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The experience of Poland in the development of agri-food clusters

■ **Abstract.** The purpose of the study was to identify the features of the functioning of agri-food clusters in Poland through an analysis of their organisational structure, mechanisms of interaction between participants in the value chain, financial support, and performance results. The methodological framework combined document analysis, structural-functional and case-based approaches, comparative-analytical methods, descriptive interpretation of quantitative indicators, systematisation, and scientific generalisation. The study established that agri-food clusters in Poland function as multilevel networks combining raw-material producers, processing enterprises, logistics structures, sales channels, research institutions, and support bodies. As of 30 June 2025, 83 cluster organisations were registered for Poland on the European Cluster Collaboration Platform; in the 2024 benchmarking sample of 42 clusters, the total number of participants was 4,942, and the average was 117.7 participants per cluster. The key mechanisms were short supply chains, direct links between producers and buyers, shared logistics and packaging solutions, and cooperation in food quality systems. Financial support from the European Union forms the resource basis for development: the budget of the Common Agricultural Policy Strategic Plan of Poland for 2023–2027 is EUR 25.243 billion, with EUR 7.778 billion allocated to rural development. The study generalised that the performance of Polish agri-food clusters is determined by the completeness of value-chain coverage, the coordinating role of the cluster core, the participation of research and advisory structures, and the ability to combine local sales forms with broader market channels. The practical value of the findings lies in their possible use by agricultural and regional policy bodies, cluster coordinators, farmers' associations, processing enterprises, and research institutions for improving cross-sectoral cooperation, planning funding, developing short supply chains, and strengthening the organisational resilience of the agri-food sector

■ **Keywords:** financial support; logistics structures; processing enterprises; self-government; market

■ INTRODUCTION

The cluster approach in the agri-food sector of Poland retains practical significance as an instrument for coordinating production, processing, logistics, sales, knowledge services, and institutional support. The relevance of the subject is strengthened by the fact that in 2023–2027, Poland is implementing the Common Agricultural Policy Strategic Plan with a total budget of EUR 25.243 billion, of which EUR 7.778 billion is allocated to rural development

(European Commission, 2025). For this reason, the experience of Poland is illustrative: the country has a substantial agricultural base, developed regional food specialisations, and one of the largest networks of cluster organisations in Central and Eastern Europe. As of 30 June 2025, the European Cluster Collaboration Platform (2025) recorded 83 Polish cluster organisations, which provides grounds for considering Poland a relevant example of institutionally

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supported agri-food clustering. D. Kuberska & M. Mackiewicz (2022) examined the evolution of cluster policy in Poland, the factors of its performance, and implementation problems. The researchers stressed the significance of government recognition of the cluster approach, coherence between national and regional strategies, continuity of state support, and consideration of the development stage of cluster organisations, in particular, their internationalisation. I. Lipińska (2022) considered the agri-food supply chain through the prism of legal solutions and indicated that cluster forms of coordination contribute to stabilising economic activity at the level of EU (European Union) law and national regulation. A.M. Lis & M. Mackiewicz (2023) analysed the role of clusters in the green transformation and distinguished integrative, resource, and educational actions through which Polish clusters move towards green, low-carbon, and circular economies. Z. Nasalski (2023) investigated the conditions for farm coopection in the agri-food sector using the example of the Warmińsko-Mazurskie Voivodeship. The study emphasised that the constraining factors include low awareness among parts of the business environment, the unwillingness of entities to cooperate, and the absence of tested coopection models, while in the institutional dimension, advisory structures, economic self-government bodies, sectoral associations, and research institutions play an important role. N. Drejerska & W. Sobczak-Malitka (2023) focused on the role of short supply chains in the transformation of food systems in Poland and linked this issue with sustainable development, healthy nutrition, and food policy. The study outlined spatial differences in the development of local food systems and demonstrated that short supply chains contribute to increasing the accessibility of local products and are linked to support for local producers and regional development.

M. Raftowicz *et al.* (2024) considered short food supply chains as a practical manifestation of sustainable development ideas. The study addressed the capacity of short chains to ensure sustainable rural development and indicated that their assessment requires simultaneous consideration of economic, social, and environmental dimensions, together with critical comparison with longer supply chains. S.T. Ozougwu & O.M. Grabowska-Chenczke (2025) examined management practices in agri-food companies of the Wielkopolskie Voivodeship as a factor in agribusiness growth. The researchers determined that a considerable share of companies had no established talent-management practices, which was combined with insufficient attention to team-building and unclear communication of shared business goals and vision by management. L. Ossowska *et al.* (2025) analysed the digital presence and e-commerce maturity of regional food producers in Poland. The study noted that the use of e-commerce remains limited, although online sellers are more often characterised by a larger scale of activity, a wider sales radius, more active use of regional raw materials and external funding sources, and the need for infrastructure and training support for the further expansion of the digital sales channel. I. Zdráhal & J.M. Fannin (2025) examined the place of food-processing industries of the Visegrad Group countries in global value chains during 1995-2018. The researchers identified differences between the V4 countries in the forms and intensity of integration, and recorded for this area increasing

participation in global chains before the Great Recession, a subsequent slowdown, and stronger attachment to European value chains, with a noticeable role for value added originating from service sectors. Y. Deroche-Leydier (2025) analysed the perceived resilience of Polish farms during the COVID-19 pandemic and the post-pandemic crisis depending on participation in short supply chains. The study demonstrated that farms included in short chains reported a higher overall level of perceived resilience, while the most visible differences concerned adaptability and transformative capacity, especially for farms that combined short and longer sales channels.

The analysis of sources indicated that the academic field consistently addresses several interconnected problem areas: cluster policy and the legal support for cluster functioning; cooperation and coopection among agri-food sector entities; short supply chains as a mechanism for the structural transformation of the food system; digital and human-resource aspects of agri-food business development; and the inclusion of the food-processing sector in broader regional and global value chains. However, the material in these studies focused on separate levels of analysis, so the purpose of this study was to determine the specific features of the functioning of agri-food clusters in Poland by analysing their organisational structure, mechanisms of interaction between participants in the value chain, sources of financial support, and main performance results. The objectives were to characterise the structure, principles of functioning, and typical models of agri-food clusters in Poland; clarify the mechanisms of interaction between farmers, processing enterprises, and sales links, along with the role of funding in the development of cluster formations; and generalise success factors and the main results of the activities of Polish agri-food clusters.

