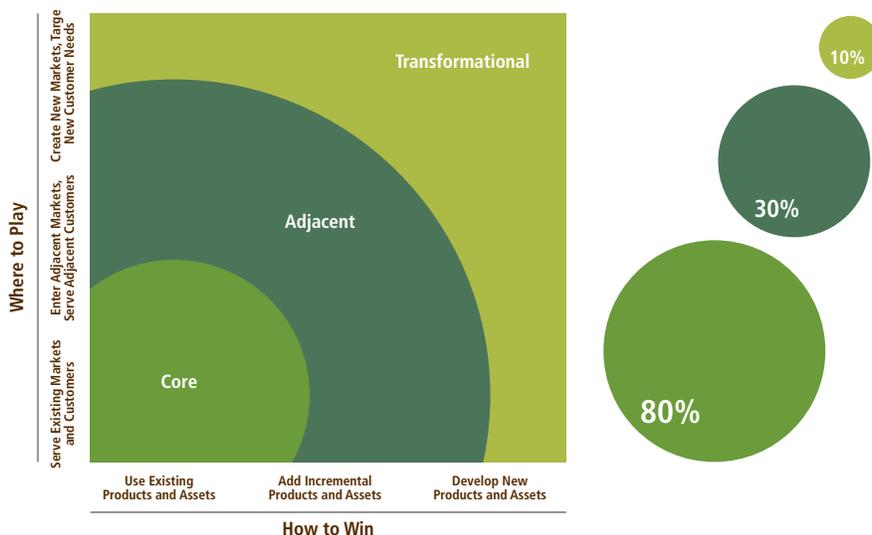


FIGURE 7.B. Innovation Ambition Matrix



5.7 Set KPI Targets

Annual targets must be set with respect to a standardized set of Key Performance Indicators (KPIs). After the strategic objectives and Implementation Plan have been validated, a (fourth and final) work session with producer organization's leadership can be organized by a local technical advisor/agribusiness consultant to discuss and agree on annual targets for KPIs relevant to the strategic objectives pursued under the Business Development Plan (see Section III.E of the Business Development Plan Template). Importantly, the default KPIs included in the Business Development Plan Template are public indicators that have been standardized either at the level of the EU (EU Common Indicators) or national (financial) reporting systems. These KPIs can be complemented, as relevant and appropriate, with indicators that are monitored in the framework of private standards and certification systems in which the producer organization participates.

6

Conclusions and Next Steps for Scaling Up the Implementation of Business Development Plans

A number of specific actions and policy reforms could help scale up the transformation process of Croatian producer organizations in line with their long-term Business Development Plans.

The limited organization of agricultural producers that currently constrains the development of well-functioning agri-food chains in Croatia is driven by a variety of factors. In addition to the negative perceptions shaped by the historical legacies of the socialist era, the development of producer organizations in Croatia is currently constrained by (non-profit) organizational forms that prevent producer organizations from implementing and sustaining productive investments in shared, value adding infrastructure and equipment as well as services that enable members' access to relevant knowledge, innovation, and technologies, including green and digital solutions. These productive investment are fundamental to help producers/members improve their productivity levels, effectively manage risks, and reach more buyers in strategic, higher value market segments at home and abroad. Combined with existing power imbalances in domestic agri-food chains, producer organizations' weak entrepreneurial capacity limits their ability to seize new growth opportunities in strategic market segments, while managing a growing array of risks affecting agri-food chains. However, a number of specific actions and policy reforms could be implemented by the MoA to bring about a new dynamic. In this context, future Business Development Plans (BDPs) of producer organizations prepared with support of technical advisors in line with the guidance provided in this note would provide a basis for the MoA to align/adapt



existing financial and technical support measures more closely with stakeholder needs and the competitive market environment in which they operate. At the same time, the investment, technical assistance, and working capital needs outlined in the BDPs could guide the design and implementation of new support measures for producer organizations available under the NRRP and/or CAP Strategic Plan. In particular, the BDPs could inform the development of (i) financial instruments that enable improved access to finance for producer organizations; (ii) climate and environmental measures that „green“ and/or digitize producer organizations' operations in a manner that strengthen their competitive position in the market; and (iii) pluralistic agricultural advisory services that are responsive to the needs of producer organizations.

6.1 Specific Actions

ACTION 1

Support existing producer organizations and aspiring leaders/entrepreneurs in the process of forming for-profit organizations/businesses.

- Develop existing (online) platforms managed by the MoA⁵³ with up-to-date information regarding the process, criteria, potential constraints/costs, and opportunities/benefits for recognizing a producer organization under one of the legal forms allowed under the new Rulebook on Producer Organization.
- Condition the recognition process on the development of integrated, long-term Business Development Plans since they would guide decision-making on the optimal legal form for implementing the Business Development Plans.

ACTION 2

Develop a technical support network that can offer integrated business planning support services to existing producer organizations and aspiring leaders/entrepreneurs.

- Develop and roll-out a training program for both public and private advisors in business development planning for producer organizations that integrates market, knowledge, innovation, and investment aspects using the process and tools developed under the pilot project.
- Integrate existing sustainability assessments methods and tools⁵⁴ in the training program to further mainstream climate and environmental concerns in the business development planning process and identify “green” investment and/or technical assistance activities that are fully aligned with producer organizations’ business development strategy.
- Create a (online) directory of legal, technical, financial, agribusiness/market specialists that existing producer organizations or aspiring leaders/entrepreneurs can consult on an as needed basis in the preparation of their long-term Business Development Plans.

ACTION 3

Support the accelerated digitization of producer groups internal (farm) management systems to facilitate performance benchmarking and the dissemination of knowledge, innovations, and technologies among members/producers (peer-to-peer).

- Provide easy (online) access to information regarding potential digital (farm) management solutions and service providers.
- Condition grant support for the adoption of digital (farm) management solutions by producer organizations to active participation of both leadership and members in related training programs.

ACTION 4

Support specific investments that fit clearly in the longer-term growth and development trajectory of the producer organization.

- Enable grant support for a broad range of investments in logistics infrastructure, equipment, and support services to allow producer organizations to evolve into multi-functional micro hubs that effectively fulfill their role in aggregating, processing, distributing, and/or marketing agri-food products for different market segments.
- Target grant support towards specific investments included in producer organizations’ business development plan that strengthen linkages between different market segments and POs in a gradual/stepwise manner (i.e. from market penetration & development to product development to diversification).

ACTION 5

Support the participation of producer organizations’ management team in vocational education and training programs that strengthen their business management skills and entrepreneurial capacity.

- Specific programs that would help improve the internal management of producer organizations/future micro hubs include programs focused on financial literacy (budgeting, recordkeeping/accounting, investing), inventory management, logistics, contract management, operating standards (food safety, GAP/GHP, environmental management, health and safety), and sales & marketing.
- Specific programs that would help improve the external engagement of producer organizations/future micro hubs with potential investors and clients include programs focused on “soft” business skills (e.g. negotiation skills), (digital) traceability, client relationship management (CRM) systems, and branding.

53 <https://poljoprivreda.gov.hr/vijesti/zahtjev-za-priznavanje-proizvodjacke-organizacije-i-drugih-oblika-udruzenja-primarnih-poljoprivrednih-proizvodjaca-upute-za-korisnike/4140>

54 EPI-AGRI Focus Group (2017) *Benchmarking of Farm Productivity and Sustainability Performance – Final Report*. Available at <https://ec.europa.eu/eip/agriculture/en/publications/eip-agri-focus-group-benchmarking-final-report>.

6.2 Policy Recommendations

SHORT-TERM POLICY RECOMMENDATIONS (2021)

The NRRP provides an opportunity to build new success models for producer organizations in Croatia through the implementation of short-term investments in the transformation of existing organizations.

- Leverage the NRRP to jumpstart the implementation of specific, short-term investments included in Producer Organizations' Business Development Plans (Annex 14 provides basic cost estimates for the development of micro food hub models in the cereal, fruit and vegetable, and livestock sectors in Croatia).⁵⁵
- Prepare a Grant Operational Manual (GOM) on the basis of this Guidance Note that would further systematize the process for identifying specific, short-term investments in producer organizations' logistics infrastructure and support services that are eligible under the Recovery and Resilience Facility, in particular those promoting the greening and digitization of infrastructure and services managed by producer organizations.
- Coordinate micro-hub investments identified through the GOM process with regional development investments in macro-hubs that are currently in the pipeline to ensure the efficient development of domestic distribution systems, in particular those developed as part of the Pannonian Croatia Industrial Transition Plan.

MEDIUM-TERM POLICY RECOMMENDATIONS (2021-2022)

CAP Strategic Plan interventions must be designed in a manner that helps sustain investments in the transformation of producer organizations in the long-term.

- Use learnings accumulated under the NRRP to guide the broader roll-out/scale-up of investments in the transformation of producer organizations under the future CAP Strategic Plan.
- Design public interventions included in the future CAP Strategic Plan in a manner that unlocks more producer organization-led investments in market-oriented (cold chain) logistics infrastructure and support services with a view to ensure their sustainability in the long term.
- Establish a clear "division of labor" between CAP Strategic Plan interventions supporting the transformation of producer organizations:
 - ◆ *EAFRD*: (i) Support the establishment of new producer organization (start-ups) on the basis of Business Development Plans; and (ii) Prioritize (either through tailored selection criteria or dedicated calls for proposals) investments at the level of individual members/farmers (on-farm)
 - ◆ *EAGF/CMO*: (i) Support the development of existing producer organizations on the basis of Operational Programs that are grounded in Business Development Plans; (ii) Co-finance investments and technical assistance activities included in the Business Development Plans and implemented exclusively at the level of producer organizations (off-farm)
 - ◆ *Financial Instruments*: Facilitate through national development banks (HBOR and HAMAG-BICRO) existing producer organizations' access to finance for specific investments and related working capital needs included in their Business Development Plans and which are co-financed with grant support provided under the EAGF/CMO
- Leverage Community-Led Local Development (CLLD) initiatives to effectively plan/coordinate public and private investments in improved logistics infrastructure and support services in (remote) rural areas where commercial viability is limited without important public investments in basic "connective" infrastructure for micro hubs (e.g. roads, electricity, ICT, water supply/sewage etc.), in particular for investments in the establishment of collection and logistics centers for biomass and bio-refineries that would support the development of the bioeconomy.

AKIS Plan accompanying the CAP Strategic Plan must help move Croatia's AKIS towards a more user-centered model.

- Use the knowledge, innovation, and technology needs identified as part of the Business Development Planning process as a basis to conduct gap analyses of public advisory services' capacities, which would determine areas of insufficient knowledge and/or geographical coverage. The results could thus guide recruitment and training programs offered by the public advisory services as well as strategic partnerships established with scientific institutions.
- Organize personnel positions in a manner that establishes clear divisions of labor between public advisors with mainly administrative roles and responsibilities vs public advisors who provide technical advisory services to producers.
- Create protocols for technical advisors to pro-actively engage with producers and set up (financial) incentive structures that positively reward advisors on the basis of KPI targets that are aligned with those included in the Business Development Plans they help implement.

⁵⁵ The Annex provides cost estimates for establishing micro-food hubs, in terms of infrastructure and equipment requirements, and it does not refer to cost requirements for creating POs.

- Develop, in partnership with scientific institutions, a nation-wide network of demonstration farms for different types of production and agro-ecological conditions that provide regular, field-based training, knowledge exchange, and information on new technologies, practices, or solutions.

LONG-TERM POLICY RECOMMENDATIONS (CAP STRATEGIC PLAN PERIOD 2023-2027)

Consistent long-term policies and government support are needed to support the transformation of producer organizations and the broader agri-food chains in which they operate.

- Facilitate the preparation of value chain-specific strategies with timebound deliverables and complementary goals (5-10 years) that are explicitly supported by the main stakeholders in each value chain to improve the coordination between value chain stakeholders in a manner that helps the entire chain become more competitive, sustainable, and resilient under local circumstances.
 - Use the sub-sector-specific analyses and measures included in the NARDS as a basis for launching multi-stakeholder platforms that would drive the development of value chain-specific strategies.
 - Operationalize the value chain-specific strategies thus developed as National Strategies for Operational Programs implemented under the CMO pillar of the future CAP Strategic Plan.
 - Extend the current scope of Croatia's value chain-specific strategies beyond the fruit and vegetables sector and to encompass new sectors proposed under the latest CAP reform proposals, in particular dairy, livestock (meat), cereals, and olive oil.
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Annex 1: Overview of Active and Registered Producer Organizations (as of March 4, 2021)

No.	Producer Organization	Sector	Date of Recognition	Legal Form	Members 2019/2020	Annual Production (T)
1	Proizvođačka organizacija "Posavina i Moslavina" udruga	Cereals	03/27/2017	Association (non-profit)	30	10,702
2	OTOK OPĆA POLJOPRIVREDNA ZADRUGA - zadruga	Cereals	11/8/2018	Cooperative (for profit)	14	1,000
3	UDRUGA PROIZVOĐAČA MLIJEKA MEĐIMURJA	Milk and milk products	01/3/2018	Association (non-profit)	29	7,000
4	DRAVA-SAVA - udruga	Milk and milk products	11/4/2015	Association (non-profit)	195	10,720
5	MLIJEČNI PUT HRVATSKE - udruga	Milk and milk products	06/24/2016	Association (non-profit)	21	5,100
6	Udruga Brezovica	F&V	11/10/2017	Association (non-profit)	10	685
7	ECOGOS - d.o.o.	F&V	14/7/2016	LLC	48	300
8	PZ JABUKA HR - zadruga	F&V	08/26/2015	Cooperative (for profit)	18	3,447
9	Poljoprivredna zadruga Slavonski svinjogojac	Pork	04/4/2017	Cooperative (for profit)	31	1,399
10	Udruga Domaći brojlerski uzgajivači	Poultry Meat	07/11/2017	Association (non-profit)	11	4,000
11	Savez uzgajivača simentalskog goveda Zagrebačke županije i Grada Zagreba - udruga	Livestock	01/4/2017	Association (non-profit)	140	626
12	Klaster pčelara "Podravina" Đurđevac - udruga	Bee Products	04/4/2017	Association (non-profit)	31	30
13	PROIZVOĐAČKA ORGANIZACIJA "ŠKRLET" - udruga	Wine	09/12/2018	Association (non-profit)	8	66.3
14	Poljoprivredna zadruga Panonia Beef	Livestock	04/24/2019	Cooperative (for profit)	15	47
15	BABY BEEF - Proizvođačka organizacija - Poljoprivredna zadruga	Livestock	26/4/2020	Cooperative (for profit)	(No Data)	no data
16	PO Poljoprivredna zadruga Međe	Cereals	18/9/2020	Cooperative (for profit)	21	5,500
17	PO VIP Panonia d.o.o.	F&V	02/10/2020	LLC	10	2,183
18	PO AGROBELA d.o.o.	Other products- potato	24/10/2020	LLC	7	339
19	PO AGRO POLJE d.o.o.	Other products- potato	03/12/2020	LLC	7	3,090
20	PO AGRO BELICA d.o.o.	Other products- potato	03/12/2020	LLC	7	2,940

