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THE SIGNIFICANCE OF THE POLISH AGRI-FOOD SECTOR IN ENSURING THE NATION'S FOOD SECURITY – SELECTED ASPECTS

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The need to ensure the country's food security is a leading element of the state's activities, due to the dynamic changes and threats stemming from the international environment, as well as climate change affecting agricultural crops. The objective of this study was to identify the role and importance of agri-food sector enterprises in ensuring Poland's food security, with particular emphasis on assessing food self-sufficiency. The research material consisted of publicly available statistical data, as well as relevant subject literature. Descriptive methods, statistical techniques and visualisation methods were applied. The food self-sufficiency index, Ss, was utilised in the analysis. The detailed analysis encompassed the years 2020-2024, i.e. the period of the pandemic and the war in Ukraine, a time of crisis when supply chains were disrupted and foreign trade hampered. The study covers basic food product groups. The first part of the study characterises the country's food security and its dimensions, while the second discusses the role of food sector enterprises in ensuring access to food. The analysis demonstrates that food companies generate the largest share of the value of sold production in industrial processing, and their strong market position is also possible thanks to a systematic increase in investment expenditure. The results of research on the production and consumption of basic agricultural raw materials show that Poland is a surplus country in food production in almost all product groups.

Keywords: food security, food self-sufficiency, agri-food enterprises

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1. INTRODUCTION

Since the beginning of human civilisation, the production and distribution of food have been among the most important tasks facing humanity. This is because food belongs to a category of products with no substitutes, and which are fundamental to the hierarchy of human needs. Therefore, governments must ensure that all citizens have access to adequate agricultural and food products. This is particularly important today, given that it is estimated that by 2022 approximately 735 million people, or 9.2% of the world's population, will live in a state of chronic hunger. This represents a staggering increase compared to 2019. Furthermore, 2.4 billion people are experiencing moderate to severe food insecurity, meaning they lack access to sufficient food (United Nations, 2025). Consequently, food security has become a significant global issue at the beginning of the third decade of the 21st century due to the interplay of various factors. The turbulent environment in which national economies now operate means that many factors simultaneously exacerbate the challenge of ensuring food security. Declining water resources and agricultural land, emerging plant and animal diseases, food waste, and the alternative use of land and food raw materials are having an increasingly adverse impact on food security (Firlej, Żmija, 2014, pp. 23-24). When considered in conjunction with the increasingly frequent and rapid climate changes affecting agricultural crops in various regions of the world, the Coronavirus (SARS-CoV-2) pandemic, and the ongoing war in Ukraine, the danger of not meeting basic human food needs becomes even greater. The global Coronavirus (SARS-CoV-2) pandemic had a significant impact on international trade, with restrictions imposed by individual countries on their exports and the prioritisation of domestic production resulting in a decline in global trade in goods and services. The result of this was the "closure" of national economies, which in turn led to a decline in global trade in 2020. The prevailing instability in the global food market was further compounded by the armed conflict that commenced in February 2022 in Ukraine, a major European producer of foodstuffs. Prior to the onset of hostilities, Ukraine's agricultural exports in 2021 constituted 14% of the global food trade (Shubravska, Prokopenko, 2022). Moreover, Ukraine accounted for up to 50% of global exports of sunflower oil, 18% of barley, 16% of corn, and 12% of wheat (Grzelak, Sobczyk, 2024). The Russian military's blockade of Ukraine's ports prevented the export of food products, resulting in rising food prices on global markets. This, in turn, has led to widespread hunger and malnutrition, affecting millions of individuals worldwide. This underscores the pivotal role of agribusiness as a major producer and supplier of food (Urban, 2014, pp. 13-14).

In view of such dynamic changes and threats arising from the international environment, it is important to answer the following research questions: Are Polish agri-food companies able to meet the food needs of the Polish population? How important is foreign trade in agri-food products in ensuring Poland's food security? On this

basis, the aim of this study is to identify the role and importance of agri-food companies in ensuring Poland's food security, with particular emphasis on assessing food self-sufficiency. The first part of the study focuses on characterising the country's food security and its dimensions. The second part discusses the role of food sector enterprises in shaping access to food. The degree of Poland's food self-sufficiency is also determined by analysing the level of production and consumption of selected agricultural raw materials and presenting the foreign trade balance in agri-food products.