■ MATERIALS AND METHODS

The study used a qualitative documentary-analytical design combining case-based, comparative, and descriptive approaches to quantitative indicators. The object of the research was the institutional and organisational environment for agri-food cluster development in Poland. The subject included the structure, coordination mechanisms, functional models, and performance factors of Polish agri-food clusters and related cooperation initiatives. To characterise the institutional, financial, and organisational environment, the study applied document analysis to official and analytical materials. The European Commission (2025) provided the basis for determining the total funding, support structure for rural areas, and the role of the Common Agricultural Policy (CAP) Strategic Plan, LEADER, and EIP-AGRI. The European CAP Network (n.d.b) clarified the role of network structures and advisory services in the Polish national CAP network. The OECD (2025) specified the relationship between agricultural policy, funding for food chains, and rural development support. To analyse the organisational structure and functional roles within Polish clusters, the study used the structural-functional method. M. Piotrowska *et al.* (2024) supplied quantitative parameters of the cluster environment, including average cluster size, innovation profile, internationalisation level, and examples of agri-food and bioeconomic clusters. The European Cluster Collaboration Platform (2023a)

characterised general cluster policy, support instruments, and the connection between clusters and innovation ecosystems in Poland. The European Cluster Collaboration Platform (2025) integrated regional innovation networks, using the Podkarpackie Voivodeship as an example. AgroBioCluster (n.d.) supported the analysis of a model combining business, local government, and research institutions. The European Agri-food Cluster (2023) characterised direct interaction between producers, buyers, and logistics partners in cereal, pulse, meat, and related markets.

To examine specific practices of short supply chains, logistics-sales cooperation, and technological modernisation, the study applied case analysis. The first case (Zamojska Farma operational group for food potatoes) demonstrated the mechanism for strengthening farmers' positions and reducing intermediaries (European CAP Network, 2024a). The second case (automation of sorting and packaging in Polish vegetable value chains) illustrated technological modernisation affecting product quality and reducing losses in short supply chains (European CAP Network, 2024b). The third case (AgroBRIDGES project materials) systematised barriers and solutions related to transport, packaging, demand, marketing, and stakeholder participation in short food chain models European CAP Network (n.d.a). To distinguish alternative models of agri-food clustering, the study used the comparative-analytical method based on AgroBioCluster (n.d.) and the European Agri-food Cluster (2023). This comparison identified market-sales, logistics-cooperative, innovation-bioeconomic, and regional-ecosystem models. To interpret the statistical and financial characteristics of the Polish cluster environment, the study employed descriptive analysis of quantitative indicators. The European Cluster Collaboration Platform (2025) determined the number of registered cluster organisations in Poland. At the final stage, systematisation and scientific generalisation, based on all previous analytical steps, identified key performance factors of Polish agri-food clusters: coordinating role of the cluster core, completeness of value-chain coverage, combination of production, processing, logistics and sales, involvement of research and advisory structures, development of short supply chains, use of quality systems, access to EU funding, and inclusion of clusters in regional innovation ecosystems.

■ RESULTS AND DISCUSSION

The study establishes that agri-food clusters in Poland develop in a context where the agri-food sector has high structural significance for the national economy. Rural areas occupy 85% of the country, agricultural land accounts for 52%, approximately 15 million people live in rural areas, and the number of identified farms is approximately 1.4 million. Dairy, grain, pig, poultry, and horticultural production occupy leading positions in the structure of Polish agricultural production, which creates preconditions for cluster models with pronounced territorial-sectoral specialisation (European Commission, 2025). At the national level, the cluster landscape of Poland is characterised by a developed but heterogeneous structure. According to the European Cluster Collaboration Platform, as of 30 June 2025, Poland had 83 registered cluster organisations, with the agri-food area present in the national cluster field, although it was represented by fewer organisations than the

digital and energy segments. The PARP benchmarking results for 2024 indicated that, in a sample of 42 clusters, the total number of members reached 4,942, and the average number of participants per cluster increased to 117.7 at the end of 2023. In 41 clusters for which complete employment data were available, the total number of employees in member companies reached 1,060.4 thousand people. Thus, the Polish experience reflects the presence of institutionally formed interorganisational structures with a noticeable critical mass of participants, rather than fragmented local initiatives European Cluster Collaboration Platform (2023a) and M. Piotrowska *et al.* (2024).

The results are consistent with the conclusions of J. Abrham (2014), who demonstrated, using the material of the Visegrad Group countries, that the development of clusters in tourism, agriculture, and the food industry was linked to regional concentration, structural diversity, and support from national programmes and EU funds. The comparative context confirms the relatively developed character of the Polish cluster environment: as of 2025, 83 cluster organisations from Poland were registered on the ECCP (European Cluster Collaboration Platform), whereas in Czechia, according to 2023 ECCP data, 35 cluster organisations were recorded, and in Hungary, 28 were recorded (European Cluster Collaboration Platform, 2023b; European Cluster Collaboration Platform, 2023c). Thus, by the number of registered cluster organisations, Poland considerably outpaced some Central and Eastern European countries, which provides grounds for considering it not peripheral but one of the more visible examples of institutionally formed clustering in this macroregion. However, the average indicator of 117.7 participants per cluster in the Polish sample was not exceptionally high on the European scale, since the average size of EU cluster organisations on the ECCP was approximately 170 participants, and 22% of EU cluster organisations had between 101 and 200 participants (Piotrowska *et al.*, 2024). This means that Polish clusters belong to the medium-size segment by the number of participants, but their significance is determined by both the breadth of value-chain coverage, the presence of coordinators, links with EU funding, and inclusion in regional innovation ecosystems. The organisational architecture of Polish clusters is built around a coordinator who ensures communication between participants and integrates different levels of the value chain. In the Polish cluster policy, the representation of different levels of a common value chain, including infrastructure, human resource management, technologies, research and development, procurement, logistics, production, marketing, and sales, is regarded as a feature of a fully developed cluster. This means that an agri-food cluster in the Polish context functions not as an association of homogeneous producers but as a coordination platform for vertically and horizontally connected entities (European Cluster Collaboration Platform, 2023a). This conclusion correlates with the study by P. Garbade *et al.* (2013), in which the functions of a cluster organisation were considered a key condition for coordination between different groups of participants. For Polish agri-food clusters, this means that the coordinator performs an administrative role while also linking production, knowledge, innovation, marketing, and market promotion into a single service system.

