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The plant-based food industry in Poland 2024 – data, opportunities and challenges

Report by the Polish Plant-Based Food Producers Association



Food Producers Association

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Introduction

This report is the first attempt by the Polish plant food industry to carry out a self-assessment based on the most recent data. Our starting point was **the need to gauge the potential of plant-based food production in Poland**.

We would like our report to serve as a basis for a substantive discussion on the possibilities for further development of this sector. As members of the Polish Plant-Based Food Producers Association, we hope that through this publication, plant-based food production will be recognized as an answer to the need for a more sustainable and fair food system in Poland – a system that would be future-proof.

The report begins by examining the definition of plant-based food. A precise explanation of this term is crucial to understanding the Polish plant-based industry.

Plant-based products are all-plant foods that can provide an alternative to certain animal products and their preparations in terms of purpose or use, including:

- Meat, fish, and seafood alternatives and products thereof,
- Dairy alternatives, including cheese alternatives, yogurt alternatives, kefir alternatives, dairy drinks, egg alternatives, desserts (milk-based, cream-based, quark-based, egg-based), and other plant-based products as alternatives to traditional animal-based products,

 Other traditional plant-based products, including tofu, tempeh, seitan, hummus, vegetable pastes, and other plant-based alternatives to specific non-animal products.

The Polish Plant-Based Food Producers Association (PPBFPA) was established in September 2023 in response to the needs of plant-based food producers. As the PPBFPA we want to create the basis for the development of the sector to meet demands for increased production. Our organization represents the interests of its members in contact with state and local authorities and international institutions. We work on the removal of legal barriers to the production of plant-based foods. During the first year of the Association's existence, we submitted an application to the Central Statistical Office for the creation of a separate PKD (Polish Classification of economic Activity) class for the industry, presented our goals to the Ministry of Agriculture and Rural Development, and took part in consultations organized by state institutions. We defended the position of plant-based food manufacturers on a proposed regulation that would prohibit the use of traditional meat product names in descriptions of plant-based meat alternatives. We also represented the plant-based food sector at industry events.

As of September 2023, **almost 20 companies have already joined us**. These include national leaders in the plant-based food segment, such as Kubara, Dobra Kaloria, and Magda Roślinna. National start-ups such as RoślinnyQurczak®, Plantway, and PROTEINrise have also joined the association. Furthermore, international companies have also joined, such as Danone, Oatly or Flora Food Group. All of these organizations want to help meet the demand for plant-based food amongst

Photo Polityka Insight



Polish men and women, including by popularizing a plant-based diet.

The global food production system is currently facing environmental challenges. As leaders of plant-based food production, we recognize that changes in protein production are needed to meet global climate goals. Protein production is currently dominated by animal production. We want to change these proportions by redirecting the food industry towards using plant-based protein. plant-based products have a much smaller environmental footprint than animal proteins. According to the Food and Agriculture Organization of the United Nations (FAO), animal production accounts for about 14.5% of global greenhouse gas emissions. Polish agriculture accounts for about 8% of national emissions, mostly from livestock farming. Fodder crops occupy about 70% of the world's agricultural land. The exploitation of this farmland leads to deforestation and degradation of the global ecosystem. Poland, the largest poultry producer in the European Union, incurs enormous environmental costs, as this type of production is responsible for high greenhouse gas emissions, significant energy consumption, water pollution from fertilizers and manure, and the depletion of antibiotic stocks.

We believe it is time to implement systemic solutions, which will facilitate the development of the plant-based industry in Poland. Our sector can become the foundation of a new food system model based on food security and sustainable production that meets climate goals and addresses public health concerns. Systemic support for the development of plant-based alternatives to animal products is the first step in reducing the negative environmental impact of the food industry.

Through our activities, we hope to place plant-based products at the center of human nutrition.

Polish government policy should stop treating plant-based protein primarily as animal feed. We hope that through our actions, plant-based products will become crucial for direct human nutrition. Increasing the production and consumption of plant protein will reduce environmental damage and contribute to improving public health and increasing innovation in the food sector.

Increasing the production of plant-based foods can reduce the food sector's greenhouse gas emissions and water and land consumption. As an industry, we are constantly investing in new technologies and in the development of better plant-based products.