Annex 2: Chronological Overview of Pilot Project 1 Logical Steps and Activities

Activity	Responsible	Results	Achieved By
STEP 1: PREPARING PILOT PROJECT LAUNCH			
Assemble core technical teams responsible for implementing the pilot project	World Bank Team Leader + Ministry of Agriculture	World Bank and MoA core Technical Teams designated	15/02/2020
Define Pilot Project Milestones and Expected Outputs	World Bank Team Leader + Ministry of Agriculture + World Bank and MoA Technical Teams	Pilot Project Implementation Plan prepared	01/04/2020
STEP 2: ANALYSING MARKET TRENDS AND ISSUES FACING PRODUCER ORGANIZATIONS			
Prepare Terms of Reference for Local Agribusiness Consultant	World Bank Team Leader + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Local Agribusiness Consultant recruited	01/05/2020
Collect basic information and data regarding existing Producer Organizations	(1) Local Project Coordinator + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	List of existing Producer Organizations that are formally registered in Croatia prepared	10/05/2020
Design and Translate Supply Survey Template	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Supply Survey Template prepared (Annex 4)	15/05/2020
Disseminate (by e-mail) Supply Survey	Ministry of Agriculture	Supply Survey sent to all seventeen (17) existing Producer Organizations that are formally registered in Croatia	20/05/2020
Follow-Up (by phone) with Respondents	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	Supply Surveys completed by twelve (12) Producer Organizations, including 3 POs from the fruit and vegetables (F&V) sector, 2 POs from the dairy sector, 4 POs from the beef sector, 2 POs from the industrial crops sector, and 1 PO from the wine sector	25/05/2020
Review Supply Survey Responses	(1) Local Agribusiness Consultant	Responses to Supply Survey Tabulated	01/06/2020
Collect basic information and data of buyers in Strategic Market Segments	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	List of key buyers and organizations in Strategic Market Segments in Croatia prepared, including the HoReCa, Retail, and Public Procurement Segments	15/06/2020
Design and Translate Demand Survey Template	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) Agrifinance Consultant	Demand Survey Template prepared (Annex 3)	25/06/2020

Activity	Responsible	Results	Achieved By
Disseminate Demand Survey Template (by e-mail)	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + Ministry of Agriculture (for Public Procurement Segment)	Demand Survey sent to key buyers and organizations in Strategic Market Segments in Croatia	05/07/2020
Follow-Up (by phone) with Respondents	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	Demand Survey completed by 2 HoReCa organizations, 3 retail businesses, and 29 public institutions involved in public procurement at the level of Sisačko-moslavačka County, Osječko-baranjska County, Zagrebačka County, and Grad Zagreb	25/08/2020
Review Demand Survey Responses	(1) Local Agribusiness Consultant	Responses to Demand Survey Tabulated	01/09/2020
Integrate results of Demand and Supply Surveys in Market Report	(1) International Agribusiness Consultant	Market Report describing micro-level trends and issues prepared	05/09/2020

STEP 3: ASSESSING THE DEVELOPMENT NEEDS OF PRODUCER ORGANIZATIONS

STEP 3A: IDENTIFYING HIGH POTENTIAL PRODUCER ORGANIZATIONS

Review and Select Best Practice Tools for Assessing the Business Organization and Management Capacity of Producer Organizations	(1) International Agribusiness Consultant + (1) International Agrifinance Consultant	ACDI/VOCA's M4 Assessment Tool Selected to Assess Business Organization and Management Capacity of Producer Organizations	05/09/2020
Select Basic Criteria & Assign Weights to Evaluate Business Development Potential of Producer Organizations	(1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Evaluation framework for identifying high potential Producer Organizations prepared (Annex 5)	10/09/2020
Score and Rank Producer Organizations on the basis of Supply Survey Responses	(1) Local Agribusiness Consultant	Eight (8) Producer Organizations engaged in collective marketing activities scored and ranked using the evaluation framework	15/09/2020

STEP 3B: ASSESSING ORGANIZATIONAL DEVELOPMENT NEEDS - BUSINESS ORGANIZATION AND MANAGEMENT

Organize Interviews (by phone) with Leadership of High Potential Producer Organizations to Assess Business Organization & Management Needs	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	Business Organization & Management Needs of three (3) High Potential Producer Organizations Assessed Using ACDI/VOCA's M4 Assessment Tool (Annex 6)	01/10/2020
Organize (virtual) Review/ Feedback Session with each Producer Organization	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Review Sessions (3) with each Producer Organization organized	01/11/2020

STEP 3C: ASSESSING ORGANIZATIONAL DEVELOPMENT NEEDS - KNOWLEDGE, INNOVATION, AND TECHNOLOGY

Design and Translate Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey Tool	(1) Local Agribusiness Consultant + (1) Local AKIS Consultant + (1) International Agribusiness Consultant	<i>Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey Template Prepared (Annex 7)</i>	01/12/2020
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Activity	Responsible	Results	Achieved By
Disseminate Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey (by e-mail) to leadership of all existing Producer Organizations	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) Local AKIS Consultant	<i>Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey</i> disseminated to eight (8) Producer Organizations engaged in collective marketing activities	15/12/2020
Follow-Up (by phone) with Producer Organizations that forwarded Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey to their Members	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) Local AKIS Consultant	AKIS Needs Survey Completed by a total of thirty-two (32) Producers/ Members of eight (8) Producer Organizations	15/01/2021
Review Responses to Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey	(1) Local Agribusiness Consultant + (1) Local AKIS Consultant	Responses to <i>Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Survey</i> Tabulated	20/01/2021
Prepare Assessment Report of Agricultural Knowledge, Innovation, and Systems (AKIS) Needs of Croatian Producer Organizations	(1) Local Agribusiness Consultant + (1) Local AKIS Consultant	<i>Agricultural Knowledge, Innovation, and Systems (AKIS) Needs Assessment Report</i> Prepared (Annex 8)	17/02/2021
STEP 3D: ASSESSING POSSIBLE CAPITAL INVESTMENT MODELS			
Review options for developing aggregation capacities of Producer Organizations operating as Micro Food Hubs	(1) International Agribusiness Development Consultant + (1) International Food Hub Development Consultant	Technical Report on Planning and Implementing Food Hub Investments Prepared	01/10/2020
Review options for developing aggregation capacities of Producer Organizations operating as Micro Dairy Hubs	(1) International Agribusiness Development Consultant + (1) International Dairy Hub Development Consultant	Technical Report on Planning and Implementing Dairy Hub Investments Prepared	01/12/2020
Review options for developing aggregation capacities of Producer Organizations operating as Micro Aquaculture Hubs	(1) Local Aquaculture Hub Development Consultant	Case Study on Planning and Implementing Aquaculture Hub Investments in Croatia Prepared	03/26/2020
STEP 4: FORMULATING OF BUSINESS DEVELOPMENT PLANS FOR PRODUCER ORGANIZATIONS			
STEP 4A: PREPARE INTEGRATED BUSINESS DEVELOPMENT PLAN TEMPLATE			
Review Existing Business Development Planning requirements for local development banks (HBOR), commercial banks, as well as grant support instruments available under the EU Common Market Organization (CMO) and the EU Rural Development Program (EAFRD)	(1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Existing Business Development Plan Templates Collected	15/01/2021
Design and Translate <i>Integrated Business Development Plan</i> Template for Producer Organizations	(1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	<i>Integrated Business Development Plan</i> Template for Producer Organizations prepared (Annex 11) that provides the basis for making the business case ("pitch") for bank loan financing of a specific investment in the future (Annex 12)	20/01/2021

Activity	Responsible	Results	Achieved By
STEP 4B + C + D: COLLECT CONTEXTUAL INFORMATION, PREPARE SWOT ANALYSIS, AND DISCUSS PROPOSED STRATEGY			
Use results of Market Analysis (Step 2) and Organizational Development Needs Assessment (Step 3) to Draft Background Information, Market Analyses, and SWOT Analysis Sections of Business Development Template	(1) Local Agribusiness Consultant + (1) International Agribusiness Consultant	Basic contextual information generated under the pilot project incorporated in the draft Business Development Plan for each Producer Organization	25/01/2021
Organize a work session with each Producer Organization to validate SWOT analysis, collect remaining contextual information related to the PO, and discuss proposed business strategy	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	All contextual information collected and validated with each Producer Organization and key component of proposed business strategy identified (Annex 13)	12/02/2021
Collect farm data from PO members using AGRIVI data templates (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	(1) AGRIVI Technical Advisor + (2) PO Leaders	Filled data templates from PO members received (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	16/02/2021
Set up AGRIVI Platform (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	(1) AGRIVI Technical Advisor	AGRIVI Platform operational	19/02/2021
Organize (virtual) Review/ Feedback Session with leadership of each Producer Organization	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Review Sessions (3) with each Producer Organization organized	23/02/2021
Organize workshops/trainings on AGRIVI Platform for PO leadership and members (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	(1) AGRIVI Technical Advisor	Workshops/trainings on AGRIVI Platform completed (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	24/02/2021
Simulate data for season 2020 (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	(1) AGRIVI Technical Advisor	Data simulations completed (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	08/03/2021
Prepare final performance report using season 2020 data (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	(1) AGRIVI Technical Advisor	Final PO performance reports using season 2020 data prepared (PO <i>Posavina i Moslavina</i> + PO <i>Udruga Brezovica</i>)	10/03/2021
STEP 4E + F + G: PREPARE IMPLEMENTATION PLANS, EVALUATE ECONOMIC IMPACTS, AND FINALIZE STRATEGIC OBJECTIVES AND IMPLEMENTATION PLAN			
Organize a work session with each Producer Organization to collect additional inputs regarding planned activities	(1) Local Project Coordinator + (1) Local Agribusiness Consultant	All proposal regarding planned activities collected	12/03/2021
Assess economic viability of planned activities under different scenarios and prepare revised draft of proposed strategic objectives and implementation plan, including possible KPI targets	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	First drafts of Business Development Plans prepared	19/03/2021

Activity	Responsible	Results	Achieved By
Organize (virtual) Review/ Feedback Session with each Producer Organization	(1) Local Project Coordinator + (1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Draft Business Development Plans validated with each producer organization	26/03/2021
STEP 4H: SHARE FINAL BUSINESS DEVELOPMENT PLANS WITH KPI TARGETS			
Share final draft of Business Development Plans with KPI targets with each Producer Organization	(1) Local Agribusiness Consultant + (1) International Agribusiness Consultant + (1) International Agrifinance Consultant	Business Development Plans with KPI targets completed for three (3) producer organizations	31/03/2021

Annex 3: Questionnaire for Demand Survey

1. Name of your Organization and location:bnm
2. How much of perishable agricultural and food products do you purchase in a given month (in kg)? What are some of the main products?
3. How much of non-perishable agricultural and food products do you purchase in a given month (in kg)? What are some of the main products?
4. Is the procurement process in your organization centralized, or are procurement decisions made by regional/local representations of your organization?
5. Is the procurement process the same for perishable and non-perishable agricultural and food products? If not, how are they different?
6. When you procure agricultural and food products do you store them somewhere or immediately use them? If you store them, where and for how long?
7. What factors determine your agricultural and food procurement decisions – 1) price only, 2) quality only, 3) price and quality, 4) quantity/volume, 5) certification, 6) packaging, 7) location of production, 8) other (specify) [more than one answer is possible]? Are the factors the same for perishable and non-perishable agricultural and food products? If not, how are they different?
8. Do you procure agricultural and food products from intermediaries or directly from producers? If from intermediaries, what intermediaries (name and location - Croatian or foreign)? If from producers, where are the producers located (in the nearby region, other parts of Croatia (specify), outside of Croatia (specify)) and are they organized (e.g. producer organization) (specify)? Is it the same for perishable and non-perishable agricultural and food products?
9. How much of the perishable agricultural and food products that you procure is local (from the nearby region), in %? What limitations do you see for procuring food locally: 1) not enough volume; 2) poor quality; 3) too expensive; 4) don't know how to get in touch with local producers; 5) other reason (explain) [more than one answer is possible]?
10. What buying arrangements/form of payment to sellers do you use: 1) cash upon delivery, 2) payment by invoice within 30 days (or more) upon delivery, 3) forward purchase/contract; 4) other (specify)? How much of your purchases are with long term contracts?
11. Do you use any traceability system in your organization?
12. What technology solutions do you use to manage transactions? Do you use an online platform or online process for procurement? If not, how do you currently interact with sellers?
13. How has the COVID-19 affected the procurement, sales and marketing process of your organization?
14. What are the challenges and opportunities for sourcing domestic agricultural and food products after COVID-19? Is there a potential for increasing the collaboration with PO/Local producers? What obstacles must be removed to increase this collaboration?

Questions specific to procurement of agricultural and food products from Croatian producer groups or organizations:

15. What agricultural and food products, volume and value do you buy directly from the POs? Which key product categories are sourced all year-round and which seasonally? What is the frequency of the purchase orders?
16. Are the domestic agricultural and food products currently bought from the POs in bulk or under some label or brand to distinguish them from other similar products? Is there a Brand/Private Label and how does the process of marketing work?
17. What are the main challenges that you have in dealing with POs?
18. What benefits do you see from buying directly from POs?
19. Would you prefer buying the local agricultural and food products on one digital market platform/site or do you prefer doing it separately (in-house) through own/established channels?

Annex 4: Questionnaire for Supply Survey

Production

1. Number of producers in the PO:
2. Legal structure of the PO:
3. Types of crops/products produced and/or sold by the PO (e.g. milk, yoghurt, cheese, meat cuts, sausages, raw vegetables and fruits, freeze packaged vegetables and fruits). In the case of fruits and vegetables, please specify which fruits and vegetables.
4. Production volumes per key crops/products by the PO members during the 3 last crop seasons/cycles in cattle breeding:
5. For each key crop/product, indicate the beginning and ending month of the harvest season/cycle in cattle breeding:
6. Is there a centralized production planning for the whole PO or is every member/producer deciding separately what to produce?
7. Does the PO do a monitoring/mentoring process for the production of the PO or is the process completely separated for every producer/member?
8. How would you describe the role of PO regarding the production processes in the PO?
9. How the COVID-19 does affect the production process of the PO?

Processing and Marketing

10. What is the role of the PO in assembling production from its members, and conducting post-harvest practices (or processing) and marketing as a group?
11. What, if any, limitations are imposed on the role of the PO due to its current legal structure?
12. Do farmer members of the PO market, process, and/or trade their produce independently and separately or only collectively through the PO? If collectively is the answer- are there professional employees for processing, sale and marketing? How does the process work?
13. What is the total annual value of production sold by the PO in the market?
14. Who are the current buyers? Please use description and % to indicate importance.
15. Does the PO sell directly (e.g. to supermarkets, restaurants, hotels, etc.) or through intermediaries?
16. What are the marketing channels/places of sale used by the PO (e.g. wholesale markets, local farmer markets, directly to large buyers such as supermarkets, hotels, restaurants, etc.)? Please use % to indicate importance.
17. What is the location of the major destination of the products sold by the PO (e.g. cities, towns, domestic vs export destinations, etc.)?
18. For each key crop/product, indicate the beginning and ending month of the marketing season?
19. Are crops/products currently sold in bulk or under some label or brand to distinguish from other similar products?
20. If there is a Brand/Private Label how does the process of processing and marketing work?
21. Does PO also buy and process the products outside the PO? Is there a need/capacity to do so?
22. How the COVID-19 does affect the processing, sale and marketing process of the PO?
23. What is the perspective of processing/sale/marketing after COVID-19?

Business Administration

24. What selling arrangements are currently in place (cash vs contract etc.)?
25. What specific buyer requirements must the products meet (e.g. quality standards, volume, time, certification, value added/processed)? Are you being audited by your customers?
26. What, if any, technology solutions do you use to manage transactions?

27. What is the form of payment in % (e.g. cash upon delivery, payment into the PO bank account, payment by invoice within 30 days (or more) upon delivery)?
28. How the COVID-19 does affect the selling arrangements of the PO?
29. What actions does your PO take to adapt to the new situation and mitigate risks on: cash flow, capital, management, market development, price movements, supply chain...