Polish practice includes several models of agri-food cluster formation. Some clusters are built according to the logic of a direct market connection between producer and buyer, while others follow the logic of innovation-bioeconomic integration, in which research institutions, local self-government bodies, advisory centres, and laboratory infrastructure are added to producers and processors. NUTRIBIOMED Cluster is illustrative in this respect, as its multilevel support model combines agricultural, biotechnological, research, and medical communities, and covers infrastructural, research, technological, and educational levels. AgroBioCluster represents another type, bringing together 46 companies, representatives of local self-government, and research institutions. A separate format is represented by the European Agri-food Cluster (2023), focused on direct links between producers and buyers in the markets for cereals, pulses, meat, and related logistics (Piotrowska *et al.*, 2024; AgroBioCluster, n.d.). Similar logic

appears in the work of J. Wiśniewska-Paluszak *et al.* (2020), where the example of a Polish agri-food cluster showed the significance of cooperation with universities for the development of modern distribution channels, joint investment, and innovative solutions. This confirms that the success of Polish clusters depends on both the number of business participants and stable links with research institutions and educational-research infrastructure. In the regional dimension, agri-food clusters function as an element of broader innovation ecosystems. The example of the Podkarpackie Voivodeship illustrates this pattern: of the seven EC-CP-registered cluster organisations in the region, one was directly assigned to the agri-food ecosystem, while regional cluster structures generally had compact staff, a limited number of coordinators, and a network-based membership model. Most of these organisations were characterised by international orientation, project partnerships, and participation in training activities (Table 1).

Table 1. Representative models of agri-food clusters in Poland

Cluster/model	Structural composition	Functional principle	Recorded performance profile
NUTRIBIOMED Cluster	agricultural producers, processors, companies in food innovation, universities, laboratory and medical structures	multilevel integration of infrastructure, R&D, technologies, education, and food safety control	strengthening of local supply chains, knowledge transfer, and support for functional food products
AgroBioCluster	46 companies, local self-government, and research institutions	combination of agri-food production and bioeconomic solutions	network association of business, research, and the public sector
European Agri-food Cluster	producers of plant and animal products, buyers, and logistics and transport partners	direct links between producers and buyers, and coordination of sales and logistics	reduction of distance between producer and market, and commodity specialisation by segment
Regional agri-food clusters of Podkarpackie	small coordination teams, a compact member network, and cross-sectoral partners	project cooperation, training, and international links	inclusion of the agri-food area in the regional innovation ecosystem

Source: developed by the author based on M. Piotrowska *et al.* (2024), European Cluster Collaboration Platform (2025), AgroBioCluster (n.d.), European Agri-food Cluster (n.d.)

This indicates that Polish agri-food clusters develop not in isolation but in constant intersection with mechanisms of smart specialisation, interregional cooperation, and European innovation integration. In the structure of Polish agri-food clusters, cooperation between farmers, processors, and sales links is formed mainly around three interconnected mechanisms: coordination of short supply chains, joint modernisation of production-packaging processes, and collective promotion of products within quality systems. At the strategic planning level, the CAP Strategic Plan of Poland supports stronger cooperation between farmers and the processing sector, in addition to the development of short supply chains, especially for small farms and higher-quality products. This means that the logic of cooperation in Poland is built around production, processing, the local market, and channels for delivering products to final consumers (European Commission, 2025). This result is consistent with the conclusions of O. Bareja-Wawryszuk (2020), who, using the material of Poland, considered direct sales, agricultural retail sales, and small-scale, localised, and restricted activity as organisational forms of local food systems. In the context of Polish clusters, this confirms that short supply chains are not a secondary sales channel but a separate organisational model of spatial concentration of local food production.

According to European CAP Network (2024a) materials, the Zamojska Farma operational group aimed to create

a short supply chain for the distribution and sale of fresh vegetable products, primarily potatoes, along with sweet-corn and cauliflower. Five local farms were involved in the project, combining the shortening of the supply chain with automation of product sorting, washing, weighing, and packaging. Quantitative results indicated a 40% increase in the selling price of potatoes, a 15% increase in labour productivity due to the automation of packaging and sorting, a 20% reduction in operating costs through reduced dependence on intermediaries, and an increase in the number of online-store customers from 50 to 800. In addition, shortening the sales chain ensured direct sales on the farm or delivery of products to the consumer in approximately two working days. Thus, this case confirms that Polish short supply chains may have both organisational and measurable economic effects for producers: higher selling prices, lower costs, expansion of the customer base, and stronger control over added value within the local food chain. Similar logic is demonstrated by the study of M. Sylla *et al.* (2017), in which the model of community-supported agriculture in Poland was analysed as an example of a short food chain with direct involvement of producers and consumers. This allows the Polish experience to be interpreted more broadly: reducing intermediaries in cluster and quasi-cluster models is associated not only with economic benefits for farmers but also with the formation of new social links between the producer and the local market. In

the structure of Polish agri-food practices, the mechanism of joint technological modernisation of post-production operations plays a distinct role. Polish examples indicate that automation of vegetable sorting and packaging is an instrument for simultaneously increasing the speed of product circulation, reducing losses, and stabilising the quality of fresh products for the consumer. In the relevant EU case, it was directly stressed that short vegetable supply chains strengthen customer loyalty and have environmental benefits, while automation of the logistics-packaging stage contributes to a better supply of fresh products to the market. Thus, the interaction between the farmer, the sorting-packaging link, and the trade channel in Polish practices has a technologically organised character (European CAP Network, 2024b). Conclusions on logistics and packaging are consistent with the study by T. Bosona & G. Gebresenbet (2011), in which integration of logistics networks in local food chains was considered a means of increasing efficiency, reducing environmental impact, expanding the market for local producers, and improving traceability of food origin. Thus, Polish cases of post-harvest automation confirm the broader conclusion that cluster cooperation becomes effective only when institutional cooperation is complemented by real logistics integration.