We want customers to have the chance to buy quality products that are affordable and tasty. To achieve this goal, we need systemic initiatives targeting food producers and consumers. The former should be given space to grow, and the latter should have the chance to make plant-based food a staple in a healthy, balanced diet.

This report describes the current state of the plant-based market based on sales data from the Polish market provided to us by NielsenIQ. While working on the report, we interviewed representatives of companies affiliated with PPBFPA, which helped us learn about the most important problems faced by plant-based food producers. We would like this material to serve as a starting point for discussions on the future of our industry and ways in which its potential can be realized.

We would like to thank the Minds & Roses team for taking on the challenge of working with us to create the first Polish report on plant-based food, as seen from the perspective of its producers. It is our belief that publishing this report is significant, as it contains vital information to the PPBFPA and everyone committed to creating a sustainable food industry.



What is plant-based food?

Why do we need a new definition for this concept?

The term is very broad – it covers all plant-based products, including unprocessed vegetables and fruit. Different definitions exist in the Polish market, resulting in often divergent data on market values. We believe that the plant-based sector in Poland is already sufficiently developed to present itself as a separate sector of the economy offering specific benefits but also having its own specific needs. The first step towards this is a **precise definition of plant-based food**, which we, as representatives of the industry, have developed together.

Definition

Plant-based products are entirely plant-based foodstuffs that can provide an alternative in terms of purpose/use to specific animal products and their preparations, including:

- meat, fish, and seafood alternatives and products thereof,
- dairy alternatives, including alternatives to cheeses, yogurts, kefirs, dairy drinks, eggs, desserts (based on milk, cream, quark, eggs), and other plant-based products as alternatives to traditional products based on animalorigin ingredients,
- other traditionally plant-based products, including tofu, tempeh, seitan, hummus, vegetable pastes, and other plant-based products acting as a plant-based alternative to specific animal-origin products.



The definition includes, among other things, the following products:

- plant-based alternatives to milk, yogurt, cream, kefir, and cheese;
- plant-based sausages, plant-based hot dogs, plant-based Kabanos (thin dried sausage), plant-based deli slices, soy granules, plant-based bacon, plant-based ribs, plant-based burgers, plant-based nuggets, plant-based minced meat patties and poultry meat alternatives;
- roasts, pâtés, and pastes containing legumes (e.g., bean – or soy-based vegan lard);
- vegetable cutlets and fritters;
- ready meals containing vegetable alternatives for meat, fish, seafood, and their preparations (e.g., oyster mushroom tripe);
- desserts, sweets, plant-based baked goods as alternatives to specific animal-origin desserts;

The definition does not include, among other things, the following products:

- x vegetables and fruit and vegetable or fruit products that are not a direct alternative to specific animal products; condiments such as vegetable bullion and soy sauce;
- vegetable fats such as margarine and vegetable oils, coconut milk;
- 🗙 peanut butter;
- 🗙 masła orzechowego;
- gelling agents such as agar-agar and pectin;
- intermediate products and ingredients of plant origin used in the production of plant-based foods (e.g., protein isolates and concentrates);
- plant-based functional foods and plant-based food supplements (e.g., plant-based protein supplements).

plant-based mayonnaise.

Plant-based foods

Are based on plant-originating ingredients

> Do not contain any animal-origin ingredients

Used as alternatives to specific animal products in terms of **function and purpose**

They may mimic **their** animal-origin counterparts in terms of sensory and nutritional attributes, but **this does not determine their** adherence **to the industry** PPBFPA members and plant-based market experts developed the industry definition presented here. Through in-depth discussions, we concluded that the necessary criteria for products to fall within the scope of "plant-based foods" are that they are based entirely on raw materials and ingredients of plant origin (with no ingredients of animal origin) and that they are used as alternatives to specific animal products in terms of function and purpose. Mimicking animal-based counterparts in terms of sensory or nutritional attributes, particularly in terms of protein content, is desirable but does not determine whether or not a product can be labeled as plant-based.

During the discussions on the definition of plant-based foods, discrepancies arose regarding the inclusion of several product categories, such as tofu, hummus, and plant-based bread spreads. Many of these products were developed without the intention of providing an alternative to animal-based products, but over the years they have played such an important role in Poland and contributed to the development of the plant-based industry that it was finally decided to include them.