2. RESEARCH MATERIAL AND METHODOLOGY

The research material in this study is primarily comprised of public and government statistics, industry reports, and literature on the subject, including academic and scientific resources. For the purposes of the study, materials, reports, statements, and analyses were prepared by the Central Statistical Office, data was sourced from the National Agricultural Support Centre, reports were prepared by the Institute of Agricultural and Food Economics, analyses were provided by the European Food Safety Authority and the Global Food Security Index was developed by the Economist Intelligence Unit. Scientific publications, both monographs and periodicals, were also used. The analysis of the research problem presented was mainly based on compilations and descriptions of existing data. The collected material was processed and interpreted using descriptive methods, statistical techniques, and visualisation. A comparative analysis over time was also used. The research results are presented using statistical charts and tabular descriptions. The food self-sufficiency index Ss was also used. This can be defined as the quotient of domestic production (Dp) and domestic consumption (Dc) (in this case including consumption, reproduction, industrial consumption, grazing, and losses and shortages) according to the formula (Kapusta, 2017, p. 166):

$$Ss = \frac{Dp * 100}{Dc},$$

where: Ss – degree of self-sufficiency, Dp – domestic production, Dc – domestic consumption. The occurrence of a balance (Ss = 100) or surplus (Ss > 100) of domestic production over domestic consumption indicates sufficient production and will be considered as balanced production and consumption. The comprehensive analysis encompassed the years 2020-2024, which correspond to the period of the pandemic and the war in Ukraine. This timeframe, characterised by crisis situations, witnessed the disruption of supply chains and the impediment of foreign trade. The study incorporated the fundamental product categories that play a pivotal role in the framework of both production and consumption. These include cereals, potatoes,

vegetables, fruit, sugar, meat, milk and eggs. These products are classified within the category of unprocessed products, encompassing both domestic consumption and quantities earmarked for further processing.

3. A LITERARY CONCEPT OF FOOD SECURITY

The term 'food security' was introduced into common usage by the FAO World Food Conference, which took place in Rome in 1974 (Sitarz, Janczar-Smuga, 2012, p. 68). It referred to the situation of access to adequate supplies of basic food at all times in order to avoid acute shortages, maintain steady production and consumption, and limit sudden changes in food prices (Obiedzińska, 2016, p. 129). According to earlier definitions, food security is ensured when at least three conditions are met simultaneously (Małysz, 1991). Firstly, the quality of the food product, i.e. access to safe food containing the necessary level of energy and the right proportions of nutrients. Food should be free from contamination exceeding acceptable standards and properly balanced in terms of energy and composition (Gulbicka, 2011, pp. 9-10). Secondly, the physical availability of food, which is understood as the overall capacity of the agricultural system to meet food demand (Czernyszewicz, 2024, p. 131). This is nothing more than a guarantee of supply through the national food economy or imports at the minimum level of demand. Thirdly, economic accessibility for households: this type of food security is ensured when consumers have the purchasing power to buy the necessary food products and services or have access to the necessary food through various forms of food aid (Gajda, Kołożyn-Krajewska, 2020, p. 112).

In 2009, a new definition of food security was proposed, treating it as a situation in which all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and preferences for an active and healthy lifestyle (FAO, Rome, 2015, p. 53). This comprehensive approach to food security is predicated on four factors (Michalczyk, 2019, p. 21):

- food availability, which is understood to denote the sufficiency of food, both from natural resources and on the market; it is determined by domestic production and imports, as well as by the ability to collect and store it;
- food access, which is a broad concept that encompasses both physical and economic dimensions of access; it is determined by the concerted efforts to ensure that all social and age groups have equal access to food, while also maintaining its affordability; the factors that regulate this phenomenon include a society's purchasing power, its income and the development of infrastructure;
- food utilisation, which is mainly determined by health quality, which is guaranteed by maintaining food safety and nutrition security;
- stability, which aims to ensure stability of supply irrespective of economic fluctuations, the country's location and climatic conditions or its international policies (Obiedzińska, 2016, pp. 128-129).