Access to Services

30. Does the PO provide any of these services to its members? If so, does it charge a fee?
 - Slaughtering?
 - Cleaning?
 - Drying?
 - Sorting/Grading?
 - Processing?
 - Packaging?
 - Freezing?
 - Storage? If yes, specify if it includes cold storage.
 - Transport?
 - Marketing/Promotion?
31. What is the general traffic connection and visibility of your PO?
32. Do you use your own transport for the supply and delivery of your product or do you outsource it? What is the share of transportation costs in the total costs of your organization (%)?
33. Is there a potential/capacity for increasing the services in the future? If so, could you please give a timeline perspective for increase?
34. How the COVID-19 does affect the access to services of the PO?

Annex 5: Evaluation Criteria and Scores for Identifying High-Potential Producer Organizations In Croatia

DIMENSION	EVALUATION CRITERIA	WEIGHTING	CRITERIA SCORE	WEIGHTED SCORE							
		1-5	(0-5) 0 = No 1 = Very Low 2 = Low 3 = Medium 4 = High 5 = Very High	PO Udruga Proizodaca Mlijeka (Dairy)	PO PZ Baby Beef (Livestock)	PO Savez Uzgaivaca Simentatskog Goveda (Livestock)	PO Posavina! (Cereals)	PO OPZ Otok (Cereals)	PO Ecogos (Fruit & Vegetables)	PO Udruga Brezovica (Fruit & Vegetables)	PO Skrljet (Wine)
Membership	Size/Recruitment	1	(0-5)	4	3	5	4	2	4	2	1
	Services for Members	3	(0-5)	0	2	2	2	2	3	4	2
Marketing	Sales through PO/Participation	5	(0-5)	5	0	4	4	2	2	4	1
	Specialized Employees/Personnel	3	(0-5)	1	2	1	2	3	2	3	1
	Brand Presence/Quality	4	(0-5)	0	3	1	0	0	3	2	2
	Turnover/P&L	5	(0-5)	5	0	4	4	2	2	4	1
Money	Accounting Systems/Procedures	4	(0-5)	3	1	3	3	2	3	3	2
	Flexibility for Scale Up/Legal Status	4	(0-5)	2	5	2	3	2	2	3	2
Management	Leadership/Manager	5	(0-5)	2	3	2	2	2	2	3	2
	Vision/Business Plan	3	(0-5)	2	4	2	2	2	2	2	2
	TOTAL SCORE			24	23	26	26	19	25	30	16
				4	3	5	4	2	4	2	1
				0	6	6	6	6	9	12	6
				25	0	20	20	10	10	20	5
				3	6	3	6	9	6	9	3
				0	12	4	0	0	12	8	8
				25	0	20	20	10	10	20	5
				12	4	12	12	8	12	12	8
				8	20	8	12	8	8	12	8
				10	15	10	10	10	10	15	10
				6	12	6	6	6	6	6	6
				93	78	94	96	69	87	116	59
				TOTAL WEIGHTED SCORE							

Annex 6: Comparative Analysis of M4 Assessment Results of Producer Organizations

DIMENSION/EVALUATION CRITERIA	# OF VOTES												SUB-SCORES			
	(1)			(2)			(3)			(4)			PO A	PO B	PO C	
	PO A	PO B	PO C	PO A	PO B	PO C	PO A	PO B	PO C	PO A	PO B	PO C				
1. MEMBERSHIP																
1.1 Recruitment	X		X		X											
1.2 Retention									X	X	X					
1.3 Annual General Meetings (AGM)							X		X		X					
1.4 AGM agenda									X	X	X					
1.5 Feedback			X				X	X								
1.6 Outreach								X		X			X			
1.7 Involvement					X		X	X								
1.8 Fees										X	X	X				
1.9 Services for Members at Risk		X	X	X												
SUB-SCORE 1													28/36 (78%)	28/36 (78%)	22/36 (61%)	
2. MARKETING																
2.1 Participation					X					X		X				
2.2 Buyers		X								X		X				
2.3 Quality		X					X					X				
2.4 Storage	X	X										X				
2.5 Marketing Plan		X					X		X							
2.6 Personnel		X					X		X							
2.7 Marketing Experience		X								X		X				
SUB-SCORE 2													22/28 (79%)	8/28 (29%)	26/28 (93%)	
3. MONEY																
3.1 Accountant				X	X				X							
3.2 Accounting Procedures							X					X	X			
3.3 Strength of Audit		X		X					X							
3.4 Profit and Loss Statement							X		X			X				
3.5 Profitability	X	X	X													
3.6 Bank Account										X	X	X				
3.7 Cash Flow					X		X						X			
3.8 Balance Sheet							X					X	X			
SUB-SCORE 3													21/32 (66%)	22/32 (69%)	26/32 (81%)	
4. MANAGEMENT																
4.1 Legal Status							X	X	X							
4.2 Bylaws		X					X						X			
4.3 Board of Directors					X		X	X								
4.4 Election of Board of Directors							X		X			X				
4.5 Supervisory Committee							X	X	X							
4.6 Business Plan		X					X		X							
4.7 Manager							X	X	X							
4.8 Standard Operating Procedures	X	X							X							
4.9 Recordkeeping							X	X	X							
SUB-SCORE 4													25/36 (69%)	23/36 (64%)	27/36 (75%)	
TOTAL SCORE													96/132 (73%)	81/132 (61%)	101/132 (76%)	

Note: PO A = PO Posavina i Moslavina / PO B = PO SUSG / PO C = PO Udruza Brezovica

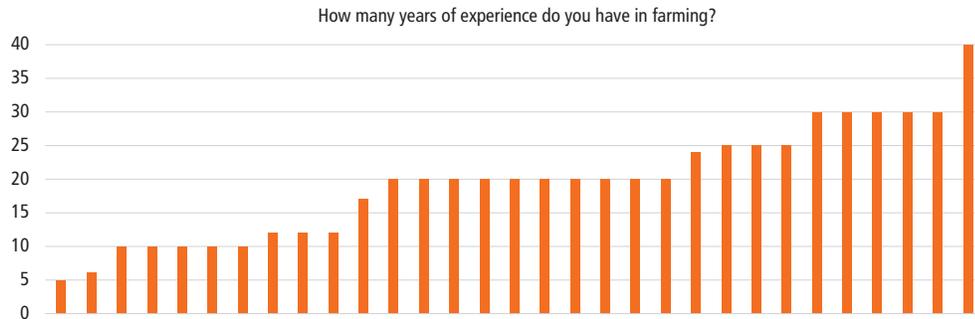
Annex 7: Questionnaire for Knowledge, Innovation, and Technology Survey

1. Are you satisfied with your existing knowledge about production (use of inputs, technologies, good practices) and marketing (how to reach markets)?	Yes	No
2. Where do you feel you lack knowledge the most? Select all that apply.		
<ul style="list-style-type: none"> 1) Management (including bookkeeping) 2) Sales and Marketing 3) Use of better/new inputs/technologies 4) Soft business skills (communication/leadership/presentation/teamwork...) 5) Technical knowledge in production: <ul style="list-style-type: none"> a. Crop management b. Plant protection c. Soil management d. Fodder production e. Animal nutrition f. Animal breeding/genetics g. Farm management h. Value chain establishment and support i. Vegetable production j. Greenhouse production k. Digital/precision agriculture l. Climate smart approaches m. Other: 		
3. How would you like to improve your knowledge? List specific actions that could be taken.		
<ul style="list-style-type: none"> a) b) c) 		
4. How do you normally acquire knowledge and information about your production decisions? Select all that apply.		
<ul style="list-style-type: none"> a) Other producers (within your producer organization) b) Other producers (outside of your producer organization) c) Books d) Magazines e) TV f) Radio g) Internet (web sites/youtube/forums) h) Input Suppliers i) Advisory services j) Other: 		
5. Where do you get your market information from (including of prices)? Select all that apply.		
<ul style="list-style-type: none"> a) Other producers (within your producer organization) b) Other producers (outside of your producer organization) c) Books d) Magazines e) TV f) Radio g) Internet (web sites/youtube/forums) h) Input Suppliers i) Advisory services j) Buyers k) Other: 		

6. Do you use the services of the public farm advisory service?	Yes	No
7. If yes, what is your level of satisfaction of the services?		
1=not satisfied; 2=somewhat satisfied; 3=satisfied; 4=very satisfied		
8. Please shortly explain the chosen level of satisfaction with the farm advisory service.		
9. If you are not using services of the public farm advisory service, please briefly explain why?		
10. Do you use private advisory services/experts/consultants?	Yes	No
11. If yes, what is your level of satisfaction of the services?		
1=not satisfied; 2=somewhat satisfied; 3=satisfied; 4=very satisfied		
12. Please shortly explain the chosen level of satisfaction with private advisory service/experts/consultants.		
13. How do you find out about private advisory service/experts/consultants?		
14. Are you satisfied with the yields/rates of return generated by the current technologies you use?	Yes	No
15. If NO, which solutions/actions in your opinion could contribute to improvements?		
a) b) c)		
16. Have you used any innovation (new inputs/technologies/practices) in your production and/or marketing in the past 1-2 years?	Yes	No
17. If yes, please specify below, what kind of innovations?		
18. Have you participated in any training last year (2019)?	Yes	No
19. If yes, please specify below, what kind of training and in how many times?		
20. In what innovative solutions would you like to invest in the future to improve your production and/or marketing?		
21. In your opinion, what are the main constraints/challenges that farmers are facing with regards to using new knowledge and innovation in agriculture?		
22. In your opinion, what needs to be done to enable better knowledge sharing and use of innovation in agriculture?		

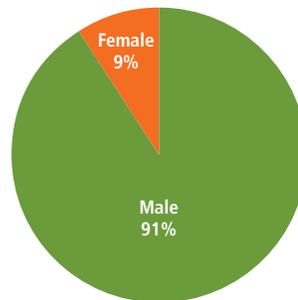
Annex 8: Knowledge, Innovation, and Technology Survey Results

1. Experience in agriculture production

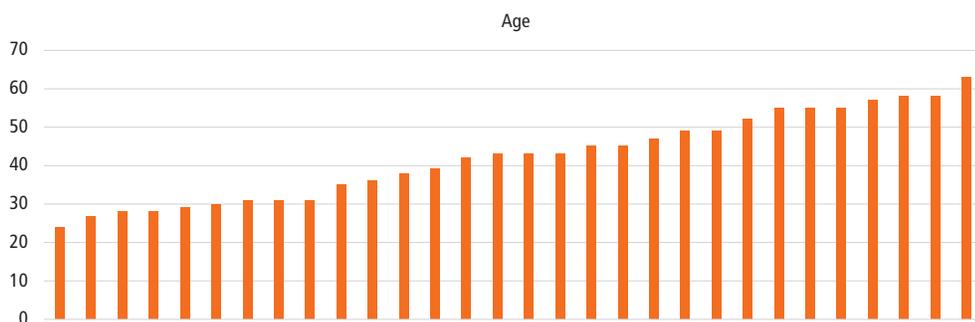


Average: 19.45 years

2. Gender of respondents



3. Age of respondents

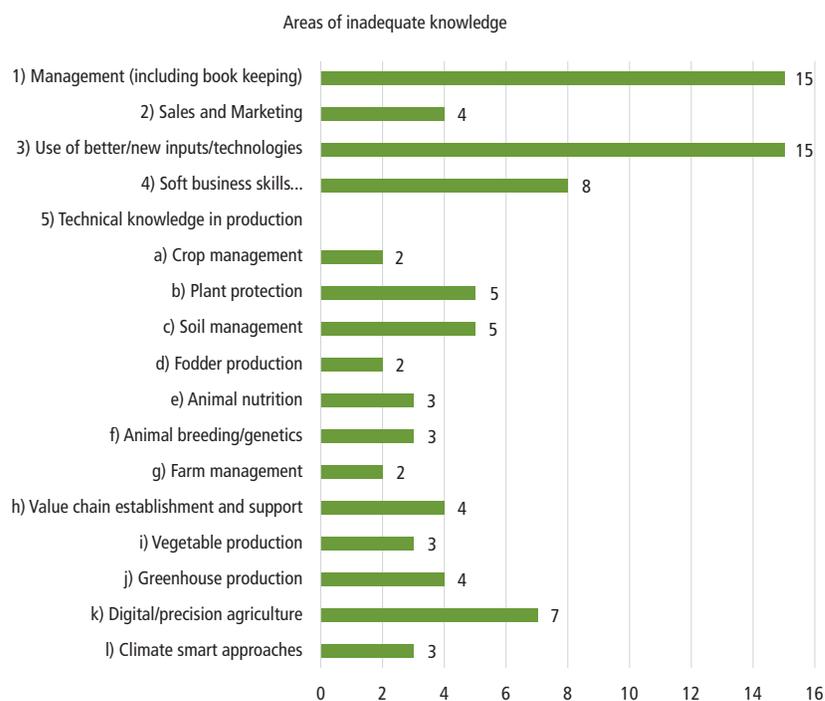


Average age 42.2 years

4. Are you satisfied with your existing knowledge about production (use of inputs, technologies, good practices) and marketing (how to reach markets)?



5. Where do you feel you lack knowledge the most?

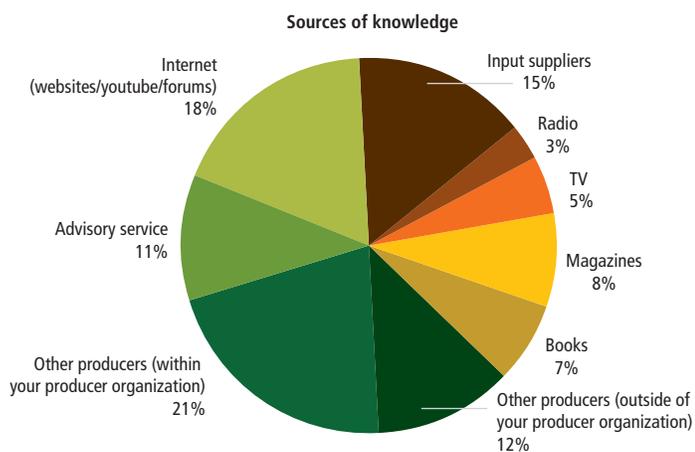


6. How would you like to improve your knowledge? List specific actions that could be taken (all answers listed)

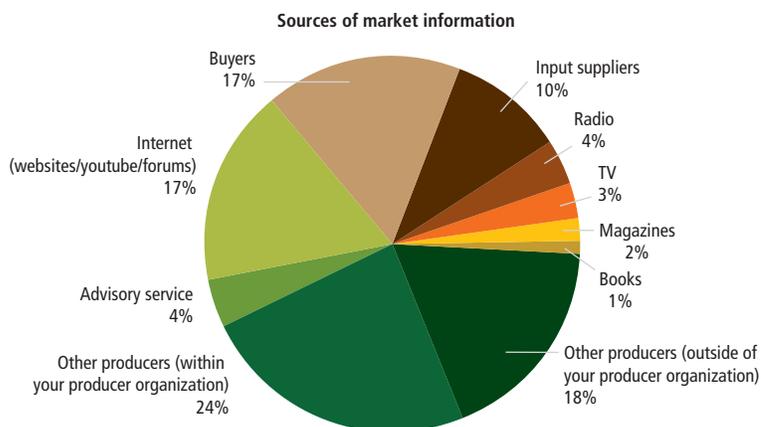
- New technology, direct sales
- Crop management; use of better/new inputs/technologies
- Use of new technologies
- More efficient tillage, precise protection against diseases and weeds, improvement of storage and distribution of goods
- New technology - digital agriculture
- New technology
- Sales
- Use of new technology
- Business skills
- Use of new technology
- Marketing

- Communication
- Plant protection, soil management
- To have someone who represents us on the market
- Plant protection
- Management, better use of inputs
- Better use of new technologies
- Update and reset of knowledge
- Continuous education provided by academic community
- Pedology, irrigation, composting
- Better use of resources
- Plant protection, feed production, animal nutrition

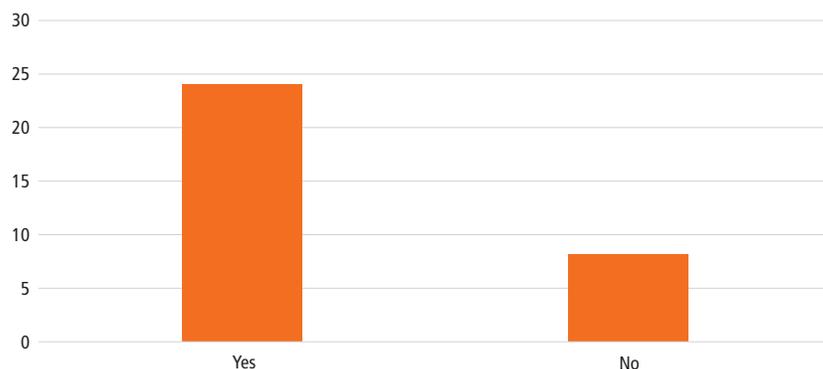
7. How do you normally acquire knowledge and information about your production decisions?