Plant-based products are intuitively understood as alternatives to animal products. An analysis of Google searches over the past several years confirms that the term "plant-based food" (PL: "żywność roślinna") is appropriate in the context of plant-based alternatives.

In 2010, the search results for the keyword 'plant-based products' mainly included information on herbs, medicines, and nonfood plants. From 2015 onwards, the first results related to plant-based diets started to appear, but these primarily concerned recommendations for proper nutrition and supplementation.

Since 2017, there has been a steady increase in articles about plant-based products, understood as plant-based alternatives to animal-based products. Many of these mentioned meat alternatives and plant-based protein sources. Search results often referenced dietary resources and blogs.

In 2019, the first four search results directly reference plant-based meat and dairy alternatives in the form of prepared products. These publications also come from sources whose topics do not focus on a plant-based diet.

In 2020, we record a resurgence in searches focusing on the dietary and health aspects of plant-based foods returned. This was related to the outbreak of the COVID-19 pandemic.

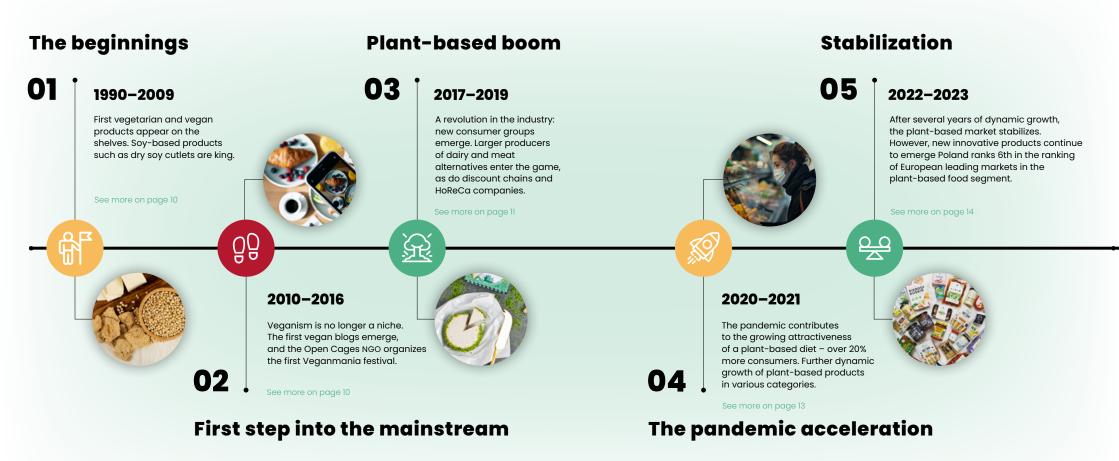
Since 2021, most search results have led directly to producers of plant-based meat alternatives. Some of the searches relate to plant-based protein sources, most likely linked to the growing interest in protein products.



The plant-based industry in Poland – from the 1990s to the present day

The first plant-based alternatives appeared in Poland in the 1990s, but the real boom did not occur until 2017–2019. Many new market players emerged then, most of whom are still present in the market today.

Another dynamic period in the industry was the COVID-19 pandemic, specifically the years 2020-2021. During this time, Poles en masse attempted to change their eating habits for the better. It was then that plant-based products ceased to be seen as aimed exclusively at vegetarians and vegans. They became an alternative for flexitarians and even meat-eaters who reached for plant-based products out of curiosity or to add variety to their diet.



1990 – 2009: THE BEGINNINGS

- The first vegetarian and vegan products appeared on Polish shelves: Polgrunt in 1991, Sante and Polsoja in 1993, Kubara (now Dobra Kaloria) in 1996, and Primavika in 1998.
- Soy-based products like dry soy cutlets are king.



Katarzyna Gębala Co-founder of Polsoja and Well Well

We sold our first tofu from our garage workshop in early 1993. At first, our customers were Asian restaurants and Chinese takeouts, which began to appear in waves in large cities. The breakthrough came with pre-packaged and pasteurized tofu bought by healthy food stores all over Poland. Traditional grocery stores were reluctant to accept our products – after all, this was only a few years after the abolition of meat ration cards. However, the whole category made its way into supermarkets, hypermarkets, and discounters only after soy burgers, sausages, and patties began to appear less exotic to the retailers.