However, these definitions still do not take into account other, increasingly frequently expressed aspects, such as trust in food and its producers. This trust has become an integral component of food security, particularly in economically developed countries, where food crises and scandals are becoming increasingly prevalent (Grochowska, 2014, p. 98). Moreover, as confirmed by research conducted by the European Food Safety Authority, 41% of EU citizens have faith that the products they buy are safe for their health (Food safety in the EU, 2022). Therefore, it is possible to concur with C. Rocha's (2008) proposal to define food security through five dimensions: physical availability, economic accessibility, adequacy, acceptability and political institutions (agency), i.e. 5 x A.

Another concept of food security is presented by the United States Department of Agriculture, which defines this concept in relation to the household. It is acknowledged that this entity is of primary importance in the domain of consumption, characterised by a minimal degree of organisation, thereby exerting a negligible influence on food security conditions (Kapusta, 2012, p. 31; Małysz, 2008, p. 87). In this context, food security is defined as the access of all household members to sufficient food at all times to meet their individual needs for an active and healthy lifestyle, without resorting to extreme measures such as theft, begging or social assistance (Kowalczyk, 2009, pp. 14-15).

In consideration of the definitions and concepts presented, it is proposed that food security can be understood in at least three fundamental dimensions: global, national and household (and within it, each member of that household). Furthermore, it is determined by various dimensions of this security, including physical availability, economic availability and social access to or security (Gawęcki, 2014; Kraciuk, 2017; Małysz, 2008).

A nation's capacity for self-sufficiency in food production is inextricably linked to the overarching concept of food security. These are issues that complement each other. However, self-sufficiency is a narrower concept. It is limited to strategic products (raw materials) and focuses on the optimal use of the potential of the national food economy, which is constantly confronted with the international market for means of production, food raw materials and final food products (Kapusta, 2017, p. 163).

In the European Union, issues related to ensuring food security for all its citizens were already regulated in the Treaty of Rome, which defined the objectives of the Common Agricultural Policy. At that time, particular attention was paid to the need to guarantee security of supply and reasonable prices for consumers. The objectives of the agricultural policy at that time resulted from the needs and situation after World War II (Leśkiewicz, 2012, p. 189). It should be noted that the content related to food security has evolved over the years, taking into account the changing environment and issues related to food security. Furthermore, the level of interest in food safety among European citizens varies significantly. For example, it has been documented as reaching 99% in Greece, 95% in Cyprus, yet a mere 33% in Poland (Food safety in the EU, 2022, p. 11). Ensuring food security is also a key

issue for the Polish authorities. It is defined as a situation in which all households have effective access to the food needed for all people and are not at risk of losing that access (Sectoral…, 2008, p. 18). What is more, improving and ensuring food security has also become one of the main strategic objectives in the field of Poland's national security, which is aimed at increasing the security and position of our country on the international stage (Recommendations, 2024, pp. 6-7). It should also be added here that the objective set out in the Strategy for Sustainable Development of Rural Areas, Agriculture and Fisheries 2030 is the multifunctional economic development of rural areas, ensuring the country's food security and increasing the added value of agriculture, as well as sustainable growth in the income of its inhabitants, while minimising economic stratification, social and territorial stratification and improving the state of the natural environment (Strategy, p. 36). This main objective is to be achieved through three specific objectives, the first of which is to strengthen food security and resilience to crises (Strategy, p. 39). This situation highlights the critical challenge of ensuring food security for Poland. In addition, it is important to note that according to the latest published Global Food Security ranking, Poland attained a high ranking – 21st out of the 113 countries assessed. The study considered a range of factors, including access to food, affordability, quality, food security support programmes, farmers' access to finance, nutrition standards, and food safety (Global Food Security Index, 2022, p. 27). Moreover, it should be pointed out that the growth of areas with water shortages, the increase in global food demand, urban development or the limitation of land availability are just a few of the factors influencing the provision of food security[2].