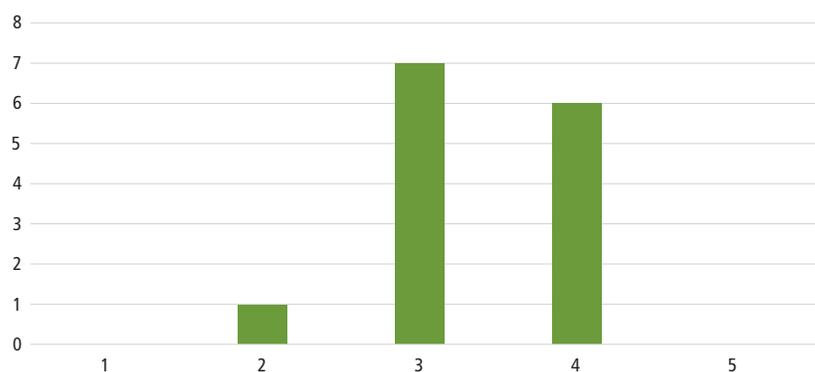
8. Where do you get your market information from (including of prices)?



9. Do you use the services of the public farm advisory service?



If yes, what is your level of satisfaction of the services (1-5)?



Please shortly explain the chosen level of satisfaction with the farm advisory service (all answers listed)

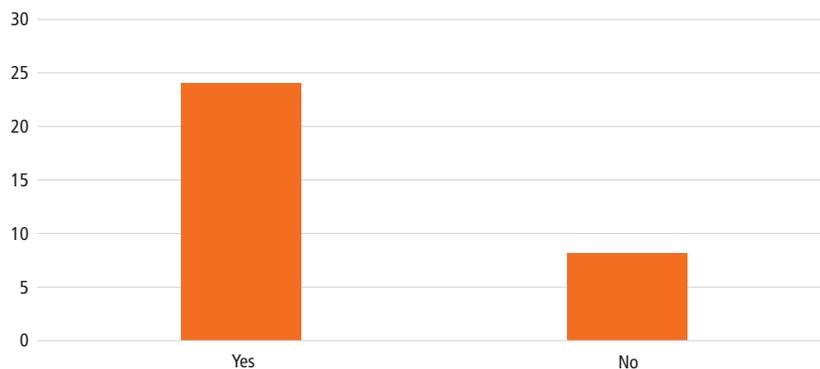
- There is always room for improvement
- Always available and professional
- Praise goes to Damir Pejaković and Tatjana Radiković from the Advisory Service. Apart from them, the advisory service has disappeared from the life of the manufacturer.
- Always available and professional
- Service very good, hardly available because not many advisors in our region
- Service is not satisfactory
- I am satisfied with the service, but it should be even more accessible
- They answer questions they know the answers to, but they know few answers
- The answers I get do not solve my problems
- I am satisfied
- AS service my needs according to tenders
- Always available and professional
- Difficult communication with the advisory service
- They support in production but not in sales
- They provided answers on requested questions
- Lectures about innovations in agriculture
- Satisfied with lectures and information about laws and regulations
- Advisors are not specialized so I can only ask them about administrative. I know much more about production than they do, which is understandable.

- They can offer useful administrative information
- They only provide basic, obligatory lectures related to ag payments requirements
- They should spend more time on field

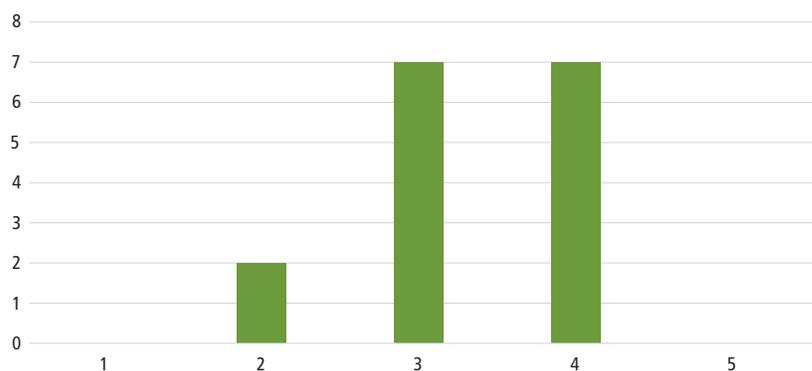
If you are not using services of the public farm advisory service, please briefly explain why? (all answers listed)

- No acceptable public advisory in Koprivničko-Križevačka county
- They are not proactive, and when asked something you get less information than you knew yourself
- The answers I get do not solve my problems
- The answers I get do not solve my problems
- Maybe I will start using the service, I was not too interested until now about public advisory services
- No need for advisory services
- No need for advisory services
- No need for advisory services
- They are often not available
- Lack of advisors, no time for advising

10. Do you use private advisory services/experts/consultants?



If yes, what is your level of satisfaction of the services?



Please shortly explain the chosen level of satisfaction with private advisory service/experts/consultants (all answers listed)

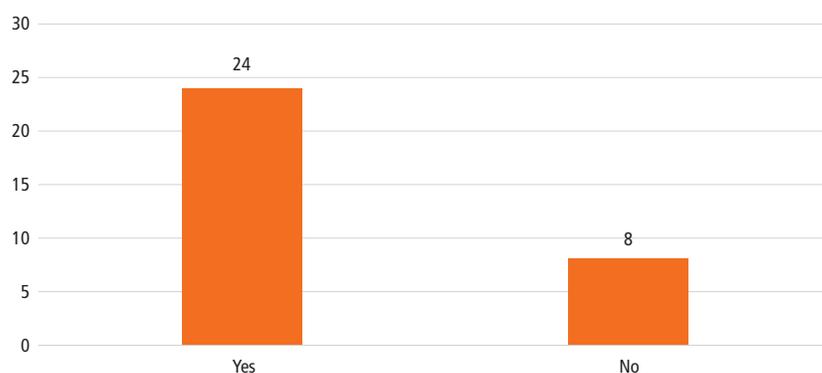
- Consultants used for RR measures
- Very high level of pro collaboration
- When applying to some of the competitions we passed successfully

- After counseling I manage to choose the most favorable solution
- Lot of money for small knowledge
- Appropriate decisions on plant protection
- Under private experts I consider agronomists who are providing help and information occasionally, free of charge
- Information about innovations in agriculture b) implementation of agreed projects
- They try to answer to all critical questions in order to maintain relations

How do you find out about private advisory service/experts/consultants? (all answers listed)

- By recommendation
- By recommendation from other producers
- For consultants we learned from the advisory service and other breeders
- Internet, other producers
- Private recommendation. Internet, advisory service
- Other producers
- From other producers
- By research
- Other producers
- They are often friends and other people we know
- Through friends
- Other farmers
- Private advisors call us and offer services, vehicle for public advisors we have to call
- Through other producers
- Other producers, internet

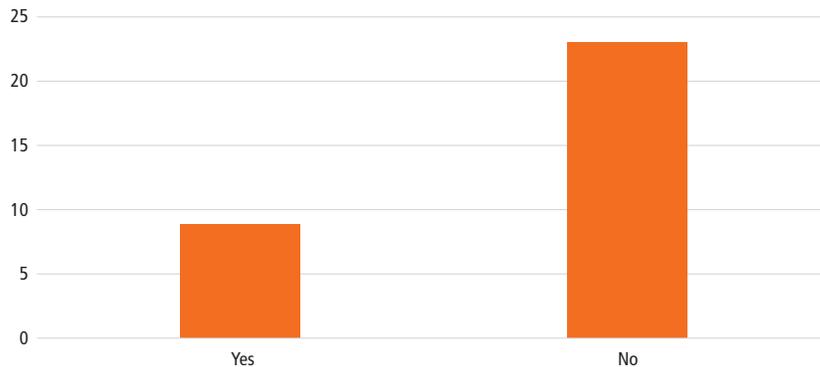
11. Are you satisfied with the yields/rates of return generated by the current technologies (machinery, equipment, tools, inputs, digital, etc.) you use?



If NO, which solutions/actions in your opinion could contribute to improvements? (all answers listed)

- Newer machines
- Cheaper inputs
- Modern technology; further training
- Cooperation, lower prices of machinery
- New inputs, seedlings
- Lower prices of inputs
- Slow administration b) promised return (subsidies)

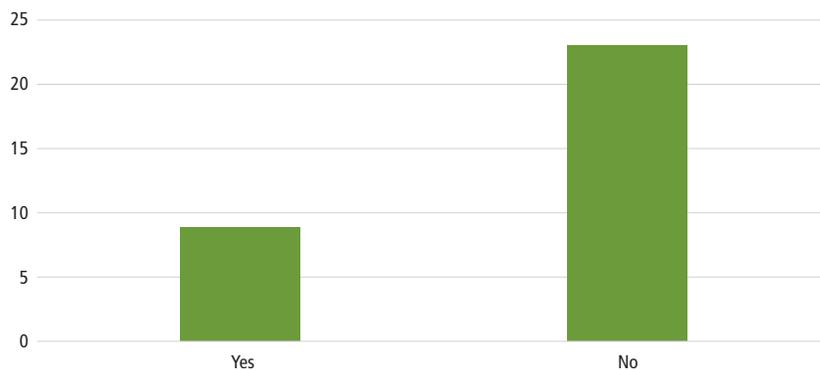
12. Have you used any innovation (new inputs/technologies/practices) in your production and/or marketing in the past 1-2 years?



If yes, please specify below, what kind of innovations? (all answers listed)

- Procurement of higher quality tillage machines
- Satellite tractor guidance, fertilizer spreader with balance - GPS control, sprayer - GPS controlled operation
- Crop sprayer with navigation
- Precision farming
- Availability of new machines
- New machines - new way of doing business
- Machine pruning and other works
- Use of treated seeds

13. Have you participated in any training last year (2019)?



If yes, please specify below, what type of training (course, on-farm, etc.), delivered by public or private sector and how many hours per training type? (all answers listed)

- Health and correction of dairy cows, performed by the private sector for 20 hours
- Renewable energy sources. The process of drying, processing and storage of cereals and oilseeds.
- Pesticide application training, 3h training
- Organic production, 6 hours
- Agriculture institute Osijek and advisory service
- Previously, organic production seminars organized by advisory services
- Field days for cereals
- Obligatory seminar provided by advisory service

- Obligatory seminar provided by advisory service
- Private sector training, 12 hours

14. In what innovative solutions would you like to invest in the future to improve your production and/or marketing?

(all answers listed)

- Production automation
- Modern technology
- Accommodation and feeding
- Of dairy cows, heifers and calves; milking machines
- Modern technology that would facilitate and reduce the production cost
- Investment in dryers and warehouses
- Investment in dryers and warehouses
- Modern machinery, storage facilities
- Use of new inputs
- New mechanization
- Better mechanization
- Modern, more precise and more efficient machines and equipment
- Better technology
- Value chain support
- Marketing the products of smaller producers, more seminars, incentives for producers
- Value chain support
- Marketing
- Marketing, new machines, better communication
- Investments in domestic production
- Modernization of mechanization and digitalization of vine cellar
- Sales and marketing. We need help in placing on the market
- Fruit cooler
- Protection nets in orchard
- Innovative, quality seeds and plant protection products
- Plant protection and fertilization
- Manure management
- Micronutrients, fertilization, precision agriculture
- Irrigation, sustainable energy sources
- Production and use of own dairy products
- Cheese production

15. In your opinion, what are the main constraints/challenges that farmers are facing with regards to using new knowledge and innovation in agriculture? (all answers listed)

- Digital illiteracy
- Prices
- The general poor condition contributes to the lack of interest of producers in acquiring new knowledge, even available
- Technology too expensive
- Poor information and financial cost of introducing innovations
- Purchase price is too high
- Distrust of new technologies
- Access to EU funds
- Climate change
- Investment price too high; equipment servicing
- Producers need new know-how and technology; more involvement
- Producers need new know-how
- Inconsistent communication; "big" promises
- Inconsistent interests
- Inconsistent realization

- Financial assets
- Huge administrative apparatus
- Slow application of new solutions
- Status of producers and lack of innovations
- Age limitations
- Too frequent changes of ag policy, uncertainty with return of investment
- Inadequate promotion of new technologies, information are not coming to the field
- Prices, access to capital, slow returns
- Administration. Lack of time, lack of machinery and personnel

**16. In your opinion, what needs to be done to enable better knowledge sharing and use of innovation in agriculture?
(all answers listed)**

- The work of advisory services in the field
- Experts in all counties directly with the Agri producers
- Better professional support
- To send professional people to the field to work with producers
- Meetings within the PO have a very positive impact on every aspect
- To ensure a quality advisory service available to all
- Knowledge exchange is very good, innovations should be presented through field presentation
- Greater information, innovations affordable
- More free lectures and training by the public advisory service
- Better presentation of new technologies
- I think people know enough, and for those who don't know I think they should be educated by advisory service
- Education and financial support
- Better interaction among farmers; availability of materials, advice, seminars
- Better interaction between producers, farms and PO
- Increase domestic production; decrease import
- Organization of courses and seminars
- Organization of courses and seminars
- Financial assets
- Less administration and simpler procedures
- Common, national approach to fruit production, general recommendations on seed and seedlings and available pesticides
- Improve communication between innovations and producers
- More lectures about innovations and demonstrations
- To make production more profitable, so young farmers can invest in future
- Presentation of new technologies on field level, educations adjusted to the work season, better connection between theory and practice, more demonstration activities, advisors who are not bureaucrats but experts
- Educations, in winter times by experience educators with empirical knowledge
- On field advisory services

Annex 9: List of Examples of Micro Food Hubs

No.	Name	Country	# Farmers Involved	Business Model	Legal Form	Products	Remarks
1	'La Ruche Qui Dît Oui' (https://larucheiditoui.fr/fr)	France	10,000 +	BtC	Private Company	Multi-Products	Digital marketplace platform connects local farmers, consumers, and "hosts" to form communities (Ruches or Assemblies) that come together once a week at specific pick-up locations to exchange products and build relationships.
2	'Le Goût d'ici' (https://www.legoutdici.com/)	Bretagne, France	27	BtC	Non-Profit (Association)	Multi-Products	A purchasing system based on the 'box scheme' model where consumers order their products on the Internet or by phone and then collect the box of products from the farm.
3	'Laugenrind' (http://www.laugenrind.com/cms/de/laugenrind.html)	Southern Tyrol, Italy	30	BtB	Basic Cooperative	Beef	Faced with the decline of the milk market in Val di Non in the province of Bolzano, a cooperative of farmers, which had already created a quality program for growing, feeding and breeding the traditional 'Alpine Grey' breed of cattle, developed, with support from the Local Action Group (LAG) Alta Val di Non, an organic, quality brand of processed meat named 'Laugenrind' offering sausages, goulash and Bolognese ragù for the local retail and HoReCa sector.
4	Firsthand Foods (https://firsthandfoods.com/)	North Carolina, USA	30	Hybrid	LLC	Beef, Pork, Lamb	The hub services the HoReCa and retail segments while also providing home delivery services and organizing "pop-up" sales at pick-up locations.
5	La Montanita Coop (https://lamontanita.coop/aboutus/)	Albuquerque, Gallup & Santa Fe, USA	400+	Hybrid	Basic Cooperative	Multi-Products	Through the Co-op Distribution Center, the consumer cooperative encompassing 16,000 families, sources from 400+ local organic producers to sell products at its (4) stores owned by the Cooperative in Albuquerque, Gallup, and Santa Fe as well as local restaurants and commercial kitchens.
6	FruitMasters (https://fruitmasters.com/organization/about-fruitmasters/)	Gelderland, The Netherlands	400+	BtB	Basic Cooperative	Fruit	The producer organization sells (hard & soft) fruit to national and international trading houses (wholesalers) and retailers through its own facility and logistics centre in the Netherlands.