Existing Polish clusters also show a format of direct coordination between producers and buyers without excessive branching of intermediary structures. The European Agri-food Cluster (n.d.) directly declared its focus on establishing direct relations between producers and buyers, concentrating on cereals, pulses, meat, and related goods, including oils, pasta products, and meat products. Notably, alongside commodity areas, the cluster website presented a logistics-transport function, meaning that sales cooperation is understood as part of a single process, not as a service added after the fact. This aspect can be compared with the study of N. Drejerska *et al.* (2019), in which

small-scale, localised, and restricted activity in Poland was considered a business model for creating value for local food products. In Polish agri-food clusters, direct links between producers, buyers, and trade channels perform a similar function: they help both sell products and retain a larger share of added value within the local system. Inter-subject coordination in the Polish agri-food sector is also supported through instruments of food quality systems. Under Plan Strategiczny WPR 2023-2027, Poland presents separate interventions 13.3 and 13.4, aimed respectively at the promotion, information, and marketing of products made within quality systems, and at the development of producer cooperation within these systems. The plan indicates that such interventions are intended to increase product recognition, strengthen cooperation, and ensure the presence of such goods on the market. This means that, for Polish cluster and cooperation models, qualitative product differentiation is combined with organisational strengthening of producer groups (Ryć, 2023). This conclusion is supported by the study of A. Barska & J. Wojciechowska-Solis (2018), in which conventional and regional products in Poland were considered through consumer perception, purchase motives, and development prospects for this segment. For agri-food clusters, this means that quality systems and collective marketing are significant both for producers and for building trust, recognition, and consumer value for local products. However, Polish examples emphasise that the effectiveness of cooperation depends on the capacity to resolve infrastructure and market bottlenecks. Within the AgroBRIDGES initiative for Poland, 10 key barriers were analysed, and 15 solutions for the development of short supply chains were proposed. Transport and packaging were identified as key barriers and critical success factors; the significance of demand and social trends related to the consumption of sustainably produced goods was also stressed separately (Table 2).

Table 2. Main mechanisms of cooperation in Polish agri-food clusters

Mechanism	Content of interaction	Participants	Recorded effect
Short supply chains	direct or shortened channel between producer and buyer	farmers, producer groups, local buyers, and trade partners	strengthening of farmers' positions, reduction of the role of intermediaries, and growth of market share
Joint sorting, packaging, and preparation for sale	automation of post-harvest processes and standardisation of quality	producers, processing/packaging links, and logistics operators	reduction of losses, acceleration of circulation, and stabilisation of fresh product quality
Direct production-sales links	coordination of contracting and commodity flows	producers, buyers, logistics, and transport	reduction of market distance and specialisation of sales channels
Cooperation in quality systems	joint promotion, marketing, and development of cooperation	farmers, processors, quality organisations, and advisory structures	increased recognition, strengthened cooperation, and better market accessibility
Multi-actor solutions for SFSC	removal of barriers in packaging, transport, and demand	farmers, agri-food enterprises, digital partners, and regional stakeholders	development of solutions for more resilient local sales models

Source: developed by the author based on I. Ryć (2023); European CAP Network (2024a; 2024b; n.d.a); European Agri-food Cluster (2023); European Commission (2025)

Thus, cluster interaction in the Polish agri-food sector is not limited to institutional cooperation between entities but requires appropriate logistics and marketing adjustment. Further explanation is provided by the study of I. Navarro-del Aguila & J. de Burgos-Jiménez (2022), in which the development of hybrid agri-food chains in South-Eastern Spain showed the possibility of combining conventional export channels with short supply channels.

In the Polish case, this allows short chains to be considered not as an alternative to the entire market system but as a flexible element of a hybrid model combining local sales, retail, logistics, and broader commodity flows. The results highlight that EU funding in the Polish case does not act as a separate external resource but is embedded in the development system of the agricultural, processing, and cluster environment through a set of CAP instruments, rural

development, network structures, and EIP-AGRI innovation groups. Under the CAP Strategic Plan for 2023-2027, the agricultural and rural development of Poland is organised through a funding system combining EAFRD, EAGF, and national contributions. The Polish PRN+ network was created to support the use of European agricultural and rural funding and, together with specialised services of the Polish innovation network and demonstration farms, covers 35 entities across the country. This organisation means that European funding functions both as a financial flow and as an instrument for the institutional deployment of cooperation networks (European CAP Network, n.d.b). The results are consistent with the conclusions of J. Jorge-Vázquez *et al.* (2021), who stressed the strategic importance of digitalising the European agri-food cooperative sector for increasing competitiveness, efficiency, and the ability to respond to economic and environmental challenges. In the Polish case, this means that EU funding should be considered both a source of investment and an instrument for technological, digital, and knowledge-based modernisation of agri-food networks. According to European Commission (2025) data, under the CAP Strategic Plan of Poland for 2023-2027, the total budget is EUR 25.243 billion, of which EUR 17.327 billion is allocated to direct payments, EUR 7.778 billion to rural development, and EUR 138.5 million to sectoral support. Within the allocation structure, EUR 2.076 billion is reserved for environmental and climate objectives within rural development, EUR 4.334 billion for eco-schemes, EUR 407.9 million for LEADER, and EUR 493.2 million for generational renewal in agriculture. Although these funds are not intended exclusively for clusters, they form the material field in which clusters obtain access to investment, advisory services, cooperation, and local development (European Commission, 2025).

CAP support is directly oriented towards cooperation models that influence cluster development. The Polish plan supports stronger cooperation between farmers and the processing sector, short supply chains, investments in high-quality food production, and strengthening the market orientation of farms. More than 127 thousand people are expected to receive advisory, training, or another form of knowledge support, or to participate in EIP-AGRI Operational Groups; more than 25 thousand people are also expected to be covered by measures related to environmental and climate performance. This confirms that the Polish model for developing agri-food clusters is based on both capital investment and the large-scale expansion of

knowledge-cooperation infrastructure (European Commission, 2025). The analysis further indicates that cluster policy instruments in Poland combine EU-wide funding with the national and regional framework of cluster support. According to the materials of the European Cluster Collaboration Platform (2023a), the instruments include funding for joint initiatives, support for research and development projects, support for small and medium-sized enterprises joining clusters, funding for cluster infrastructure and networking events, concept testing and demonstration projects, innovation vouchers, support for hiring specialists with academic degrees, development of professional and communication skills, market analytics, export consultancy, and marketing activities. Thus, Polish agri-food clusters develop within a complex financial-organisational package in which European funds strengthen production investment, managerial capacity, innovation capacity, and export capacity. This corresponds to the study of E. Giuliani & M. Bell (2005), which established, using the example of a Chilean wine cluster, that knowledge within a cluster does not spread automatically but concentrates around firms with higher absorptive capacity and around technological intermediaries. For Polish agri-food clusters, this means that instruments for supporting research and development, innovation vouchers, and concept testing have the greatest effect when the cluster includes entities capable of receiving, adapting, and disseminating new knowledge among other participants.