Subsequent food crises, such as price fluctuations on food markets or the lack of guaranteed real food security, have sparked numerous discussions about the need to pay special attention to the agricultural and agri-food sectors. Thus, already in 2011, the European Parliament recognised agriculture as a strategic sector in the context of food security (Dz.Urz. UE C 136-2011).

In view of the above, it can be concluded that in order to ensure food security in the current era, it is particularly important to make the entire agri-food sector 'resilient' to common crisis factors. This resilience can be built largely by strengthening the competitiveness of the food economy, which in turn increasingly necessitates the existence and use of innovation. In recent years, the agri-food industry has witnessed a significant increase in technological development, digitalisation, novel production and promotion methodologies, and new opportunities for employment and management (Whayne, 2024). The digital revolution has been identified as a significant opportunity for development. It has been demonstrated that

[2] Leading factors include: increased global demand for food; linkages between financial markets and speculation in agricultural commodity futures markets; urban growth; volatility in food and energy markets, decline in global food stocks, rapid development of biofuels; reduced land availability; climate change; growth of water-scarce areas; food insecurity; loss of biodiversity; food loss and waste; changes in consumption patterns; demographic growth (Obiedzińska, 2016, p. 128).

this initiative provides new opportunities for innovation and improvements in processes at various levels of production, from agricultural production, through food processing and food supply chain management, to food safety and quality assurance systems. The development of technology, particularly the integration of digital and real-world systems, is precipitating a paradigm shift in production from mass to personalised production, in other words, production that is tailored and adapted to the individual needs and expectations of specific consumer groups (Szczepaniak, Wigier, 2020, p. 248). Innovation in agricultural holdings concerns not only seeds, plant protection products or machinery and equipment used in agricultural activities, but also aspects such as work organisation and renewable energy sources (Suchoń, Zuba-Ciszewska, 2025, p. 307). In food processing, innovations will include production technologies, types of foodstuffs, new packaging and nanotechnology in food production (cf. Kouam, Kingsley, 2023; Mielski, 2016, pp. 15-23). Innovation has already contributed to the development of the agri-food industry (Suchoń, 2010, pp. 206-212), and is now also becoming essential for maintaining and strengthening the success of enterprises. Furthermore, taking advantage of the opportunities offered by new technologies, such as improving product quality, increases food safety and, consequently, food security.

4. ENSURING POLAND'S FOOD SECURITY THROUGH AGRI-FOOD ENTERPRISES

It is imperative that citizens have access to sufficient food, which is a fundamental responsibility of any national economy. Consequently, companies operating within the agri-food sector represent its primary conduit. This sector constitutes a fundamental component of the national economy, and its significance extends beyond mere economic considerations, such as the generation of Gross Domestic Product (GDP) or participation in foreign trade. The sector's importance is also pronounced on a social level. Two elements are of particular significance in the context of food security. The first of these is agriculture, which is an essential and fundamental element of this process, given its role in producing food. The second is the food processing industry, which facilitates the processing of agricultural products and the refinement of these products into foodstuffs, thereby extending their shelf life. Consequently, it can be posited that the food industry constitutes a component of the national economy, responsible for the procurement and processing of natural resources (Obiedzińska, 2013, p. 6). In addition to its role in agriculture, it fulfils a fundamental function in the food economy. The food sector's interactions with the global environment are also of significance, as they facilitate the placement of surplus products in foreign markets and provide access to food resources on a global scale. The food sector includes companies with a wide range of activities, belonging to industrial processing and engaged in the production of food and beverages.

According to the European Classification of Activities, it consists of entities classified in the following sections:
- production, processing, and preservation of meat and meat products,
- processing and preservation of fish and fishery products,
- processing of fruit and vegetables,
- production of vegetable or animal oils and fats,
- production of dairy products,
- production of grain milling products, starch and starch products,
- production of prepared animal feeds,
- production of other food products,
- production of beverages.