No.	Name	Country	# Farmers Involved	Business Model	Legal Form	Products	Remarks
7	Polfrut (http://www.polfrut.pol-agro.eu/)	Grojecko-Warecki, Poland	20	BtB	LLC	Fruit, Vegetables	The producer organizations is EuroGAP certified and exports a large volume and variety of fruits and vegetables (10,000-15,000 tons) to retail chains in both in the EU (Lithuania, Latvia, Estonia, Germany, Finland), UK, and neighboring countries (Russia, Belarus).
8	Alice Nero (https://int.alcenero.com/pages/noi)	Emilia Romagna, Italy	1,000+ farmers in Italy, 10,000+ farmers in Central & South America, 400+ processors	BtB	Joint Stock Company (JSC)	Multi-Products (Organic Speciality Products)	The JSC brings together producer cooperatives, industrial processors, and farming entrepreneurs under a single brand ("Alice Nero") to produce a broad range of organic specialty products for retail chains, including processed products (pasta, rice, tomato puree and pulp, vegetables, legumes and puréed soups, biscuits and fruit juices, preserves, honey, plant-based beverages, baby foods, yoghurts, ice creams), fresh produce (fruit, vegetables), and organic Fairtrade products sourced from Latin America (coffee, chocolate, cocoa, brown sugar, Basmati rice and tea).
9	Georgian Farmers' Association (GFA) (https://gfa.org/ge/en/)	Tbilisi, Georgia	400+	BtB	Private investor, contractual relation with farmers' association	Fresh Produce	Under the contractual agreement between GFA and the private distributor, which rents a 2,000 sq m warehouse between Tbilisi and main production areas, GFA manages quality controls, linkage with and selection of local producers, and capacity building/training programs for producers, whereas the distributor takes responsibility for all logistics aspects (transport, storage, aggregation, picking, sorting, packaging) related to the marketing of the fresh produce to the HoReCa sector in Tbilisi. GFA receives 10% of the total profits generated by the distributor.
10	Distrikempen (http://www.purekempen.be/extra/distrikempen/)	Antwerp, Belgium	8	BtB	Private investor, contractual relation with farmers	Dairy, Charcuterie, Fruit, Vegetables	Contractual agreements between private distributor and regional producers who participate in a regional brand ("Pure Kempen") for (same day) collection and delivery to local retailers.
11	World Bank Agriculture Modernization Project (https://projects.worldbank.org/en/projects-operations/project-detail/PT168014)	Resen, Strumiça, & Skopje, North Macedonia	700 (Est.)	BtB	Concession	Fruit, Vegetables	Public ownership of hub (regional and local authorities) with management delegated to a private, a public/private operator, or a producer organization. Resen hub will aggregate apple production and deliver to retail chains and wholesalers in new Skopje agri-food platform (macro-food hub), while Strumiça hub will aggregate fresh produce from local producers and deliver to export companies and retail chains.

Annex 10: List of Examples of Micro Dairy Hubs

No.	Name	Country	# Farmers Involved	Business Model	Legal Form	Products	Remarks
1	Arla Foods (https://www.arla.com/)	Denmark, Sweden, Germany, Belgium, United Kingdom, Luxembourg, The Netherlands	13,500	Farm to Market	Cooperative, owner of LLC	Broad portfolio of consumer products and industrial products	Also operating in local partnerships (mostly joint ventures), outside of the home market.
2	FrieslandCampina (https://www.frieslandcampina.com/)	The Netherlands, Germany, Belgium	17,000	Farm to Market	Cooperative, owner of LLC	Broad portfolio of consumer products and industrial products	Also operating in local partnerships (mostly joint ventures), outside of the home market.
3	Dairy Crest Direct (https://www.dairycrestdirect.co.uk/)	United Kingdom	330	Farm to Industry	Association	Raw milk, sold to Davidstow Creamery (owned by Saputo)	Farms with average supply >1 mio kg annual in Cornwall and Devon.
4	Noorderland Melk (https://www.noorderlandmelk.nl/)	The Netherlands	300+	Farm to Industry	Cooperative	Raw milk, sold to A-Ware. Several market concepts based on farm differentiation	Family farms with average supply >1 mio kg annual dominant, Northern part of The Netherlands.
5	Lembang (https://www.youtube.com/watch?v=ijTq0q155_J)	Indonesia	4,000+	Farm to Industry	Cooperative	Raw milk sold to several processors	Smallholders in West Java.
6	OMSCO (https://www.omSCO.co.uk/)	United Kingdom	250	Farm to Market	Cooperative	Organic, branded as Organic Kingdom	Large volume: 250,000 tons. Strong market position, managing 65% of UK's organic milk.
7	Rouveen Kaasspecialiteiten (https://www.rouveen-kaasspecialiteiten.nl/en/)	The Netherlands	250	Farm to Market	Cooperative	Cheese specialties, conventional and organic	Volume ca. 200,000 tons.
8	CONO Kaasmakers (https://www.cono.nl/)	The Netherlands	440	Farm to Market	Cooperative	Branded cheese with sustainability claim. Strong regional profile	Volume 400,000 tons.
9	Mukurwe-ini Wakulima Dairy Company (https://www.wakulimadairy.co.ke/)	Kenya	1,000+	Farm to market	Cooperative, owner of LLC	Fresh milk, yogurt	Multi-purpose co-operative: dairy, feed and SaCo (Savings & Credit).

No.	Name	Country	# Farmers Involved	Business Model	Legal Form	Products	Remarks
10	Delflandshof (https://www.delflandshof.nl/)	The Netherlands	5	Hybrid	Cooperative	Fresh milk, yoghurt. 'Circular' and local claim, scope: city of Rotterdam & vicinity	Support from local government, still small volume. Surplus milk delivered to FrieslandCampina.
11	Boeren van Amstel (https://www.boerenvanamstel.nl/)	The Netherlands	21	Hybrid	Cooperative	Fresh milk, yoghurt. Regional and nature conservation claim, scope: city of Amsterdam	Start-up, still small volume. Raised EUR 300,000 through crowdfunding. Surplus milk delivered to FrieslandCampina.
12	De Fryske (https://defryske.fr/en/)	The Netherlands	5	Hybrid	Private investor, contractual relation with farmers	Authentic cheese. Regional and nature conservation claim	Scale-up. Still small volume. Recently raised EUR 250,000 additional financing through crowdfunding.

Annex 11: Business Development Plan Template for Producer Organizations

I. Background Information

PROFILE OF THE PRODUCER ORGANIZATION	
Introduction/Brief description of the businesses of the existing Producer Organization	PO (<i>Name</i>) is a (<i>Type of Organization</i>) in the (<i>Sub-Sectors</i>) Sectors. As of (<i>Month/Year</i>), the PO has (<i>Number</i>) members, production on a total of (<i>Number</i>) hectares/livestock units, and annual turnover of HRK (<i>Number</i>)/€ (<i>Number</i>). The main products sold by the PO in (<i>Year</i>) include (i) (<i>Number</i>) Tons of (<i>Product</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>); (ii) (<i>Number</i>) Tons of (<i>Product n+1</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>); (iii) (<i>Number</i>) Tons of (<i>Product n+2</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>); (iv) (Etc.)
In case of a new Producer Organization: Previous business activities of members of the Producer Organization, including an overview of the average annual value of marketed production of members of the Producer Organization at least 3 years before joining the Producer Organization	<ul style="list-style-type: none"> • (<i>Member Name</i>) has been engaged in (<i>Activities</i>) in the period (<i>Dates</i>). The average annual value of marketed production during (<i>Last 3 years before joining the Producer Organization</i>) was HRK (<i>Number</i>)/€ (<i>Number</i>). • (<i>Member Name n+1</i>) has been engaged in (<i>Activities</i>) in the period (<i>Dates</i>). The average annual value of marketed production during (<i>Last 3 years before joining the Producer Organization</i>) was HRK (<i>Number</i>)/€ (<i>Number</i>). • (<i>Member Name n+2</i>) has been engaged in (<i>Activities</i>) in the period (<i>Dates</i>). The average annual value of marketed production during (<i>Last 3 years before joining the Producer Organization</i>) was HRK (<i>Number</i>)/€ (<i>Number</i>). • (Etc.)
History/Emergence of the Idea of Founding the existing Producer Organization	PO (<i>Name</i>) was founded in (<i>Year</i>) in order to (<i>Justification for Founding the PO</i>). At the time of its establishment, the PO had (<i>Number</i>) members. It has since expanded its membership to (<i>Number</i>) members today.
Legal Status & Shareholder Structure of the existing Producer Organization	PO (<i>Name</i>) is legally registered as a (<i>Legal Status</i>). Its shareholders and their respective shares include (<i>Name, Share %</i>), (<i>Name n +1, Share %</i>), (<i>Name n+2, Share %</i>), (Etc.)
Geographical location of the existing Producer Organization	The PO is stationed in (<i>Location of Headquarters</i>) from where it covers the (<i>domestic and/or international market destinations</i>) market(s). Its members are located in (<i>Location, Number of Members</i>), (<i>Location n +1, Number of Members</i>), (<i>Location n+2, Number of Members</i>), (Etc.)
Existing administrative and business assets, including land, infrastructure, and equipment, owned/rented by the Producer Organization	The administrative headquarters (<i>Owned/Rented</i>) by the PO concerns a (<i>Number</i>) m ² (<i>Building/Space</i>) in (<i>Location</i>). The (<i>Building/Space</i>) serves as (<i>Functions</i>). Key business infrastructure and equipment (<i>Owner/Rented</i>) by the PO includes (i) (<i>Description of infrastructure/equipment</i>) located in (<i>Location</i>); (ii) (<i>Description of infrastructure/equipment n+1</i>) located in (<i>Location</i>); (iii) (<i>Description of infrastructure/equipment n+2</i>) located in (<i>Location</i>); and (Etc.)

II. Market Analysis

A. MACRO TRENDS (filled in by Technical Advisor)

Industry Size, Growth Rate, Projections	
Industry Structure and Dynamics	
Key Players	
Long-term Prospects	

B. MARKET SEGMENTATION

What is the definition and size of the market segment(s) you focus on?	The PO currently produces (<i>Fresh/Stockable</i>) products for buyers in the (<i>HoReCa/Retail/Wholesale/Public Procurement/Food Processing/Bioeconomy/Other</i>) sector(s) in (<i>domestic and/or international market destinations</i>). Consumers in this market use agri-food products mainly for (<i>Daily Use/Convenience/Indulgence</i>). According to (<i>Source</i>), the overall size of this market segment(s) is estimated at HRK (<i>Number</i>)/€ (<i>Number</i>) in (<i>Year</i>).
How many customers do you have, who are the main buyers (top 3-5) among them, and how much do they buy?	The PO currently serves (<i>Number</i>) of buyers in the (<i>domestic and/or international market destinations</i>) market(s). The main buyers and their respective purchase volume and value include (i) (<i>Buyer Name</i>), which purchased (<i>Number</i>) Tons of (<i>Product</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>) in (<i>Year</i>); (ii) (i) (<i>Buyer Name n + 1</i>), which purchased (<i>Number</i>) Tons of (<i>Product</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>) in (<i>Year</i>); (iii) (<i>Buyer Name n + 2</i>), which purchased (<i>Number</i>) Tons of (<i>Product</i>) worth HRK (<i>Number</i>)/€ (<i>Number</i>) in (<i>Year</i>); and (Etc.)
How do these customers make purchase decisions and conduct transactions?	The main customers currently purchase products from the PO (<i>directly/through intermediaries located in x</i>). The transactions are conducted in (<i>person/physical markets/digital marketplaces</i>) using (<i>cash upon delivery/payments by invoice within 30 days or more upon delivery/forward purchases/long term contracts</i>). The purchasing decisions (<i>are/are not</i>) guided by private/voluntary standards (<i>specify, if applicable</i>).
What type and number of customers that currently do not buy from you could be interested in buying from you in the short term?	The PO could potentially reach (<i>Number</i>) of additional customers in the (<i>HoReCa/Retail/Wholesale/Public Procurement/Food Processing/Bioeconomy/Other</i>) sector(s) in (<i>domestic and/or international market destinations</i>) over the next 1-2 years.

C. COMPETITOR ANALYSIS

Who are your main competitors (top 3-5) in the market?	The main competitors of the PO include (i) (<i>Competitor Name</i>) in (<i>domestic and/or international market destinations</i>); (ii) (<i>Competitor Name n+1</i>) in (<i>domestic and/or international market destinations</i>); (iii) (<i>Competitor Name n+2</i>) in (<i>domestic and/or international market destinations</i>); (iv) (Etc.)
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D. SWOT ANALYSIS	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> () Product Quality/Performance: () Product Origin: () Product Range/Variety: () Complementarity/Synergy of Activities: () Customer Service: () Low Cost Operations/Production: () Efficient Internal Systems/Business Processes: () Product Availability/Scale: () Advanced Technology: () Intellectual Properties: () Flexibility/Customization: () Research, Development, Innovation: () Geographic Location: () Members: () Employees/Knowledge & Skills: () Leadership: () Natural Resources: () Image/Perceptions/Reputation: () Brand Recognition: () Strategic Partnerships/Relationships: () Distribution Network/Reach: () Delivery Time/Speed/Reliability: () Pricing: () Assets: () Capital Cost/Access to Finance: () Compliance with Quality Standards & Certifications: () Organizational Culture/Attitude: () Other: 	<ul style="list-style-type: none"> () Product Quality/Performance: () Product Origin: () Product Range/Variety: () Complementarity/Synergy of Activities: () Customer Service: () Low Cost Operations/Production: () Efficient Internal Systems/Business Processes: () Product Availability/Scale: () Advanced Technology: () Intellectual Properties: () Flexibility/Customization: () Research, Development, Innovation: () Geographic Location: () Members: () Employees/Knowledge & Skills: () Leadership: () Natural Resources: () Image/Perceptions/Reputation: () Brand Recognition: () Partnerships & Relationships: () Distribution Network/Reach: () Delivery Time/Speed/Reliability: () Pricing: () Assets: () Capital Cost/Access to Finance: () Compliance with Quality Standards & Certifications: () Organizational Culture/Attitude: () Other:
THREATS	OPPORTUNITIES
<ul style="list-style-type: none"> () Political/Policy: () Social: () Economic: () Market/Industry: () Technological: () Legal: () Environmental: 	<ul style="list-style-type: none"> () Political/Policy: () Social: () Economic: () Market/Industry: () Technological: () Legal: () Environmental:

III. Strategy

A. MISSION

Why are you in business/creating the Producer Organization?