A characteristic feature of the Polish experience is the increase in funding in related areas directly connected with food-chain resilience. After the revision of the National Recovery and Resilience Plan of Poland in July 2024, funding for four investment measures related to food-chain resilience, research capacity, and sustainable water use increased from EUR 1.9 billion to EUR 2.6 billion. Alongside this, under the Polish CSP, the total rural development budget is EUR 7.778 billion, with an EU funding share of 60% and 46 interventions. This means that cluster and quasi-cluster forms of cooperation in the agri-food sector are provided with a relatively broad resource field for modernisation, logistics adaptation, and greening (OECD, 2025). A separate segment of European funding is linked to support for producers in quality systems and cooperation formats. Interventions 13.3 and 13.4 in the Polish WPR plan are aimed at marketing food products in quality systems and developing producer cooperation within these systems (Table 3).

Table 3. Main areas of the influence of EU funding on the development of agri-food clusters in Poland

Instrument/programme	Recorded resource	Functional significance for clusters
EU Common Agricultural Policy Strategic Plan for 2023-2027	EUR 25.243 billion of total budget	formation of the general investment and cooperation framework for the agricultural sector, processing, and rural development
Rural development	EUR 7.778 billion	support for modernisation, cooperation, local development, and advisory services
LEADER programme	EUR 407.9 million	strengthening of local networks, territorial initiatives, and local partnership
Knowledge exchange and the European Innovation Partnership for Agriculture	more than 127 thousand participants; more than 25 thousand participants in climate- and environment-related measures	deployment of knowledge and innovation infrastructure
National Recovery and Resilience Plan package on the resilience of food chains	increase in funding from EUR 1.9 billion to EUR 2.6 billion	strengthening of food-chain resilience, research capacity, and water management

Table 3. Continued

Instrument/programme	Recorded resource	Functional significance for clusters
Cluster policy instruments	research and development, networking events, concept testing, innovation vouchers, export consultancy, and marketing support	increase in the organisational, innovation, and external-market capacity of clusters
Interventions 13.3 and 13.4 within quality systems	promotion and development of producer cooperation	support for collective marketing, recognition, and the connectivity of quality systems

Source: developed by the author based on I. Ryc (2023), European Cluster Collaboration Platform (2023a), European Commission (2025), OECD (2025), European CAP Network (n.d.b)

Through such instruments, European funding effectively strengthens market communication, collective promotion, and the organisational density of production networks, which is one of the basic features of a mature cluster model in the agri-food sector. The generalisation of the Polish experience indicates several factors that systematically accompany the positive dynamics of agri-food clusters. Above all, this concerns the presence of a coordinator capable of ensuring administrative coordination and building practical services for participants, from project management to training, promotion, R&D, and internationalisation. This logic is visible in Polish instruments supporting key national clusters, where funding is linked to the development of the cluster offer for companies, networking events, knowledge transfer, market analytics, export consultancy, and partnership with research and innovation actors (European Cluster Collaboration Platform, 2023a). The second factor is the completeness of value-chain coverage. The Polish experience shows that more resilient formats are those in which primary production, processing, logistics, marketing, quality systems, and innovation-advisory support are combined. In this context, NUTRIBIOMED Cluster represents a model in which cooperation covers agricultural advisory centres, farms, local producers, universities, technological solutions for monitoring food safety, packaging, HACCP, GHP, and GMP standards, and the promotion of functional food products. As a result, the integration of different links in the chain enables movement from a simple association of participants towards the development of new products and new commercialisation channels (Piotrowska *et al.*, 2024). Comparison with the study of M. Schoonhoven-Speijer & S. Vellema (2020) demonstrates that the resilience of an agri-food cluster depends on the ability to institutionally consolidate the role of intermediary links that provide access to food, trade, and the market. In the Polish case, this confirms the significance of producers, processors, logistics, trade, advisory, and coordination participants, which form the “middle” infrastructure of food provision.

The third factor is the ability of clusters to connect knowledge, innovation, and the market. In the general Polish benchmarking, almost all clusters provided pro-innovation services, although the average number of such services remained limited at approximately 3-4, and cooperation with technology-transfer institutions covered fewer than half of the clusters. This demonstrates the uneven maturity of the innovation component. However, where

the innovation component was institutionally formalised, results were recorded in the form of SME access to expertise, testing, commercialisation, and development of new food products (Piotrowska *et al.*, 2024). The fourth factor is internationalisation, although its level in Polish clusters remains uneven. On average, Polish clusters were characterised by a relatively low level of internationalisation: the average composite indicator in this area was 0.29, while the internationalisation potential indicator was 0.30. The most common internationalisation instruments were trade missions, participation in international fairs, joint exhibitions, and promotion of brands and products in external markets. The average number of internationalisation services decreased from 6.4 to 5.1, but the number of members actually using these services increased to 1,085. This indicates a shift from a broad but not always demanded offer towards more targeted use of external-market instruments (Piotrowska *et al.*, 2024). The results can be compared with the study of P. Bertolini & E. Giovannetti (2006), in which internationalisation of the agri-food district of Modena was considered a factor in structural change in the conventional food industry. For Polish clusters, this means that entering external markets has export significance and changes the internal organisation of production, logistics, marketing, and interaction between participants. A similar emphasis appears in the study by F. Musso & B. Francioni (2015), where the example of Italian wine-producing SMEs emphasised that network relations may support internationalisation, although their effect depends on the type of ties and the real ability of firms to use local and external contacts. In the Polish case, this explains the unevenness of internationalisation: participation in a cluster does not guarantee entry into external markets if local networks are not supplemented by targeted services for export, branding, and international promotion. The fifth factor is the connection of clusters with broader regional innovation ecosystems. The material of Polish regional cluster networks recorded a positive relationship between the presence of cluster organisations and indicators such as business R&D investment, patent activity, employment in information and communication technologies (ICT), labour productivity, and GDP per capita. These results were formulated as correlations, not causal relationships, but they indicate that clusters in the Polish environment function as institutional intermediaries through which knowledge, technologies, and entrepreneurial activity are translated into regional economic results (Table 4).