According to data from the Central Statistical Office (GUS), at the end of 2024, the total number of enterprises belonging to the agri-food sector was just under 88,500, of which agricultural enterprises accounted for just under 53,000 companies, and those belonging to the food sector accounted for over 35,500 enterprises (see tab. 1).

Table 1. Number of businesses classified as agriculture, food and beverage manufacturing by expected number of employees in 2024

Type of business/size of company	Total	0-9	10-49	50 and more
Agriculture (and hunting)	52 794	50 940	1 615	239
Production of foodstuffs	33 874	28 495	4 237	1 142
Beverage production	1 805	1 569	169	67

Source: *Zmiany strukturalne grup podmiotów gospodarki narodowej w rejestrze REGON 2024 roku*, 2025, pp. 28-30.

Furthermore, an increase in the number of newly established enterprises across all sectors was observed in comparison with the previous year. In the agri-food sector, as in the Polish economy as a whole, micro-enterprises (employing up to nine employees) dominated, accounting for as much as 96.5% of agricultural enterprises, 84% of food production enterprises, and 87% of beverage production enterprises. Moreover, food and beverage processing enterprises accounted for approximately 9% of all industrial processing entities in Poland.

An important element in the analysis of the significance of agri-food sector enterprises in ensuring the country's food security was the value of food and beverage sales (tab. 2). The analysis indicates that from 2020 to 2023, there was a significant increase in the value of food sales, reaching up to 55%. Concurrently, the value of beverage sales grew exponentially. However, it appears that the aforementioned data cannot be interpreted as an increase in demand for food. Rather, the high inflation rate during the period in question was also a reason for the increased

value of agri-food sales. Nevertheless, the percentage of the value of food and beverage sales combined remains the highest, accounting for 20% of the total industry. Consequently, the food industry is considered to be one of the most significant sectors of the Polish economy.

Table 2. Value of production sold of selected industrial products in 2020-2023

Specification	Year	Value in million PLN	Percentage in total industry
Food products	2020	208 670	17.9
	2021	233 303	16.2
	2022	311 705	16.6
	2023	323 410	18.1
Drinks	2020	33 169	2.8
	2021	36 371	2.5
	2022	41 292	2.2
	2023	43 725	2.4

Source: own study based on data from the Central Statistical Office.

Such a strong position and rapid growth of the agri-food sector in Poland are also possible thanks to investments made in its various branches. It is thanks to investments, among other things, that this sector has undergone profound changes over the years. From a traditional, rather backward sector using outdated technologies and production methods, it has transformed into a modern and dynamically changing business that is successful not only domestically but also on foreign markets (Szczepaniak, Wigier, 2020, p. 233). As shown in Table 3, there was a significant increase in investment expenditure on all components of the food sector in Poland in the years analysed. Furthermore, expenditure on food production increased by 40% in 2023 compared to 2020. A similar situation applies to agriculture, which is the main pillar of agribusiness and a key element of the food chain. Investment expenditure here increased by 21%. Agriculture's condition significantly impacts the sector's position and development, with changes in agriculture consequently affecting the Polish food industry. It is important to acknowledge the increasing number of entities introducing innovations, notably agricultural producer associations, such as dairy cooperatives, agricultural producer groups, agricultural production cooperatives and energy cooperatives (Krzyżanowska, 2016). Despite the prevalence of entities engaged in innovative activities within the Polish agri-food sector, a considerable proportion of farms and enterprises remain uninvolved in this type of activity. For instance, in the 2020-2022 period, the proportion of innovative enterprises in the food product sector that exhibited innovation in both product and process design was 25.9%, which was one of the lowest values recorded in the industrial processing sector as a whole. Furthermore, within this group, 11.5% of enterprises introduced

new or improved products, while only 4.6% introduced products that were new to the market. It is evident that these values are all below the average for industrial processing as a whole. The situation is different for beverage manufacturers, where the share of innovative enterprises is just under 41% (Industrial Statistical Yearbook, 2023, pp. 445-447), which is higher than the average for industrial processing.