2010–2016: FIRST STEP INTO THE MAINSTREAM

- Veganism is no longer a niche. Cultclassic blogs appear, such as Jadłonomia (2010) and Wegan Nerd (2011).
- In 2013, Krowarzywa opens their first restaurant serving vegan burgers. This is also the first year that the Veganmania festival takes place, organized by the Open Cages NGO.
- In 2016, the Bezmiesny plant food producer enters the niche market of meatless products with a bang, with support from a highly public crowdfunding campaign.



Rafał Czech Bezmięsny

We entered the market in 2016 – a time of the pioneers who created the plant-based market just before the big boom. We were a breath of fresh air in the category. Bezmiesny was and still is a company with completely different products, different energy, a different packaging design, and a different mode of communication.



- A revolution in the industry: vegetarians and vegans are no longer the main target group for plant-based products. They are joined by flexitarians (those limiting their meat and dairy intake), and consumers seeking new flavors. This shift results in an improvement in the quality of plant-based alternatives, and leads to more recognition from a broader, more discerning consumer group. This is also reflected in the changing names for the products: terms such as "plant-based" (PL: "roślinny") are starting to replace "vegan".
- In 2017, the first strong players in the plant-based dairy alternatives enter the market: Danone creates a plant-based beverage category with its Alpro brand. Moreover, Wege Siostry develop their cashew-based cheese alternatives, and Planton launch their yogurt alternatives.
- Plant-based meat alternatives are not being left behind: in 2017, Sokołów became the first meat producer to expand its portfolio with plant-based pates and lards. In 2019, Dobra Kaloria introduces plant-based burgers and meatballs based on sunflower sprouts, and Roślinny Qurczak® presents a bean-based alternative to chicken.
- In 2018, in response to the rapid rise in popularity of plant-based foods, RoślinnieJemy launches its annual awards. The Best Plant Product Award of 2017 goes to the "Toczony z nerkowców" cashew-based

cheese from Wege Siostry. The first edition of Plant-Powered Perspectives, an industry development conference, is also held.

- 2019 is an important year for tofu. The Slovakian producer Lunter starts distributing the product in Poland.
- The biggest revolution takes place at the level of retail chains, primarily thanks to discounters, which were the first to start supporting Polish producers. As of 2018, the chains are also introducing more affordable private labels, available nationwide.
- Changes are also taking place in the HoReCa sector: plant-based hot dogs appear at Orlen gas stations and Ikea, and Poland's largest burger chain, Bobby Burger, introduces its first vegan burger. Plant-based milk alternatives are available in a growing number of cafes. On the Happy Cow website, Warsaw ranks third among the world's most vegan-friendly cities, after Berlin and Los Angeles.
- 2019 is the year the first RoślinnieJemy outdoor campaign is launched, titled "Bez spiny jem rośliny" ("Eat plants and don't sweat it"). Nearly 30 thousand people visit the Veganmania festival.
- According to a 2019 survey carried out by Roślinniejemy, 28% of Poles eat meat alternatives from time to time, and 6% do so regularly.



Marta Łojewska Danone

With the Alpro brand in our portfolio, Danone was one of the co-creators of the plant-based beverages category in Poland. Starting in 2017, we invested in its development and subsequently expanded it to include various fermented products and desserts. Initially, these types of products were introduced for people who had completely eliminated animal products from their diets. Today, we can see that this category is growing rapidly thanks to flexitarians, who do not want to eliminate such foods from their diet completely but only want to reduce the frequency of their consumption. This is also the main premise of the Planetary Diet, which we at Danone promote as good for health and the planet. It is also aligned with the OnePlanet, One Health vision that guides our actions.

2020-2021: THE PANDEMIC ACCELERATION

- The outbreak of the COVID-19 pandemic contributes to the growing appeal of a plant-based diet, with more than 20% more consumers than in previous years declaring interest in such a nutritional style. According to Mintel data, from August 2019 to July 2020, as many as 13% of debuts on store shelves were plant-based products. A year earlier it was only 6%.
 - The years 2020-2021 mark a dynamic increase in the number of plant-based products in multiple categories, from meat alternatives and dairy all the way to readymade dishes. We see an increase in the activity of Polish producers, such as WSP Społem, which launches a plant-based version of its popular Kielecki mayonnaise, as well as of new startups, such as Nielone (currently Planeat) and It's Bean. International players also join in on the plant trend. Nestlé launches meat alternatives under the Garden Gourmet brand, Unilever develops the Vegetarian Butcher line, and Upfield Polska (presently Flora Food Group) introduces Violife dairy alternatives to their offer.
- Brands from the meat sector, such as Tarczyński, Olewnik, or Pekpol, notice the potential of the segment and launch plant-based alternatives to their offer.