The purpose of our PO is to *(adapt production and products to market requirements/ jointly market products/establish common rules on production/develop business and marketing skills/facilitate innovative processes/jointly purchase inputs/other)* for our members.

B. LONG-TERM GOALS

Where do you envisage the Producer Organization to be in 5 years from now?

In 5 years from now, our PO will have delivered (describe value/benefit/impact to the members, employees, customers, local community, and/or environment in an inspiring manner).

C. STRATEGIC POSITIONING

	CURRENT	FUTURE
What type of customers do you serve?	<input type="checkbox"/> Individual: <input type="checkbox"/> HoReCa: <input type="checkbox"/> Retail: <input type="checkbox"/> Wholesale: <input type="checkbox"/> Public Procurement: <input type="checkbox"/> Food Processing: <input type="checkbox"/> Bioeconomy: <input type="checkbox"/> Other:	<input type="checkbox"/> Individual: <input type="checkbox"/> HoReCa: <input type="checkbox"/> Retail: <input type="checkbox"/> Wholesale: <input type="checkbox"/> Public Procurement: <input type="checkbox"/> Food Processing: <input type="checkbox"/> Bioeconomy: <input type="checkbox"/> Other:
What customer needs do you address?	BtB <input type="checkbox"/> Product Availability/Scale: <input type="checkbox"/> Product Range/Variety: <input type="checkbox"/> Flexibility/Customization: <input type="checkbox"/> Product Quality: <input type="checkbox"/> Knowledge & Skills: <input type="checkbox"/> Delivery Time/Speed/Reliability: <input type="checkbox"/> Supply Chain Risk Reduction: <input type="checkbox"/> Reach: <input type="checkbox"/> Strategic Partnership/Relationship: <input type="checkbox"/> Information: <input type="checkbox"/> Traceability: <input type="checkbox"/> Reduce Transaction Time/Costs/Efforts: BtC <input type="checkbox"/> Daily Use: <input type="checkbox"/> Convenience: <input type="checkbox"/> Indulgence:	BtB <input type="checkbox"/> Product Availability/Scale: <input type="checkbox"/> Product Range/Variety: <input type="checkbox"/> Flexibility/Customization: <input type="checkbox"/> Product Quality: <input type="checkbox"/> Knowledge & Skills: <input type="checkbox"/> Delivery Time/Speed/Reliability: <input type="checkbox"/> Supply Chain Risk Reduction: <input type="checkbox"/> Reach: <input type="checkbox"/> Strategic Partnership/Relationship: <input type="checkbox"/> Information: <input type="checkbox"/> Traceability: <input type="checkbox"/> Reduce Transaction Time/Costs/Efforts: BtC <input type="checkbox"/> Daily Use: <input type="checkbox"/> Convenience: <input type="checkbox"/> Indulgence:

	CURRENT	FUTURE
Which products and services do you provide?		
To Members	<input type="checkbox"/> Production/Seasonal Planning: <input type="checkbox"/> Technical Assistance: <input type="checkbox"/> Knowledge/Information/Data Collection: <input type="checkbox"/> Input Procurement: <input type="checkbox"/> Machinery Pools: <input type="checkbox"/> Quality Systems/Standards: <input type="checkbox"/> Collection <input type="checkbox"/> Bundling Different Categories: <input type="checkbox"/> Sorting/Grading: <input type="checkbox"/> Washing: <input type="checkbox"/> Processing: <input type="checkbox"/> Preservation: <input type="checkbox"/> Freezing: <input type="checkbox"/> Packaging/Labeling: <input type="checkbox"/> Storage: <input type="checkbox"/> Transportation/Distribution: <input type="checkbox"/> Marketing/Promotion: <input type="checkbox"/> Accounting: <input type="checkbox"/> Sales/Contracting/Brokerage: <input type="checkbox"/> Traceability: <input type="checkbox"/> Payments: <input type="checkbox"/> Research, Technology, Innovation: <input type="checkbox"/> Other:	<input type="checkbox"/> Production/Seasonal Planning: <input type="checkbox"/> Technical Assistance: <input type="checkbox"/> Knowledge/Information/Data Collection: <input type="checkbox"/> Input Procurement: <input type="checkbox"/> Machinery Pools: <input type="checkbox"/> Quality Systems/Standards: <input type="checkbox"/> Collection <input type="checkbox"/> Bundling Different Categories: <input type="checkbox"/> Sorting/Grading: <input type="checkbox"/> Washing: <input type="checkbox"/> Processing: <input type="checkbox"/> Preservation: <input type="checkbox"/> Freezing: <input type="checkbox"/> Packaging/Labeling: <input type="checkbox"/> Storage: <input type="checkbox"/> Transportation/Distribution: <input type="checkbox"/> Marketing/Promotion: <input type="checkbox"/> Accounting: <input type="checkbox"/> Sales/Contracting/Brokerage: <input type="checkbox"/> Traceability: <input type="checkbox"/> Payments: <input type="checkbox"/> Research, Technology, Innovation: <input type="checkbox"/> Other:
To Customers	<input type="checkbox"/> Products: <input type="checkbox"/> Services:	<input type="checkbox"/> Products: <input type="checkbox"/> Services:
What is the main point of difference of these products and services (e.g. price, service, supply, quality, location etc.)?		
Why do you believe that is the case?		

D. STRATEGIC OBJECTIVES FOR THE NEXT 5 YEARS

Dimension	Aspects	Brief Description of Current Situation	Change Required to Achieve Mission & Long-Term Goals	Strategic Objectives
Money	Income Statement		1.	
	Cash Flow Statement			
	Balance Sheet			
Members	Number of Members & Length of Membership		2.	
	Activities Carried Out/Services Provided for Members			
Marketing	Product Range/Volume, Value, and Value Added of Products Marketed (Fresh vs Processed)		3.	
	Promotion/Sales & Marketing			
	Revenue Model & Sales Pricing Strategy			
	Places/Delivery & Distribution (including average duration between field collection and sale of products)			
Management	Management Team		4.	
	Organizational Structure & Number of Employees Different from Members (Part or Full-time)			
	Business Processes & ICT Systems (procurement, traceability, warehouse management etc.)			

E. KEY PERFORMANCE INDICATOR (KPI) TARGETS										
Strategic Objective	KPI	2019	2020	Y1	Y2	Y3	Y4	Y5		
()	1) Total value of investments*									
()	2) Total Revenue/Turnover									
()	3) Gross profit margin									
()	4) EBIT									
()	5) Operating margin									
()	6) Net Profit/Income									
()	7) Number of members*									
()	8) Areas used in production (Ha)*									
()	9) Volume produced (Tons)* , By Product Category									
()	10) Volume sold (Tons)* Fresh Processed									
()	11) Value of products sold (HRK)* Fresh Processed									
()	12) Market share with respect to total income									
()	13) Number of activities* in the Implementation Plan completed									
()	14) Number of members trained/given advice* , By Topic									
()	15) Number of employees trained/given advice* , By Topic									
()	16) Number of ha (agricultural) covered by environment/ climate commitments going beyond mandatory requirements*									
()	17) Number of Producers with environment/climate commitments going beyond mandatory requirements									

(*) EU Common Indicators

V. Economic Evaluation of Implementation Plan

5.1 Net Present Value

5.2 Internal Rate of Return

5.3 Sensitivity Analysis

5.4 Final Evaluation

Annex 12: Business Plan for Bank Loan Financing of a Specific Investment⁵⁶

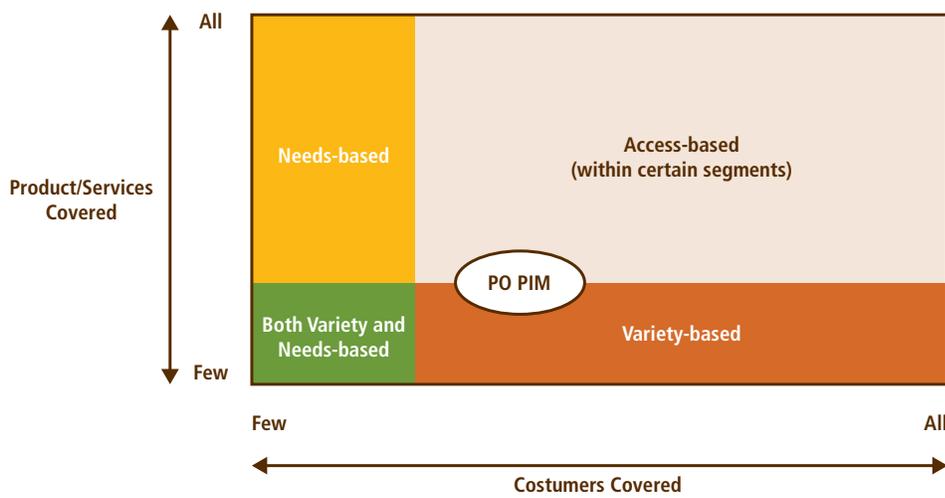
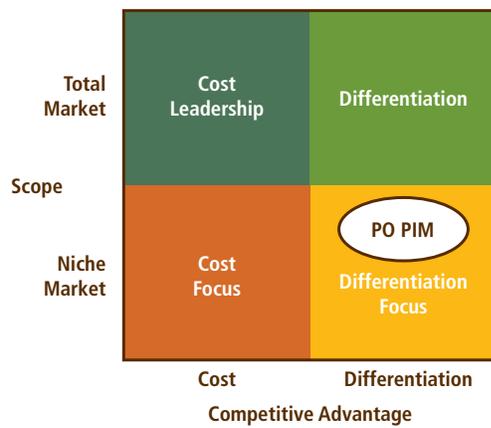
1.	Introduction	INVESTMENT SUMMARY
2.	Information about the Applicant/ Entrepreneur - Investor	<ul style="list-style-type: none"> ▪ Name ▪ Headquarters ▪ Owner ▪ CEO ▪ Register of business entity registration (court, trade...) ▪ Date of entry in the Register ▪ OIB ▪ Related persons (name, OIB/MB, ownership and management structure, and basis of connection with the Applicant) ▪ Short CV of the holder of the agricultural holding if it is a person not older than 40 years at the time of application, who has the appropriate education and skills and who establishes the agricultural holding for the first time as the manager of that agricultural holding; the establishment, whatever its legal form, may be carried out alone or together with other farmers; "Establishment date" means the date on which the applicant carries out or completes the activity or activities related to the establishment of the agricultural holding managed by
3.	Subject of Investor's Business	Description of what the Applicant is doing (activity), how long he/she has been operating in that activity (experience related to the project/investment that he/she is applying for this financial instrument)
4.	Existing Assets of the Investor	Present Balance Sheet
5.	Analysis of Financial Operations So Far	Present: <ul style="list-style-type: none"> ▪ Income Statement ▪ Cash Flow Statement
6.	NKD code of the applicant's main activity	Enter the code and name of the main activity. Entrepreneurs whose main activity (activity listed in the Notification on classification according to the NKD or Excerpt from the trade register) is from one of the areas referred to in item 2.2. Lending programs (ineligible activities) are not eligible for funding, even in cases where they invest in one of the eligible activities.
7.	Applicant's development opportunities	Description of Applicant's strategic objectives
8.	Name of investment	Indicate the name of the specific investment/project as presented in the 5y Implementation Plan (Section IV)
9.	Public (grant) program within which the investment is implemented	State the names of the public (grant) program measure/sub-measure/type of rural development operation within the framework of the Rural Development Program of the Republic of Croatia in which the investment is made.
10.	Investment location	Indicate the county, place and settlement of the investment
11.	Description and purpose of the investment	Describe the investment (what is the purpose of the investment, what is being invested in, a description of the origin of the idea/need for investment). The answers to the questions: WHAT (in what is invested), HOW (how the investment is planned), WHY (why the Applicant enters the investment, what is the purpose of that investment), FOR WHOM (for which target market segment) can help. If applicable, the description of the investment should explain the contribution to the measures of public (grant) program within which the investment is implemented

⁵⁶ A "specific Investment" referred to in the (short-term) Business Plan Template included in Annex 12 may correspond to one (1) planned investment "activity" incorporated in the (medium-term) Business Development Plan template included in Annex 11.

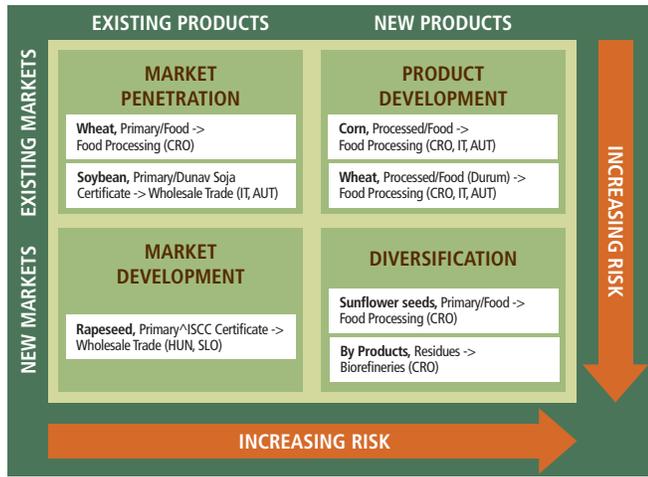
12.	Expected number of new employees/Analysis of dynamics and structure of employees	Describe the plan of new employment that will be the result of financing through the Investment according to the following structure: 1. Total number of new employees <ul style="list-style-type: none"> ▪ Number of new employees indefinitely (calculated based on the number of working hours) ▪ Number of new full-time employees (only recurring jobs are accepted each year, calculated on the basis of the number of working hours) 2. Structure of new employees by education <ul style="list-style-type: none"> ▪ NK, PK, NSS, KV ▪ SSS, VK ▪ VŠŠ/BACC ▪ VSS/MAG, MAG/MAG SCI, DR 3. Budget of annual gross salaries 4. Description of technical assistance and training needs
13.	Investment structure and sources of financing	Tabulate the detailed structure of (i) investments in basic assets, working capital and technical assistance; and (ii) the corresponding amounts of financing from investment loan vs own participation (own funds, other sources) vs public (grant) sources. If the investment is carried out within several measures of the Rural Development Program, it is necessary to show the structure by individual measures, and the overall structure of investment.
14.	Dynamics of investment	Description of: <ul style="list-style-type: none"> ▪ Planned investment start date ▪ Planned completion date of the investment
15.	Market justification/analysis	Market justification indicates the market demand for the product/service, i.e. it gives a brief overview of the procurement market and the sales market. Some of the constituent elements that can be listed (if applicable) are: <ul style="list-style-type: none"> ▪ Target Market Segment ▪ Competitor Analysis ▪ Members/Suppliers ▪ Marketing Plan
16.	Financial Analysis	Financial justification indicates the sustainability of the investment. The Investment Study should show the impact on the financial flow (income/receipts and expenses) of entrepreneurs. For example: <ul style="list-style-type: none"> ▪ Revenues: (= planned price x planned quantity), it is necessary to show the impact on revenues that will generate this investment, i.e. how revenues will increase through this investment in the loan repayment period, and contribution to rural development program measures if the investment relates to more than one measure ▪ Expenses: show all direct costs, operating expenses, depreciation, and amortization am in the loan repayment period, i.e. when the investment comes to life, becomes operational The analysis can be expressed through a projection of the Profit and Loss Account/Income Statement, Balance Sheet, Cash Flow and/or descriptively.
17.	Economic Assessment	Economic justification indicates the profitability of the investment. The assessment entails a static assessment of the efficiency of the investment and can be expressed by calculating the payback period, net present value, and/or internal rate of return of the investment
18.	Sensitivity Analysis	
19.	Technological and technical elements of investment	Description of: <ul style="list-style-type: none"> ▪ Characteristics of land, building, and/or animals ▪ Technical/technological processes ▪ Structure, volume, and cost of consumption/procurement of raw materials, materials and energy ▪ Structure and volume of production outputs
20.	Legal compliance	Describe compliance with applicable SPS, food safety, environmental protection, and/or animal welfare standards
21.	Final evaluation of the investment	
22.	ANNEX	<ul style="list-style-type: none"> ▪ Financial statements for the last 3 business years ▪ Tables of Buyers/Suppliers/Loans/Other Liabilities