Table 3. Investment outlays in agriculture and food industry in 2020-2023 (PLN million)

Specification	Year			
	2020	2021	2022	2023
Agriculture (and hunting)	5366.5	5585.4	6043.0	6489.8
Production of foodstuffs	9667.7	10628.2	12387.9	13553.7
Beverage production	1521.2	1398.1	1464.7	1590.2

Source: own study based on data from the Central Statistical Office.

The analysis of the importance of agri-food enterprises in ensuring the country's food security should be expanded to include an assessment of their potential to ensure the country's self-sufficiency. To this end, basic information on the production and domestic consumption volumes of key agricultural products was employed. Based on the data in table 4, Poland appears to have had a food production surplus during the analysed years. This means that for the majority of product groups analysed, the food self-sufficiency index is equal to or greater than 100; therefore, agri-food enterprises produce more products than are consumed domestically. Fruit is the only product group for which the food self-sufficiency ratio (Ss) is consistently negative, which means that domestic demand exceeds production. Having a surplus over domestic demand creates opportunities to export surplus products and use the foreign currency obtained to import products that are produced in insufficient quantities, or not produced at all in the country for natural reasons (e.g. certain vegetables and fruits).

Table 4. Production and domestic consumption of selected agricultural products

Specification	Volume per marketing year		
	2020/2021	2021/2022	2022/2023
Basic cereals in thousands of tonnes			
Collections	28 563	26 996	26 922
Domestic consumption	20 912	20 257	20 164
Surplus/deficit	7 651	6 739	6 758

Specification	Volume per marketing year		
	2020/2021	2021/2022	2022/2023
Potatoes in thousands of tonnes			
Collections	7 848	7 082	6 029
Domestic consumption	7 373	6 887	5 909
Surplus/deficit	475	195	120
Vegetables in thousands of tonnes			
Collections	5 155	5 279	5 443
Domestic consumption	4 901	4 999	5 492
Surplus/deficit	254	280	–49
Fruit in thousands of tonnes			
Collections	4 512	5 059	5 363
Domestic consumption	4 809	5 240	5 570
Surplus/deficit	–297	–181	–207
Sugar in thousands of tonnes			
Collections	1 981	2 810	2 788
Domestic consumption	1 602	1 667	1 785
Surplus/deficit	379	1 143	1 003
Specification	Volume per year		
	2021	2022	2023
Meat in chilled weight in thousands of tonnes			
Production from slaughter	5 577	5 813	5 506
Consumption	3 091	3 253	3 132
Surplus/deficit	2 486	2 560	2 374
Beef in chilled weight in thousands of tonnes			
Production from slaughter	642	621	595
Consumption	135	122	73
Surplus/deficit	507	499	522

Specification	Volume per marketing year		
	2020/2021	2021/2022	2022/2023
Pork in chilled weight in thousands of tonnes			
Production from slaughter	2 100	2 113	1 877
Consumption	1 891	2 033	1 755
Surplus/deficit	209	80	122
Poultry meat in chilled weight in thousands of tonnes			
Production from slaughter	2 796	3 049	2 998
Consumption	1 045	1 094	1 289
Surplus/deficit	1 751	1 955	1 709
Cow's milk in thousands of litres			
Production	14 881	15 208	15 482
Domestic consumption	11 874	12 132	12 499
Surplus/deficit	3 007	3 076	2 983
Eggs in thousands of tonnes			
Production	619	674	723
Domestic consumption	418	400	488
Surplus/deficit	201	274	235

Source: own study based on data from the Central Statistical Office.