- In 2020, an unprecedented event takes place: the traditional dairy producer Magda, which has been producing plant-based yogurts since 2017, switches completely to plant-based production.
- Plant-based products become available like never before. In 2021, Żabka introduces plant-based private label, Plant Hunter.
- The plant-based food industry is also gaining traction among a wide range of consumers. This is happening thanks to promotional campaigns such as Alpro's "You Are Great" and the educational initiatives of the Aldi chain, among others. It is also appreciated by manufacturers – in 2021, the industry debuts its own panel discussion at the Food Market and Trade Forum.

2022-2023: STABILIZATION

- After several years of dynamic growth, the Polish plant market stabilizes.
- Even so, innovative products continue to emerge, such as Serio's lupin plant-based cheese alternative, Bezmisny's fishless salmon, Plantway's pea-protein chicken alternative. Tofu producer Lunter expands its range of ready meals with the ingredient. The Inka brand introduces two new flavors of the Barista plant-based beverages. Alpro launches its plant-based alternative to Skyr.
- According to research conducted by Mintel Poland in 2023, the leading European markets in the plant-based food segment are the United Kingdom and Germany, with Poland ranking sixth. 44% of Poles say health reasons have prompted them to reduce their meat consumption, while 23% are increasingly giving up cow's milk for the same reason.
- In 2024, Biedronka announces that it will continue to strengthen its offer of plant-based products. More than 250 vegan and vegetarian items can be found on the shelves of Kaufland stores. A line of plant-based snacks makes its debut at Żabka.

 WorldFood Poland and CMR's 2024 publication presents a list of 942 plant-based alternative products available on the Polish market, including dairy, meat and deli slices alternatives, vegetable pastes, hummus, and tofu, as well as an index of 89 producers and distributors of these products.



Maciej Otrębski RoślinnieJemy

As an industry, we have gone through the honeymoon stage, or the stage of being infatuated with the plant-based category... and this applies to producers as well as retail chains alike. There was a time when very many products appeared at the stores simultaneously – they weren't always good, plus they weren't sufficiently different to spark interest in the consumer. After all, how many vegetable burgers do you need to try? This is why we could see a correction of the expectations versus reality last year. Several companies had to disappear from the market or give up producing this category.



Michał Gaszyński SERio

We are transitioning from a startup to a well-established organization with an expanded product portfolio and rapidly growing sales. Our biggest success to date has been introducing products to Biedronka (on an in-out basis) at a very early stage of our business. Such a move allowed us to gain experience and understand the chain's ways, needs, and requirements.



The value of the plant-based food market in Poland

On the next page, we present market value data for 2023, where the plant-based food market is calculated according to the definition developed by PPBFPA.

The retail market for the plant food industry (excluding HoReCa, specialty stores and e-commerce) is valued at 1.08 billion PLN (~250 million EUR) in 2023. If sales in HoReCa channels, e-commerce and specialty stores are included, based on the declarations of some of the producers affiliated with PPBFPA, the value of the entire Plant-based Food market in Poland rises to PLN 1.465 billion PLN (~ 340 million EUR) in 2023. Total value of the plant-based food retail market (excluding HoReCa, specialized stores, and e-commerce) in 2023:

1.08 billion PLN (~250 million EUR)



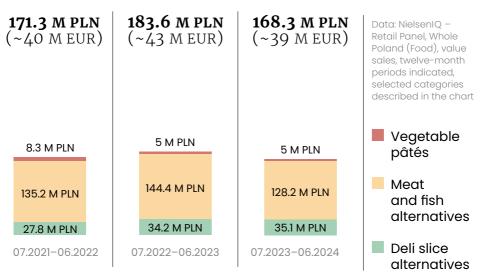
Data: NielsenIQ – Retail Panel, Whole Poland (Food), value sales, 2023, selected categories described in the chart.