Annex 13: Example of PO Implementation Plan

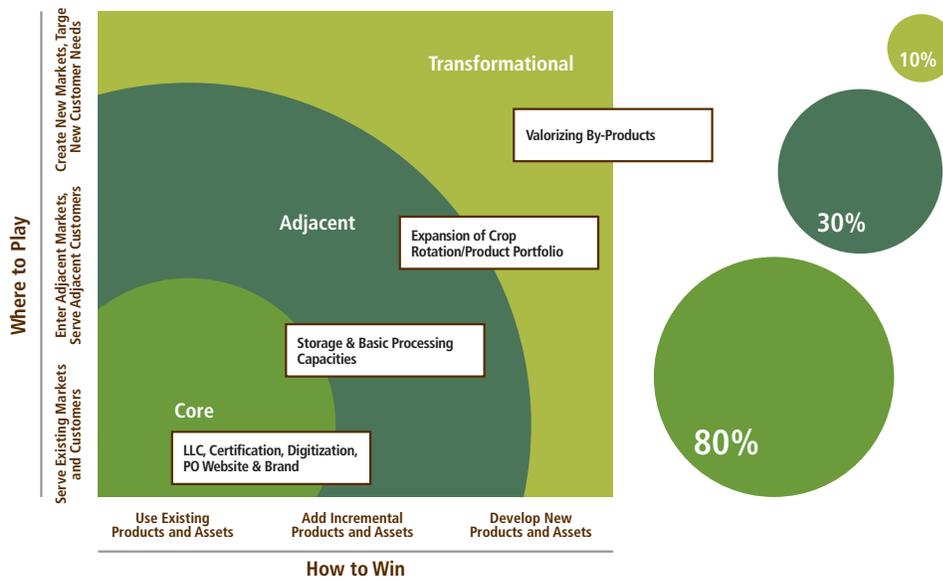
1. Strategic Positioning



2. Marketing Strategy



3. Implementation Plan



Annex 14: Basic Cost Estimates of Micro Food Hub Models

14.1. Cereals

A basic cost estimate of designing and implementing one (1) new proto-typical food micro hub model in the cereal sector in Croatia is presented below.⁵⁷ The estimate only seeks to provide a general reference for policy-makers and technical advisors and would have to be revised/adjusted further on a case-by-case basis. It should be noted that the model provided applies mainly to the cereals produce sector and a number of assumptions were made as part of the modeling exercise, which take into account data, information and lessons learned from both the STARS RAS pilot project experiences, in particular the project engagements with PO *Posavina i Moslavina* (PO PIM), as well as international best practice examples.⁵⁸ Most importantly, it is assumed that the model micro-hub facility would be approximately 10,000 square feet of space (930 m²), the price per square feet of building space and production equipment in the location would be 790 HRK / 105 EUR, and the development of the micro-hub would unfold in four (4) phases as part of a gradual scale up and expansion (see table below). **The total estimated project cost (including investment, technical assistance, and operating expenses) over a seven (7) year period is approximately 20 Mio EUR / HRK 151 Mio.** Total revenue over a seven (7) year period is approximately 28 Mio EUR / HRK 213 Mio.

PHASE	YEAR	ASSUMPTIONS
PHASE 1	Y1	There will no investment in any construction or equipment, as the project will lease facilities and equipment.
PHASE 2	Y2	Some acquisition of a production line for industrial scales and line for reception and reloading the cereals. The hub also may choose to move into larger leased space which would have existing cold storage capacities. The planning for the hub's own facility (packing house) will start, and will include the identification of a site and design of the hub facility and operations.
	Y3	Construction work will be carried out during Year 3, and the majority of the needed equipment will be acquired and installed. Operations begin in the new facility.
PHASE 3	Y4-Y5	In the next years additional investment will be made to expand the hub's processing capabilities. There will be a production line for processing soybean into soybean oil.
PHASE 4	Y6	All the lines and equipment will be in full production.
	Y7	The hub is on production and sales high - 5,0 Mio € turnover.

⁵⁷ The Annex provides cost estimates for establishing micro-food hubs, in terms of infrastructure and equipment requirements, and it does not refer to cost requirements for creating POs.

⁵⁸ Lindsey, T.; Slama, J. (2012). *Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois*, University of Illinois Business Innovation Services; Illinois Department of Agriculture; Illinois Department of Commerce and Economic Opportunity; *FamilyFarmed.org*, 56pp; USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II; SACOG (2014) Sacramento Valley Food Hub Cost Estimate Analysis. Available at food_hub_cost_estimate_analysis.pdf (sacog.org).

Basic Cost Estimate (in €)

COST ITEMS	PERIOD									
	PHASE 1		PHASE 2		PHASE 3		PHASE 4			
	Y1	Y2	Y3	Y4	Y5	Y6	Y7			
INVESTMENTS	40.000,00 €	142.600,00 €	525.400,00 €	78.500,00 €	155.500,00 €	49.500,00 €	56.000,00 €			
Building Engineering Designs (8% of project) & Construction Management (5% of project) - year before build	/	62.400,00 €	/	/	/	/	/			
Building Construction - warehouse (with floor storage) and purifier	/	/	380.000,00 €	/	/	/	/			
Remote Receiving Stations	/	/	/	/	/	/	/			
Dryer	/	/	100.000,00 €	/	/	/	/			
Industrial scales and line for reception and reloading the cereals	/	40.000,00 €	/	/	/	/	/			
Production line for processing soybean into soybean oil	/	/	/	/	82.500,00 €	/	/			
Auxiliary Systems & Equipment (e.g. utility/grid connections, crates, pallets, cleaning equipment, fork lifts, pallet jacks, tracks)	/	/	/	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			15.000,00 €
Website Y1, Y2; E-platform Y3-Y7	2.000,00 €	2.000,00 €	4.500,00 €	5.000,00 €	5.500,00 €	6.000,00 €	7.000,00 €			
Branding & Labeling	2.000,00 €	3.000,00 €	3.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €			
Advertising & Promotion	3.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €			
Distribution Truck (1) - leasing	24.000,00 €	24.000,00 €	24.000,00 €	24.000,00 €	24.000,00 €	/	/			
Equipment for Office & Employee Space (furniture, computers, printers, kitchen, bathroom, lunch break room)	3.000,00 €	/	/	10.000,00 €	/	/	/			5.000,00 €
Mobilization (e.g. surveys, permits, tests)	1.000,00 €	1.200,00 €	1.400,00 €	4.500,00 €	3.500,00 €	3.500,00 €	4.000,00 €			
Contingency	5.000,00 €	5.000,00 €	7.500,00 €	10.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			
TECHNICAL ASSISTANCE	13.900,00 €			13.900,00 €						
Digital Agriculture/Crop Planning (e.g. Agrivi)	6.600,00 €	6.600,00 €	6.600,00 €	6.600,00 €	6.600,00 €	6.600,00 €	6.600,00 €			6.600,00 €
ISCC Certification	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €			5.300,00 €
Dunav - Soja Certificate (NON-GMO)	2.000,00 €	2.000,00 €	2.000,00 €	2.000,00 €	2.000,00 €	2.000,00 €	2.000,00 €			2.000,00 €

Basic Cost Estimate (in €)

COST ITEMS	PERIOD							
	PHASE 1		PHASE 2		PHASE 3		PHASE 4	
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	
OPERATING EXPENSES	2.096.500,00 €	2.310.500,00 €	2.668.440,00 €	2.876.690,00 €	3.167.115,00 €	3.445.115,00 €	3.597.615,00 €	
Salary Costs	100.000,00 €	102.000,00 €	123.200,00 €	127.200,00 €	130.500,00 €	152.500,00 €	171.500,00 €	
Manager (FT)	20.000,00 €	20.000,00 €	25.000,00 €	25.000,00 €	25.000,00 €	30.000,00 €	35.000,00 €	
Sales & Marketing (FT)	16.000,00 €	16.000,00 €	20.000,00 €	20.000,00 €	20.000,00 €	25.000,00 €	27.000,00 €	
Operations/Logistics/Warehouse Manager (FT)	14.500,00 €	14.500,00 €	17.500,00 €	17.500,00 €	17.500,00 €	19.500,00 €	21.500,00 €	
Production/Quality Manager	15.000,00 €	15.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €	
Bookkeeping (FT) (outsourcing)	500,00 €	500,00 €	700,00 €	700,00 €	1.000,00 €	1.000,00 €	1.000,00 €	
Truck/Delivery Driver (FT)	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	
Delivery Driver Assistance (FT)	/	/	/	/	/	/	/	
Seasonal Labor (PT)	20.000,00 €	22.000,00 €	28.000,00 €	32.000,00 €	35.000,00 €	45.000,00 €	55.000,00 €	
Depreciation (25%/year for equipment/ production line; 10%/year buildings)	/	10.000,00 €	79.240,00 €	82.990,00 €	103.615,00 €	93.615,00 €	93.615,00 €	
Raw materials (@ 50% of revenue),	1.500.000,00 €	1.650.000,00 €	1.850.000,00 €	2.000.000,00 €	2.200.000,00 €	2.400.000,00 €	2.500.000,00 €	
Insurance and Legal Costs	1.500,00 €	4.000,00 €	5.500,00 €	6.500,00 €	7.000,00 €	7.000,00 €	7.500,00 €	
Packaging materials (@ 3.5% of revenue,	105.000,00 €	115.500,00 €	129.500,00 €	140.000,00 €	154.000,00 €	168.000,00 €	175.000,00 €	
Transportation costs (@ 1.75% of revenue)	52.500,00 €	57.750,00 €	64.750,00 €	70.000,00 €	77.000,00 €	84.000,00 €	87.500,00 €	
Utility cost (@ 1.5% of revenue)	45.000,00 €	49.500,00 €	55.500,00 €	60.000,00 €	66.000,00 €	72.000,00 €	75.000,00 €	
Maintenance cost (@ 2% of equipment cost)	60.000,00 €	66.000,00 €	74.000,00 €	80.000,00 €	88.000,00 €	96.000,00 €	100.000,00 €	
Annual Licenses (@ 0.2% of revenue)	6.000,00 €	6.600,00 €	7.400,00 €	8.000,00 €	8.800,00 €	9.600,00 €	10.000,00 €	
Kalo/Waste in production (@ 0.5% of revenue)	15.000,00 €	16.500,00 €	18.500,00 €	20.000,00 €	22.000,00 €	24.000,00 €	25.000,00 €	
Misc annual supplies (@ 0.75% of revenue)	22.500,00 €	24.750,00 €	27.750,00 €	30.000,00 €	33.000,00 €	36.000,00 €	37.500,00 €	
Other expenses (@ 6.3% of revenue)	189.000,00 €	207.900,00 €	233.100,00 €	252.000,00 €	277.200,00 €	302.400,00 €	315.000,00 €	
TOTAL	2.150.400,00 €	2.467.000,00 €	3.207.740,00 €	2.969.090,00 €	3.336.515,00 €	3.508.515,00 €	3.667.515,00 €	

14.2. Fruit & Vegetables

A basic cost estimate of designing and implementing one (1) new prototypical food micro hub model in the fruit and vegetable sector in Croatia is presented below. The estimate only seeks to provide a general reference for policy-makers and technical advisors and would have to be revised/adjusted further on a case-by-case basis. It should be noted that the model provided applies mainly to the fruit and vegetable/fresh produce sector and a number of assumptions were made as part of the modeling exercise, which take into account data, information and lessons learned from both the STARS RAS pilot project experiences, in particular the project engagements with PO *Udruga Brezovica* (PO UB), as well as international best practice examples.⁵⁹ Most importantly, it is assumed that the model micro-hub facility would be approximately 10,000 square feet of space (930 m²), the price per square feet of building space and production equipment in the location would be 1352 HRK / 179 EUR, and the development of the micro-hub would unfold in four (4) phases as part of a gradual scale up and expansion (see table below). **The total estimated project cost (including investment, technical assistance, and operating expenses) over a seven (7) year period is approximately 15 Mio EUR / HRK 113 Mio.** Total revenue over a seven (7) year period is approximately 19 Mio EUR / HRK 143 Mio.

PHASE	YEAR	ASSUMPTIONS
PHASE 1	Y1	There will no investment in any construction or equipment, as the project will lease facilities and equipment. If co-locating with a partner organization (e.g. food bank), the hub could have access to facilities and equipment such as conveyors, forklifts, and so forth.
PHASE 2	Y2	Some acquisition of a production line for processing, calibration, and packaging will take place while the project stays in the leased facility, or with a partner organization. The hub also may choose to move into larger leased space which would have existing cold storage capacities. The planning for the hub's own facility (packing house) will start, and will include the identification of a site and design of the hub facility and operations.
	Y3	Engineering for the main construction work will be carried out during Year 3, and the majority of the needed handling and processing equipment will be acquired and installed. Medium to large-scale farmers with existing receiving stations would initially serve as receiving stations for the hub. Production will be about 1/4 ton per hour.
PHASE 3	Y4-Y5	Construction work in Q1 of Y4. Operations begin in the new facility. Each year additional investment will be made to expand the hub's processing capabilities. There will be two processing lines for tender and fresh produce pack and cut. Production will be 1/2 ton per hour.
PHASE 4	Y6	The need for additional space will manifest itself due to the increase of the throughput (produce); thus, some additional equipment would be acquired. The three lines will be running at full capacity. Contracts would be formalized with existing farmer-owned (or other) receiving stations. Production will be 1 ½ tons per hour.
	Y7	The hub will look into expanding its market niche and get into in-depth processing by adding a jam and sauces line. Production will be 2 tons per hour.

59 Lindsey, T.; Slama, J. (2012). *Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois*, University of Illinois Business Innovation Services; Illinois Department of Agriculture; Illinois Department of Commerce and Economic Opportunity; *FamilyFarmed.org*, 56pp; USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II; SACOG (2014) Sacramento Valley Food Hub Cost Estimate Analysis. Available at food_hub_cost_estimate_analysis.pdf (sacog.org).