In an open economy, the concept of assessing food self-sufficiency is based on market balance and supplemented by an analysis of foreign trade in agricultural and food products (Klikocka, Klikocki, Szostak, 2016, pp. 9-20). Before joining the European Union, Poland was a net importer of food products. Consequently, it experienced food shortages and a lack of self-sufficiency. It was accession to the EU that accelerated the development of this sector. The Polish food industry has undergone significant changes in recent decades. Its development has been influenced primarily by two factors: the capacity of the internal market and competitiveness in foreign trade. The pace of this development was determined by internal demand and food exports (Mroczek, 2014, pp. 142-153). Thanks to technical, technological and organisational development, Poland has become one of Europe's leading modern and innovative food producers (*Sektor spożywczy w Polsce*, p. 4). The effects of such activity can be seen, for example, in the export success of Polish companies. The opening of such a large market as the European markets has enabled an increase in exports of agri-food products (Budzyńska-Biernat, 2020, p. 76). Since 2004, the

foreign trade balance of Polish agri-food products has been consistently positive, and its value has been steadily increasing. In 2023, it reached a record high of EUR 18.7 billion (see fig. 1).

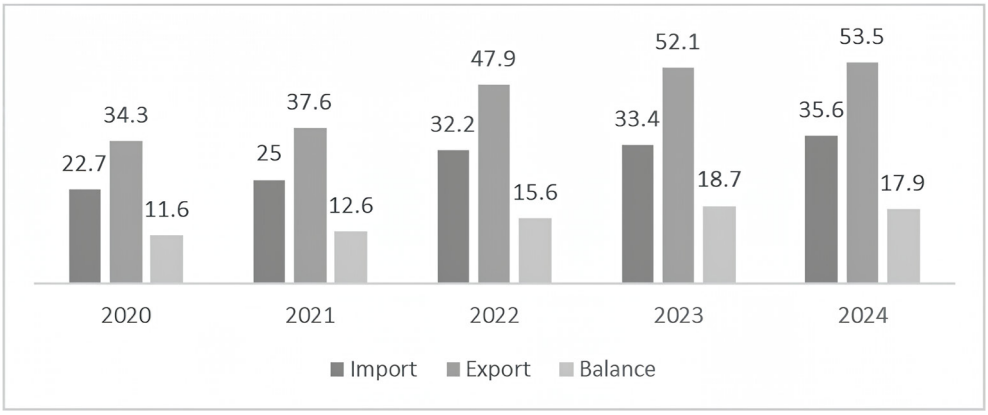

Fig. 1. Polish trade in agri-food commodities between 2020 and 2024 (value in billion euro) (own elaboration based on data from Krajowy Ośrodek Wsparcia Rolnictwa)

Another notable trend was the significant increase in Polish exports of agri-food products in 2022, which rose by EUR 10 billion to reach EUR 47.9 billion. The high revenues of domestic exporters were influenced by rising transaction prices for agri-food products on the international market after the outbreak of the armed conflict in Ukraine, as well as the simultaneous depreciation of the zloty against the EU currency. This generated 80% of the revenues obtained from Polish food exports (*Wyniki polskiego handlu towarami rolno-spożywczymi*, 2023, p. 2). Moreover, in 2024, the share of revenues from foreign sales of agri-food products in total Polish exports increased to 15.3%, up on the previous year's figure of 14.8%. The structure of Polish exports was dominated by meat and meat products, which accounted for 20% of agri-food exports. The next highest value items were cereals and cereal products (12%), tobacco and tobacco products (10%), sugar and sugar products (8%), dairy products (7%), fish and fish products (6%), and vegetables and vegetable products (5%). These product groups generated a total of 68% of the revenue from all agri-food exports from Poland. Regarding imports to Poland, the largest shares were accounted for by meat and meat products (11%), fruit (9%), fish and fish products (9%), coffee, tea and cocoa (8%), seeds and fats (7%), and vegetables (6%). These data only confirm that under conditions of undisturbed cooperation with foreign companies, Poland is characterised by stability and reliability of supply in the food chain and an enriched product range. Exports include products whose production exceeds domestic consumption (e.g. meat), while imports include products for which demand exceeds the capacity of agri-food companies to provide (e.g. fruit). Therefore, one of the basic conditions for the country's food security is met.