MARKET VERIFICATION IN 2022-2023

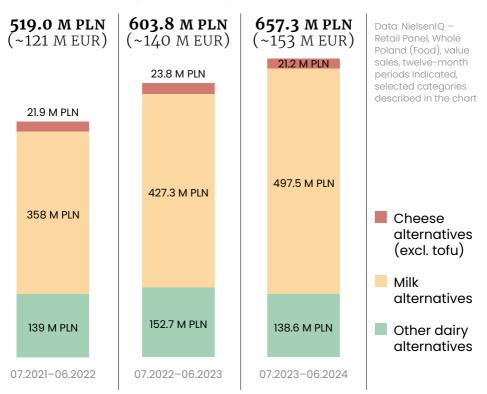
Over the past two years, the value of the Polish plant food market has increased by 19.0% (data: NielsenIO - comparison of annual periods July 2021 – June 2022 – July 2023 - June 2024). At the same time, household consumption increased by 23.8% (CSO Statistical Bulletin No. 8/2024). These figures could suggest that the plant food market is growing more slowly than household consumption. This was indeed the case during this short period, in which there was a natural adjustment in the growth rate. The earlier years were characterized by extremely dynamic growth, which prompted many producers to to try their hand at the plant-based food market. In the post-pandemic years of 2022 and 2023, the market was tested, as a result, many

players abandoned their involvement in the plant-based category, and the industry consolidated significantly.

Despite this, the plant-based food market's growth space remains partially undeveloped, especially when looking at sales. According to NielsenIQ data, the value of the entire food market in Poland in 2023 was 200.5 billion PLN (~466 million EUR), meaning that the 1.08 billion PLN (~250 million EUR) of the plant-based food market represents just over 0.5% of the Polish food basket.



Value of plant-based meat and deli slices alternatives market (2021-2024)



Value of the plant-based dairy alternatives market (2021-2024)

Value of the tofu, hummus, and vegetable sandwich pastes' market (2021-2024)



Rafał Czech

Bezmięsny

The market went through a correction in 2023 and we saw the disappearance of companies that were mismanaged, lacking ideas or product strategy. We're now seeing a return to the positive trend - there is growth, but it's on a more stable footing. The industry is recovering slightly from last year's slump. I think it's a positive phenomenon sudden movement in any direction always disrupts the trend. I think we are still seeing the growing popularity of plant-based foods and the development of better, more nutritious products that meet consumer needs. At the same time, consumers are becoming more aware and discerning: they won't accept inferior quality but are looking for good, unique flavors offered by quality products.

Anna Matusiak

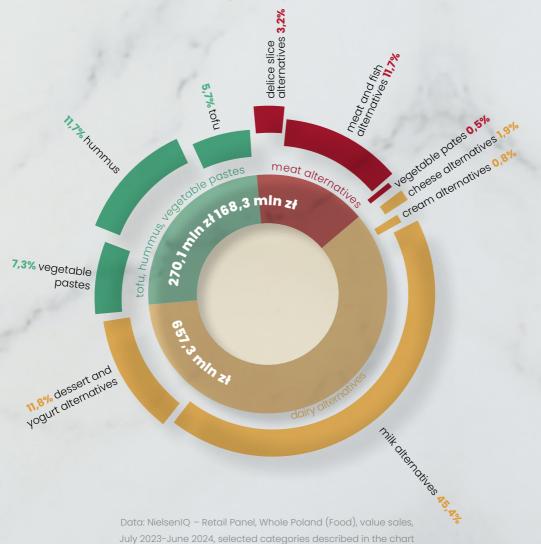
Flora Food Group

At the moment, our industry is still a niche with growth potential. If you compare the size of the plant-based deli slices category with its meat counterpart, you'll see that it's just a drop in the ocean. However, retailers still recognize the potential. They know they need these products in their range. On the other hand, products of animal origin are better anchored in the consumer's consciousness. Retailers know that meat-based products will definitely rotate better.