Table 4. Success factors and key results of Polish agri-food clusters

Factor	Documented manifestation	Key result
Critical mass of participants	4,942 participants in 42 clusters; 117.7 participants per cluster	an organisational base for cross-sectoral cooperation is present

Table 4. Continued

Factor	Documented manifestation	Key result
Coordination core	project-management, training, marketing, R&D, and internationalisation services	the cluster coordinator combines production, knowledge, innovation, and sales
Complete value chain	combination of production, processing, logistics, quality control, and sales	NUTRIBIOMED integrates safety, packaging, HACCP/GHP/GMP standards, and functional food products
Innovation services	on average, 3-4 pro-innovation services per cluster; cooperation with technology transfer institutions covers fewer than half of clusters	innovation maturity is uneven and requires strengthening
Internationalisation	index of 0.29; potential of 0.30; 1,085 members use internationalisation services	demand for export services is growing despite a decrease in the average number of such services from 6.4 to 5.1
Short supply chains	3 analysed cases; AgroBRIDGES identified 10 barriers and 15 solutions	performance depends on logistics, packaging, transport, demand, and collective marketing
EU financial framework	EUR 25.243 billion under the CAP; EUR 7.778 billion for rural development; EUR 407.9 million under LEADER	funding supports investment, cooperation, knowledge, and local development
Regional integration	7 cluster organisations in Podkarpace; positive relationship with R&D, patents, ICT employment, labour productivity, and GDP per capita	clusters act as institutional intermediaries in regional innovation ecosystems

Source: developed by the author based on I. Ryć (2023), M. Piotrowska *et al.* (2024), European Cluster Collaboration Platform (2023a; 2025), European CAP Network (2024a; 2024b), European Commission (2025)

For agri-food clusters, this means inclusion in broader structures of smart specialisation, digitalisation, and green transformation, rather than confinement to the food market alone. The study by P. Galaso & A. Rodríguez-Miranda (2022) on a dairy agro-industrial cluster in Uruguay confirms that strategic cooperation in agro-industrial clusters depends on the territorial structure of networks and interaction between subgroups of firms. This allows a deeper interpretation of the Polish experience: regional agri-food clusters are effective when they operate as territorial networks, not merely as formal associations of enterprises. In the area of market results, Polish agri-food cluster practices primarily show strengthening of producers' positions in supply chains, a reduced role of intermediaries, increased controllability of quality, and reduced logistics and packaging losses. The potato short supply chain case demonstrated a measurable economic effect for farmers: expansion of the customer base, a higher selling price, lower operating costs, and stronger control over the sales circuit. In the case of vegetable packaging operations, optimisation of fresh product handling, lower losses, and better capacity to respond to market demand were recorded. In the case of NUTRIBIOMED, strengthening of local supply chains, reduced dependence on imports, and easier access for SMEs to testing facilities and commercialisation pathways were recorded (European CAP Network, 2024a; European CAP Network, 2024b; Piotrowska *et al.*, 2024). At the systemic level, the key result of the Polish experience is the institutional consolidation of the cluster environment. Compared with previous monitoring waves, the number of cluster members increased consistently, and the average cluster size in 2024 exceeded the 2018 level. This dynamic means that Polish clusters, including those operating in the agri-food sphere and related bioeconomic areas, are established as stable forms of cross-sectoral cooperation. However, unevenness in the level of innovation and international activity remains, which indicates the existence in Poland not of a single universal model but of several types

of agri-food clustering, from market-logistics to R&D-integrated models.

■ CONCLUSIONS

The study established that agri-food clusters in Poland operate as multilevel organisational structures that combine raw-material production, processing, logistics, sales, research and advisory support, and institutional coordination. Their functioning is not limited to the territorial concentration of enterprises but depends on stable horizontal and vertical links between farmers, processors, market intermediaries, trade channels, and support institutions. The Polish model combines cluster organisation with short supply chains, quality systems, local sales channels, and broader interregional market links. Quantitative indicators confirmed the institutional scale of the Polish cluster environment. As of 2025, 83 registered cluster organisations were recorded in Poland. According to the 2024 PARP benchmarking, the sample of 42 clusters included 4,942 participants at the end of 2023, averaging 117.7 participants per cluster. Such concentration creates conditions for stable network interaction, while cluster effectiveness depends largely on the completeness of value-chain coverage. The key outcomes of Polish agri-food clusters include stronger positions of producers in sales channels, reduced dependence on intermediaries, lower logistics and packaging losses, and expanded opportunities for collective marketing, innovation cooperation, and use of research infrastructure. The study also showed that EU financial support plays an important role in cluster development. Poland's CAP Strategic Plan amounted to EUR 25.243 billion, including EUR 7.778 billion for rural development, supporting production modernisation, cooperation, advisory mechanisms, and market promotion. The practical recommendations follow from these findings. Given the average cluster size in the PARP sample, priority should be given to expanding membership and strengthening the coordinator's service role in marketing, R&D, export support, and project cooperation. The Zamojska Farma case demonstrated the value of short supply chains; therefore,

local logistics, packaging, sorting, and digital sales channels should be further developed. Financial support should prioritise cluster models that integrate producers, processors, logistics partners, research institutions, and quality systems. Further research should compare Polish clusters by specialisation, examine digital tools in sales coordination, and assess the long-term impact of financial support on the competitiveness of agri-food chain participants.