Basic Cost Estimate (in €)

COST ITEMS	PERIOD									
	PHASE 1		PHASE 2		PHASE 3			PHASE 4		
	Y1	Y2	Y3	Y4	Y5	Y6	Y7			
INVESTMENTS	112.000,00 €	254.300,00 €	366.200,00 €	443.100,00 €	303.800,00 €	71.500,00 €	236.000,00 €			
Building Engineering Designs (8% of project) & Construction Management (5% of project) - year before build	/	8.600,00 €	43.000,00 €	8.600,00 €	/	/	/			
Building Construction - packing house x 2; warehouse (300 pallets, +4+8 cold storage)	/	/	66.300,00 €	330.000,00 €	66.300,00 €	/	/			
Remote Receiving Stations (rent)	/	/	11.000,00 €	12.500,00 €	14.000,00 €	15.000,00 €	17.000,00 €			
Cold Storage/Warehouse/Packaging - Facility leasing (Fragaria)	60.000,00 €	60.000,00 €	30.000,00 €	/	/	/	/			
Production line for packaging F&V - 1T/h - 1x	/	/	155.000,00 €	/	/	/	155.000,00 €			
Production line for jam and sausage - 1x	/	132.500,00 €	/	/	132.500,00 €	/	/			
Production line for processing, calibration and packaging of berries - up to 500 T/season; Second production line in Y5	/	/	/	/	/	/	/			
Auxiliary Systems & Equipment (e.g. utility/grid connections, crates, pallets, cleaning equipment, fork lifts, pallet jacks, tracks, scales)	/	/	/	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			
Website Y1, Y2; E-platform Y3-Y7	2.000,00 €	2.000,00 €	4.500,00 €	5.000,00 €	5.500,00 €	6.000,00 €	7.000,00 €			
Branding & Labeling	3.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	8.500,00 €	8.500,00 €	8.500,00 €			
Advertising & Promotion (@1.5% of revenue)	3.000,00 €	5.000,00 €	7.500,00 €	7.500,00 €	8.500,00 €	8.500,00 €	9.500,00 €			
Refrigerated Truck (1) - leasing 5yr	35.000,00 €	35.000,00 €	35.000,00 €	35.000,00 €	35.000,00 €	/	/			
Equipment for Office & Employee Space (furniture, computers, printers, kitchen, bathroom, lunch break room)	3.000,00 €	/	/	10.000,00 €	/	/	5.000,00 €			
Mobilization (e.g. surveys, permits, tests)	1.000,00 €	1.200,00 €	1.400,00 €	4.500,00 €	3.500,00 €	3.500,00 €	4.000,00 €			
Contingency	5.000,00 €	5.000,00 €	7.500,00 €	10.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			
TECHNICAL ASSISTANCE	8.800,00 €	7.800,00 €	7.800,00 €	8.800,00 €	7.800,00 €	7.800,00 €	8.800,00 €			
Digital Agriculture/Crop Planning (e.g. Agrivi)	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €	5.300,00 €			
GlobalGAP Certification	1.500,00 €	1.500,00 €	1.500,00 €	1.500,00 €	1.500,00 €	1.500,00 €	1.500,00 €			
Food Safety/IFS Certification (certification every 3 years, supervision between)	2.000,00 €	1.000,00 €	1.000,00 €	2.000,00 €	1.000,00 €	1.000,00 €	2.000,00 €			

Basic Cost Estimate (in €)

COST ITEMS	PERIOD									
	PHASE 1		PHASE 2		PHASE 3			PHASE 4		
	Y1	Y2	Y3	Y4	Y5	Y6	Y7			
OPERATING EXPENSES	986.700,00 €	1.463.225,00 €	1.707.955,00 €	2.011.955,00 €	2.228.410,00 €	2.556.435,00 €	3.133.385,00 €			
Salary Costs	100.000,00 €	102.000,00 €	123.200,00 €	127.200,00 €	130.500,00 €	152.500,00 €	171.500,00 €			
Manager (FT)	20.000,00 €	20.000,00 €	25.000,00 €	25.000,00 €	25.000,00 €	30.000,00 €	35.000,00 €			
Sales & Marketing (FT)	16.000,00 €	16.000,00 €	20.000,00 €	20.000,00 €	20.000,00 €	25.000,00 €	27.000,00 €			
Operations/Logistics/Warehouse Manager (FT)	14.500,00 €	14.500,00 €	17.500,00 €	17.500,00 €	17.500,00 €	19.500,00 €	21.500,00 €			
Production/Quality Manager	15.000,00 €	15.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €	18.000,00 €			
Bookkeeping (FT) (outsourcing)	500,00 €	500,00 €	700,00 €	700,00 €	1.000,00 €	1.000,00 €	1.000,00 €			
Truck/Delivery Driver (FT)	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €	14.000,00 €			
Delivery Driver Assistance (FT)	/	/	/	/	/	/	/			
Seasonal Labor (PT)	20.000,00 €	22.000,00 €	28.000,00 €	32.000,00 €	35.000,00 €	45.000,00 €	55.000,00 €			
Depreciation (25%/year for equipment/production line; 10%/year buildings)	750,00 €	33.875,00 €	83.005,00 €	116.005,00 €	155.760,00 €	122.635,00 €	161.385,00 €			
Raw materials (@ 50% of revenue),	665.000,00 €	995.000,00 €	1.125.000,00 €	1.325.000,00 €	1.455.000,00 €	1.710.000,00 €	2.100.000,00 €			
Insurance and Legal Costs	1.500,00 €	4.000,00 €	5.500,00 €	6.500,00 €	7.000,00 €	7.000,00 €	7.500,00 €			
Packaging materials (@ 3.5% of revenue,	46.550,00 €	69.650,00 €	78.750,00 €	92.750,00 €	101.850,00 €	119.700,00 €	147.000,00 €			
Transportation costs (@ 1.75% of revenue)	23.275,00 €	34.825,00 €	39.375,00 €	46.375,00 €	50.925,00 €	59.850,00 €	73.500,00 €			
Utility cost (@ 1.5% of revenue)	19.950,00 €	29.850,00 €	33.750,00 €	39.750,00 €	43.650,00 €	51.300,00 €	63.000,00 €			
Maintenance cost (@ 2% of equipment cost)	26.600,00 €	39.800,00 €	45.000,00 €	53.000,00 €	58.200,00 €	68.400,00 €	84.000,00 €			
Annual Licenses (@ 0.2% of revenue)	2.660,00 €	3.980,00 €	4.500,00 €	5.300,00 €	5.820,00 €	6.840,00 €	8.400,00 €			
Kalo/Waste in production (@ 0.5% of revenue)	6.650,00 €	9.950,00 €	11.250,00 €	13.250,00 €	14.550,00 €	17.100,00 €	21.000,00 €			
Misc annual supplies (@ 0.75% of revenue)	9.975,00 €	14.925,00 €	16.875,00 €	19.875,00 €	21.825,00 €	25.650,00 €	31.500,00 €			
Other expenses (@ 6.3% of revenue)	83.790,00 €	125.370,00 €	141.750,00 €	166.950,00 €	183.330,00 €	215.460,00 €	264.600,00 €			
TOTAL	1.107.500,00 €	1.725.325,00 €	2.081.955,00 €	2.463.855,00 €	2.540.010,00 €	2.635.735,00 €	3.378.185,00 €			

14.3. Livestock

A basic cost estimate of designing and implementing one (1) new proto-typical food micro hub model in the livestock sector in Croatia is presented below. The estimate only seeks to provide a general reference for policy-makers and technical advisors and would have to be revised/adjusted further on a case-by-case basis. It should be noted that the model provided applies mainly to the livestock produce sector and a number of assumptions were made as part of the modeling exercise, which take into account data, information and lessons learned from both the STARS RAS pilot project experiences, in particular the project engagements with PO *Savez uzgajivača simentalskog goveda Zagrebačke županije I grada Zagreba* (PO SUSG), as well as international best practice examples.⁶⁰ Most importantly, it is assumed that the model micro-hub facility would be approximately 50,000 square feet of space (4700 m²), the price per square feet of building space and production equipment in the location would be 944 HRK / 125 EUR, and the development of the micro-hub would unfold in four (4) phases as part of a gradual scale up and expansion (see Table below). **The total estimated project cost (including investment, technical assistance, and operating expenses) over a seven (7) year period is approximately 22 Mio EUR / HRK 166 Mio.** Total revenue over a seven (7) year period is approximately 26 Mio EUR / HRK 196 Mio.

PHASE	YEAR	ASSUMPTIONS
PHASE 1	Y1	There will no investment in any construction or equipment, as the project will lease facilities and equipment.
PHASE 2	Y2	The planning for the hub's own facility (Regional center for livestock development Dubrava, including warehouse, educational and auction room) will start, and will include the identification of a site and design of the hub facility and operations.
	Y3	Construction work will be carried out during Year 3, and the majority of the needed equipment will be acquired and installed - regional center for livestock development, slaughterhouse, industrial scales and reception line for livestock, production line for processing and packaging meat, and others). Operations begin in the new facility.
PHASE 3	Y4-Y5	In the next years additional investment will be made to expand the portfolio with organic meat.
PHASE 4	Y6	All the lines and equipment will be in full production.
	Y7	The hub is on production and sales high - 6,3 Mio € turnover.

60 Lindsey, T.; Slama, J. (2012). *Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois*, University of Illinois Business Innovation Services; Illinois Department of Agriculture; Illinois Department of Commerce and Economic Opportunity; *FamilyFarmed.org*, 56pp; USDA (2015). *Running a Food Hub: A Business Operations Guide*. USDA Rural Development Services Report 77, Volume II; SACOG (2014) Sacramento Valley Food Hub Cost Estimate Analysis. Available at food_hub_cost_estimate_analysis.pdf (sacog.org).

Basic Cost Estimate (in €)

COST ITEMS	PERIOD									
	PHASE 1		PHASE 2		PHASE 3			PHASE 4		
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
INVESTMENTS	42.000,00 €	353.200,00 €	5.525.400,00 €	93.000,00 €	89.500,00 €	62.000,00 €	68.500,00 €			
Building Engineering Designs (4% of project) & Construction Management (2% of project) - year before build	/	312.000,00 €	/	/	/	/	/			
Building Construction - Regional center for livestock development Dubrava, including warehouse, educational center, auction room	/	/	5.200.000,00 €	/	/	/	/			
Remote Receiving Stations	/	/	/	/	/	/	/			
Slaughterhouse	/	/	85.000,00 €	/	/	/	/			
Industrial scales and line for reception and reloading of livestock	/	/	40.000,00 €	/	/	/	/			
Production line for processing and packaging meat	/	/	125.000,00 €	/	/	/	/			
Auxiliary Systems & Equipment (e.g. utility/grid connections, crates, pallets, cleaning equipment, fork lifts, pallet jacks, tracks)	/	/	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			
E-platform Y3-Y7 (website already existing)	/	/	4.500,00 €	5.000,00 €	5.500,00 €	6.000,00 €	7.000,00 €			
Branding & Labeling	/	/	10.000,00 €	12.000,00 €	13.000,00 €	15.000,00 €	15.000,00 €			
Advertising & Promotion	3.000,00 €	5.000,00 €	5.000,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €			
Distribution Truck with cold chain (1) - leasing	30.000,00 €	30.000,00 €	30.000,00 €	30.000,00 €	30.000,00 €	/	/			
Equipment for Office & Employee Space (furniture, computers, printers, kitchen, bathroom, lunch break room)	3.000,00 €	/	/	10.000,00 €	/	/	5.000,00 €			
Mobilization (e.g. surveys, permits, tests)	1.000,00 €	1.200,00 €	3.400,00 €	3.500,00 €	3.500,00 €	3.500,00 €	4.000,00 €			
Contingency	5.000,00 €	5.000,00 €	7.500,00 €	10.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €			
TECHNICAL ASSISTANCE	7.000,00 €	6.000,00 €	6.000,00 €	9.000,00 €	8.000,00 €	8.000,00 €	9.000,00 €			
Digital Farming	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €	5.000,00 €			
IFS Certification (cert. every 3 years, supervision between)	2.000,00 €	1.000,00 €	1.000,00 €	2.000,00 €	1.000,00 €	1.000,00 €	2.000,00 €			
Organic certificate	/	/	/	2.000,00 €	2.000,00 €	2.000,00 €	2.000,00 €			

Basic Cost Estimate (in €)

COST ITEMS	PERIOD									
	PHASE 1		PHASE 2		PHASE 3			PHASE 4		
	Y1	Y2	Y3	Y4	Y5	Y6	Y7			
OPERATING EXPENSES										
Salary Costs	1,109,000,00 €	1,242,000,00 €	2,546,650,00 €	3,413,150,00 €	3,814,450,00 €	4,217,450,00 €	4,911,700,00 €			
Manager (FT)	110,000,00 €	110,000,00 €	125,200,00 €	127,200,00 €	129,500,00 €	133,500,00 €	137,500,00 €			
Sales & Marketing (FT)	30,000,00 €	30,000,00 €	35,000,00 €	35,000,00 €	35,000,00 €	35,000,00 €	35,000,00 €			
Operations/Logistics/Warehouse Manager (FT)	16,000,00 €	16,000,00 €	20,000,00 €	20,000,00 €	20,000,00 €	20,000,00 €	20,000,00 €			
Production/Quality Manager	14,500,00 €	14,500,00 €	17,500,00 €	17,500,00 €	17,500,00 €	19,500,00 €	21,500,00 €			
Bookkeeping (FT) (outsourcing)	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €			
Truck/Delivery Driver (FT)	500,00 €	500,00 €	700,00 €	700,00 €	1,000,00 €	1,000,00 €	1,000,00 €			
Delivery Driver Assistance (FT)	14,000,00 €	14,000,00 €	14,000,00 €	14,000,00 €	14,000,00 €	14,000,00 €	14,000,00 €			
Seasonal Labor (PT)	/	/	/	/	/	/	/			
Depreciation (25%/year for equipment/production line; 10%/year buildings)	10,000,00 €	10,000,00 €	13,000,00 €	15,000,00 €	17,000,00 €	19,000,00 €	21,000,00 €			
Raw materials (@ 50% of revenue),	/	/	600,950,00 €	600,950,00 €	600,950,00 €	600,950,00 €	559,700,00 €			
Insurance and Legal Costs	750,000,00 €	850,000,00 €	1,350,000,00 €	2,000,000,00 €	2,300,000,00 €	2,600,000,00 €	3,150,000,00 €			
Packaging materials (@ 3.5% of revenue,	1,500,00 €	1,500,00 €	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €	25,000,00 €			
Transportation costs (@ 1.75% of revenue)	52,500,00 €	59,500,00 €	94,500,00 €	140,000,00 €	161,000,00 €	182,000,00 €	220,500,00 €			
Utility cost (@ 1.5% of revenue)	26,250,00 €	29,750,00 €	47,250,00 €	70,000,00 €	80,500,00 €	91,000,00 €	110,250,00 €			
Maintenance cost (@ 2% of equipment cost)	22,500,00 €	25,500,00 €	40,500,00 €	60,000,00 €	69,000,00 €	78,000,00 €	94,500,00 €			
Annual Licenses (@ 0.2% of revenue)	30,000,00 €	34,000,00 €	54,000,00 €	80,000,00 €	92,000,00 €	104,000,00 €	126,000,00 €			
Kalo/Waste in production (@ 0.5% of revenue)	3,000,00 €	3,400,00 €	5,400,00 €	8,000,00 €	9,200,00 €	10,400,00 €	12,600,00 €			
Misc annual supplies (@ 0.75% of revenue)	7,500,00 €	8,500,00 €	13,500,00 €	20,000,00 €	23,000,00 €	26,000,00 €	31,500,00 €			
Other expenses (@ 6.3% of revenue)	11,250,00 €	12,750,00 €	20,250,00 €	30,000,00 €	34,500,00 €	39,000,00 €	47,250,00 €			
TOTAL	1,158,000,00 €	1,601,200,00 €	8,078,050,00 €	3,515,150,00 €	3,911,950,00 €	4,287,450,00 €	4,989,200,00 €			