Plant-based milk alternatives account for nearly half of the plant-based food category

Value for the period July 2023-June 2024





THE SUCCESS OF PLANT-BASED BEVERAGES

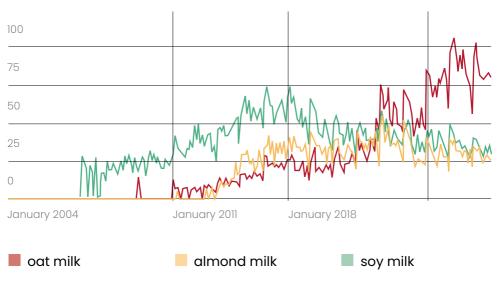
Milk alternatives occupy the dominant position in sales of the plant-based food industry in Poland. Of all the plant-based categories, beverages commonly referred to as "milks" are the most successful in Poland. They now account for nearly half of the retail sales value of the entire industry.

According to NielsenIQ data, last year (July 2023 to June 2024), they accounted for 45.4% of the retail sales value of the entire industry. **The annual value of milk alter-natives approaches 0.5 billion PLN (~116 million EUR)** (in the analyzed period 2023 – 497.5 million PLN). In the last two years (July 2021 – June 2022 vs. July 2023 – June 2024), according to NielsenIQ data, the growth of this category was 39.0%.

What is the secret to their growing popularity? Why exactly has this category proven resistant to the declines experienced by other plant-based products?

Plant-based beverages are a category that is very well established in the minds of consumers. It is visible on store shelves as well as in HoReCA. Coffee "with plant-based milk" has become a staple in coffee chain offerings. This is a convenient way for consumers to try the product without taking the risk of buying the whole package. Plant-based milk alternatives are increasingly sharing space with animal-based milk, making it easier for consumers to compare products and make choices. Such a move is not as obvious in other categories covered by the definition, such as meat and deli slices' alternatives. Plant-based beverages meet the needs of people who choose or need to eliminate lactose from their diets. Lactose intolerance in adults increases with age. It is estimated that approximately 65% of the population (data: *Lactose Intolerance by Country – World Population by Country*, 2024) is affected by such intolerance. In Poland, the percentage is about 43%, one of the higher results in Europe. The diversity within the category means that every consumer can find a beverage that suits their taste preferences and situation. For example, oat milk is perceived as a good companion to typical breakfast dishes. Google statistics show that oat milk is the clear growth leader at the expense of soy and almond milk.

Number of searches for plant-based drinks according to Google statistics since 2004

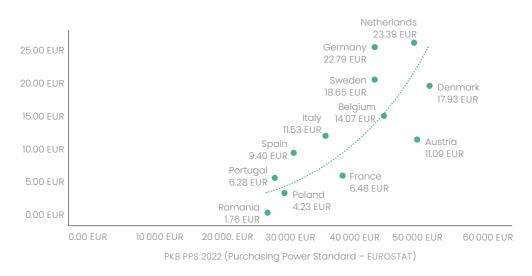


Based on Google statistics since January 2004



Polish plant-based food market against the European market

The key question, however, is "What are the industry's prospects?" At this point, it is worth looking at the plant-based food market in other European countries, which is made possible by a report by GFI (The Good Food Institute) from 2022 (no analogous reports from later years are available at the moment).



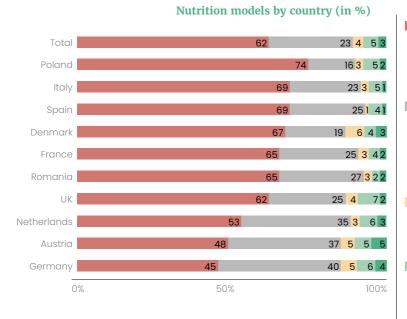
Consumption of plant-based food per capita vs. GDP PPS per capita

Own calculations based on: Plant-Based State of the Industry Report - GFI, 2022

The GFI report provides a summary of the value of the plant food market of the 12 EU economies for 2022. When comparing the data within European countries, it is worth bearing in mind their diversity in terms of not only their level of economic development and wealth but also

their culinary traditions and socio-cultural conditions. The Polish market, with annual expenditures of 4.23 EUR per person, is far from the amounts spent on plant-based food in Denmark, Germany, the Netherlands, Sweden, Austria and Belgium, i.e. in Europe's richest economies. In the aforementioned countries, the average annual consumption of plant-based food per person (20.85 EUR) is nearly five times higher than in Poland.

Plant-based diets are gaining popularity in these countries primarily due to growing environmental, health, and ethical awareness. According to the report "Evolving appetites: an in-depth look at European attitudes toward plant-based eating," compiled in 2023 by the Smart Protein Project, they observe the highest percentage of flexitarians, i.e. people who aim to reduce meat consumption. Governments there are introducing and funding numerous initiatives to develop innovation and increasing the availability of plant-based foods. These efforts have resulted in a much more developed market for such products in the West than in Poland.