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■ REFERENCES

- [1] Abraham, J. (2014). Clusters in tourism, agriculture and food processing within the Visegrad Group. *Agricultural Economics*, 60(5), 208-218. doi: 10.17221/20/2014-AGRICECON.
- [2] AgroBioCluster. (n.d.). Retrieved from <http://agrobiocluster.pl/?lang=en>.
- [3] Amador Dziedzic, K., Krystowski, K., Kuberska, D., Mackiewicz, M., Marciniak-Piotrowska, M., Piotrowski, M., Sieradzki, R., Sokołowska, A., Thlon, D., & Thlon, M. (2024). *Benchmarking of clusters in Poland – 2024 edition: General report*. Warsaw: Polish Agency for Enterprise Development.
- [4] Bareja-Wawryszuk, O. (2020). Forms of organization and spatial concentration of local food systems: A case from Poland. *Entrepreneurship and Sustainability Issues*, 8(1), 471-483. doi: 10.9770/jesi.2020.8.1(33).
- [5] Barska, A., & Wojciechowska-Solis, J. (2018). Conventional and regional food as seen by consumers – research results: The case of Poland. *British Food Journal*, 120(9), 1994-2004. doi: 10.1108/BFJ-01-2018-0054.
- [6] Bertolini, P., & Giovannetti, E. (2006). Industrial districts and internationalization: The case of the agri-food industry in Modena, Italy. *Entrepreneurship & Regional Development*, 18(4), 279-304. doi: 10.1080/08985620600613761.
- [7] Bosona, T., & Gebresenbet, G. (2011). Cluster building and logistics network integration of local food supply chain. *Biosystems Engineering*, 108(4), 293-302. doi: 10.1016/j.biosystemseng.2011.01.001.
- [8] Deroche-Leydier, Y. (2025). Enhancing the resilience of short food supply chains: Toward a relational understanding of the resilience process in the face of inflation. *Agricultural and Food Economics*, 13, article number 31. doi: 10.1186/s40100-025-00368-4.
- [9] Drejerska, N., & Sobczak-Malitka, W. (2023). Nurturing sustainability and health: Exploring the role of short supply chains in the evolution of food systems – the case of Poland. *Foods*, 12(22), article number 4171. doi: 10.3390/foods12224171.
- [10] Drejerska, N., Bareja-Wawryszuk, O., & Gołębiewski, J. (2019). Marginal, localized and restricted activity: Business models for creation a value of local food products: A case from Poland. *British Food Journal*, 121(6), 1368-1381. doi: 10.1108/BFJ-05-2018-0337.
- [11] European Agri-food Cluster. (n.d.). Retrieved from <https://www.euroagrifood.com/?lang=en>.
- [12] European CAP Network. (2024a). *EIP-AGRI innovation awards 2024 for operational groups: Nominees*. Retrieved from https://eu-cap-network.ec.europa.eu/campaign/eip-agri-innovation-awards-2024-nominees_en.
- [13] European CAP Network. (2024b). *EIP Operational Group improves Polish farmer positions in vegetable value chains*. Retrieved from <https://surl.li/obdirs>.
- [14] European CAP Network. (n.d.a). *AgroBRIDGES*. Retrieved from https://eu-cap-network.ec.europa.eu/projects/agrobridges_en.
- [15] European CAP Network. (n.d.b). *Poland*. Retrieved from https://eu-cap-network.ec.europa.eu/countries/poland_en.
- [16] European Cluster Collaboration Platform. (2023a). *Country factsheet: Poland*. Brussels: European Cluster Collaboration Platform.
- [17] European Cluster Collaboration Platform. (2023b). *Country factsheet: Czechia*. Brussels: European Cluster Collaboration Platform.
- [18] European Cluster Collaboration Platform. (2023c). *Country factsheet: Hungary*. Brussels: European Cluster Collaboration Platform.
- [19] European Cluster Collaboration Platform. (2025). *Clusters meet regions' event in Rzeszów "Exploring the innovation ecosystem: Clusters as catalysts for regional competitiveness" – the case of the Podkarpackie region*. Brussels: European Cluster Collaboration Platform.
- [20] European Commission. (2025). *At a glance: Poland's CAP strategic plan*. Retrieved from https://agriculture.ec.europa.eu/document/download/7716493a-28a0-4a7c-a66d-e54803e42bdd_en?filename=csp-at-a-glance-poland_en.pdf.
- [21] Galaso, P., & Rodríguez-Miranda, A. (2022). Strategic collaboration in agro-industrial clusters: Territorial dynamics within the dairy industry in Uruguay. *Competitiveness Review: An International Business Journal*, 32(5), 777-796. doi: 10.1108/CR-10-2021-0146.
- [22] Garbade, P.J.P., Fortuin, F.T.J.M., & Omta, S.W.F. (2013). Coordinating clusters: A cross sectoral study of cluster organization functions in the Netherlands. *International Journal on Food System Dynamics*, 3(3). doi: 10.22004/ag.econ.144859.
- [23] Giuliani, E., & Bell, M. (2005). The micro-determinants of meso-level learning and innovation: Evidence from a Chilean wine cluster. *Research Policy*, 34(1), 47-68. doi: 10.1016/j.respol.2004.10.008.
- [24] Jorge-Vázquez, J., Chivite-Cebolla, M.P., & Salinas-Ramos, F. (2021). The digitalization of the European agri-food cooperative sector: Determining factors to embrace information and communication technologies. *Agriculture*, 11(6), article number 514. doi: 10.3390/agriculture11060514.