5. CONCLUSIONS

Food security is a complex and multifaceted issue that is gaining new significance in today's highly complex international environment. It is relevant at both the global and national levels, as well as affecting individuals within households. The concept includes, among other things, food self-sufficiency, economic accessibility and safety of food, but also social and health aspects. In Poland, the role of agri-food companies in ensuring food security is crucial, as they are a fundamental link in the food chain, which has two essential components. The first is agriculture and the second is the food processing industry, which refines agricultural products into food and extends their shelf life. Agri-food sector enterprises also play an important role in international food trade. Analysis shows that the number of agricultural and food industry enterprises will exceed 88,000 in 2024, with micro-enterprises clearly predominant. What is more, all categories have seen a slight increase compared to the previous year. In addition, these companies generate the largest proportion of the value of sold production in industrial processing. The total value of food and beverage sales has remained stable at around 20% of the total industry for years. The strong position and rapid development of the agri-food sector in Poland are also possible thanks to the systematic increase in investment in individual branches of this sector. Although agriculture and the related food industry are classified as low-tech in terms of innovation, they play a significant role in the Polish economy, particularly with regard to ensuring food security. This is reflected in the above data, including gross value added, the number of enterprises in this sector, and the value of sold production. Furthermore, the favourable geographical location, climate and significant percentage of agricultural areas in Poland have a positive influence on the food industry's high position.

Research results concerning the production and consumption of basic agricultural raw materials indicate that Poland is a country with a food production surplus. Between 2020 and 2023, the degree of self-sufficiency in basic agricultural products was consistently above 100, meaning that agri-food companies produced enough products to cover domestic consumption. The largest production surplus in relation to consumption was for meat, particularly beef and poultry. The exception was fruit, for which domestic consumption was not covered by production throughout the analysed period, indicating that Polish agricultural producers alone are unable to meet domestic demand. Analysis of the foreign trade balance of Polish agri-food products, together with a detailed structure of commodities, confirmed the country's food self-sufficiency.

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ZNACZENIE POLSKIEGO SEKTORA ROLNO-SPOŻYWCZEGO W ZAPEWNIENIU BEZPIECZEŃSTWA ŻYWNOŚCIOWEGO KRAJU – WYBRANE ASPEKTY

Streszczenie

Dynamiczne zmiany i zagrożenia płynące z otoczenia międzynarodowego, a także coraz częściej występujące w różnych rejonach świata gwałtowne zmiany klimatyczne wpływające na uprawy rolne sprawiają, że zapewnienie bezpieczeństwa żywnościowego kraju staje się wiodącym elementem działalności państwa. Celem niniejszej pracy było rozpoznanie roli i znaczenia przedsiębiorstw sektora rolno-spożywczego w zapewnieniu bezpieczeństwa żywnościowego Polski, ze szczególnym uwzględnieniem oceny samowystarczalności żywnościowej. Materiał badawczy stanowiły ogólnodostępne dane statystyczne, wykorzystano także literaturę przedmiotu. Zastosowano metodę opisu, techniki statystyczne oraz metodę wizualizacji. Wykorzystano również wskaźnik samowystarczalności żywnościowej Ss. Szczegółowa analiza objęła lata 2020-2024, czyli okres pandemii i wojny w Ukrainie, a więc czas sytuacji kryzysowych, w którym łańcuchy dostaw mogły pozostać przerwane, a handel zagraniczny był utrudniony. W badaniu uwzględniono podstawowe grupy produktów żywnościowych. W pierwszej części opracowania scharakteryzowano bezpieczeństwo żywnościowe kraju wraz z jego wymiarami. W dalszej natomiast omówiono rolę przedsiębiorstw sektora żywnościowego w zapewnieniu dostępu do żywności. Analiza wykazała, że przedsiębiorstwa spożywcze generują największy w przetwórstwie przemysłowym odsetek wartości produkcji sprzedanej, a ich wysoka pozycja na rynku jest możliwa również dzięki systematycznemu wzrostowi nakładów na inwestycje. Wyniki badań dotyczących produkcji oraz zużycia podstawowych surowców rolnych wykazały, że niemal we wszystkich grupach produktowych Polska jest krajem nadwyżkowym w produkcji żywności.

Słowa kluczowe: bezpieczeństwo żywnościowe, samowystarczalność żywnościowa, przedsiębiorstwa przemysłu rolno-spożywczego