- [25] Kuberska, D., & Mackiewicz, M. (2022). Cluster policy in Poland – failures and opportunities. *Sustainability*, 14(3), article number 1262. [doi: 10.3390/su14031262](https://doi.org/10.3390/su14031262).
- [26] Lipińska, I. (2022). The role of clusters in the agri-food supply chain: Selected legal issues. *Revista Estudios Jurídicos. Segunda Época*, 22, article number e7460. [doi: 10.17561/rej.n22.7460](https://doi.org/10.17561/rej.n22.7460).
- [27] Lis, A.M., & Mackiewicz, M. (2023). The implementation of green transformation through clusters. *Ecological Economics*, 209, article number 107842. [doi: 10.1016/j.ecolecon.2023.107842](https://doi.org/10.1016/j.ecolecon.2023.107842).
- [28] Musso, F., & Francioni, B. (2015). Agri-food clusters, wine tourism and foreign markets: The role of local networks for SME's internationalization. *Procedia Economics and Finance*, 27, 334-343. [doi: 10.1016/S2212-5671\(15\)01004-7](https://doi.org/10.1016/S2212-5671(15)01004-7).
- [29] Nasalski, Z. (2023). Conditions for coopeition of farms in the agri-food sector on the example of the Warmińsko-Mazurskie Province. *Problems of Agricultural Economics*, 374(1), 85-102. [doi: 10.30858/zer/162156](https://doi.org/10.30858/zer/162156).
- [30] Navarro-del Aguila, I., & de Burgos-Jiménez, J. (2022). Sustainable innovation through developing hybrid agri-food supply chains: A case in South-Eastern Spain. *Toxics*, 10(12), article number 752. [doi: 10.3390/toxics10120752](https://doi.org/10.3390/toxics10120752).
- [31] OECD. (2025). *Agricultural policy monitoring and evaluation 2025: Making the most of the trade and environment nexus in agriculture*. Retrieved from https://www.oecd.org/en/publications/agricultural-policy-monitoring-and-evaluation-2025_a80ac398-en/full-report/european-union_2e29a59b.html.
- [32] Ossowska, L., Janiszewska, D., & Kurdyś-Kujawska, A. (2025). Food producers in the digital era: Analysis of the online presence and e-commerce maturity of regional food producers in Poland. *Procedia Computer Science*, 270, 5426-5435. [doi: 10.1016/j.procs.2025.10.010](https://doi.org/10.1016/j.procs.2025.10.010).
- [33] Ozougwu, S.T., & Grabowska-Chenczke, O.M. (2025). The role of talent management in the growth of agribusiness: The case of agri-food companies in Wielkopolskie Voivodeship. *Journal of Agribusiness and Rural Development*, 76(2), 207-214. [doi: 10.17306/J.JARD.2025.00010R1](https://doi.org/10.17306/J.JARD.2025.00010R1).
- [34] Raftowicz, M., Solarz, K., & Dradrach, A. (2024). Short food supply chains as a practical implication of sustainable development ideas. *Sustainability*, 16(7), article number 2910. [doi: 10.3390/su16072910](https://doi.org/10.3390/su16072910).
- [35] Ryć, I. (2023). *Food quality systems in the CAP strategic plan 2023-2027. National Rural Network+*. Retrieved from <https://www.ksowplus.pl/rolnictwo-i-produkcja-rolna/aktualnosc/interwencje-ps-wpr-2023-2027-systemy-jakosci-zywnosci>.
- [36] Schoonhoven-Speijer, M., & Vellema, S. (2020). How institutions governing the economic middle in food provisioning are reinforced: The case of an agri-food cluster in northern Uganda. *Journal of Rural Studies*, 80, 34-44. [doi: 10.1016/j.jrurstud.2020.06.035](https://doi.org/10.1016/j.jrurstud.2020.06.035).
- [37] Sylla, M., Olszewska, J., & Świąder, M. (2017). Status and possibilities of the development of community supported agriculture in Poland as an example of short food supply chain. *Journal of Agribusiness and Rural Development*, 43(1), 201-207. [doi: 10.17306/J.JARD.2017.00266](https://doi.org/10.17306/J.JARD.2017.00266).
- [38] Wiśniewska-Paluszak, J., Koszela, K., Lipińska, I., Przezbórska-Skobieć, L., Wielicka-Regulska, A., Sadowski, A., & Grabowska-Chenczke, O. (2020). Cooperation of agri-food clusters with universities: The case study for Poland. *AGROFOR International Journal*, 5(2), 130-141. [doi: 10.7251/AGRENG2002132W](https://doi.org/10.7251/AGRENG2002132W).
- [39] Zdráhal, I., & Fannin, J.M. (2025). Food processing industries in Visegrad countries in global value chains (1995-2018). *Comparative Economic Research. Central and Eastern Europe*, 28(1), 97-117. [doi: 10.18778/1508-2008.28.06](https://doi.org/10.18778/1508-2008.28.06).

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Досвід Польщі у розвитку агропродовольчих кластерів

■ **Анотація.** Метою дослідження було визначити особливості функціонування агропродовольчих кластерів у Польщі через аналіз їхньої організаційної структури, механізмів взаємодії між учасниками ланцюга створення вартості, фінансової підтримки та результативності діяльності. Методологічну основу дослідження становили поєднання документального аналізу, структурно-функціонального та кейсового підходів, порівняльно-аналітичних методів, описового тлумачення кількісних показників, систематизація та наукове узагальнення. Дослідження встановило, що агропродовольчі кластери в Польщі функціонують як багаторівневі мережеві структури, які об'єднують виробників сировини, переробні підприємства, логістичні структури, канали збуту, науково-дослідні установи та дорадчі органи. Станом на 30 червня 2025 року на Європейській платформі кластерної співпраці для Польщі було зареєстровано 83 кластерні організації; у вибірці бенчмаркінгу 2024 року з 42 кластерів загальна кількість учасників становила 4 942, а середня кількість – 117,7 учасника на один кластер. Ключовими механізмами виявилися короткі ланцюги постачання, прямі зв'язки між виробниками та покупцями, спільні логістичні й пакувальні рішення, а також співпраця в системах якості харчових продуктів. Фінансова підтримка з боку Європейського Союзу формує ресурсну основу для розвитку: бюджет Стратегічного плану Спільної аграрної політики Польщі на 2023-2027 роки становить 25,243 млрд євро, з яких 7,778 млрд євро спрямовано на розвиток сільських територій. Узагальнення, отримані в дослідженні, свідчать про те, що результативність польських агропродовольчих кластерів визначається повнотою охоплення ланцюга створення вартості, координувальною роллю кластерного ядра, участю науково-дослідних і дорадчих структур, а також здатністю поєднувати локальні форми збуту з ширшими ринковими каналами. Практична цінність отриманих результатів полягає в можливості їх використання органами аграрної та регіональної політики, координаторами кластерів, асоціаціями фермерів, переробними підприємствами та науково-дослідними установами для вдосконалення міжгалузевої співпраці, планування фінансування, розвитку коротких ланцюгів постачання та зміцнення організаційної стійкості агропродовольчого сектору

■ **Ключові слова:** фінансова підтримка; логістичні структури; переробні підприємства; самоврядування; ринок