Carnivorous

I often eat meat (such as beef, pork, chicken, turkey, fish and/or seafood).

Flexitarian

I sometimes eat meat, but I try to reduce my meat consumption and often choose plant-based meals.

Pescetarian

I eat fish and/or seafood but not other types of meat.

Vegetarian

I don't eat meat or fish, but I may eat eggs and/or dairy products.

🖉 Vegan

I don't eat meat, fish, eggs, dairy products or other animal ingredients.

Question: Which of the following best describes your current dietary lifestyle? | Single choice

Sample:

Total N=7500; Austria N=750; Denmark N=750; France N=750; Germany N=750; Italy N=750; Netherlands N=750; Poland N=750; Romania N=750; Spain N=750; UK N=750.



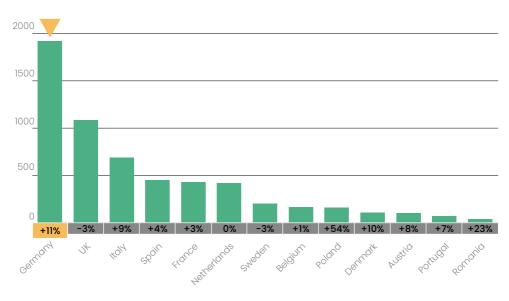
In terms of consumption, we have a chance to catch up with the leaders of the plant-based market within the next decade However, this depends on addressing systemic and market barriers to development, without which the popularization of plant food will take much longer.

For the time being, we have a chance to approach the level of development of the plant-based food market in such economies as Spain, Portugal, Italy, and France. In these four countries, the average annual expenditure on food is 8.86 EUR per person - still more than twice as much as in Poland. But why not as much as in the previously mentioned countries? The growth of the plant--based industry is influenced by the culinary traditions of the Spanish, Portuguese, Italians, and French, in which meat and fish products still play a significant role. On the other hand, the Mediterranean diet also includes many plant-based ingredients, which can help consumers adapt to a new way of eating.

Of the EU members in the GFI report, only Romania (EUR 1.76) has a lower per capita consumption value index than Poland. It should be mentioned, however, that faster growth in the dynamics of sales of plant-based products was recorded there than in our country.

Central and Eastern Europe, including Poland, the Czech Republic, Hungary, and Slovakia, still clings to traditional, meat-based dishes. The transition to a more plant-based diet is proceeding somewhat more slowly in our region than in the West.

The Polish plant-based food market is not internally homogeneous. There is a noticeable disparity in the availability of plant--based products between the big cities and rural areas. In metropolitan areas, plant--based cuisine is developing dynamically – for example, **Warsaw, in recent years, has often made it to the top ten most plant-based cities in the world, according to Happy Cow**. The city has 47 fully plant--based restaurants. Meanwhile, in rural areas and smaller cities, the pace of change is much slower, although we are seeing an emergence of initiatives on behalf of some retail chains.



Plant-based food sales in Europe by country (in millions of EUR), 2022

Data: Plant-Based State of the Industry Report - GFI, 2022

GERMANY AS EUROPEAN MARKET LEADER

The German market is the largest market for plant-based alternatives in Europe in terms of sales value, reaching \in 1.9 billion in 2022. The country's plant-based industry is growing rapidly (+42% growth from 2020 and +11% from 2021).

As a 2023 ProVeg study shows, only 20% of German consumers consume meat products daily, and as many as 46% consciously limit their consumption. The prevalence of this attitude has made meat consumption in Germany the lowest in its history – 52 kilograms per capita (down 4.2 kilograms from 2022). Such action appears to be translating into interest in plant-based **alternatives**, resulting in the second-lowest per capita spending on plant-based alternatives in Europe (23 EUR per person).

The German government has already invested 780,000 USD in 2018 in research to refine the texture of plant-based products to resemble meat as much as possible. In 2023, Secretary of State Silvia Bender announced her intention to work to support the plant-based industry to develop further. In 2018, the German government invested 780,000 USD in research to improve the consistency of plant-based products.



Aleksandra Środa Nestlé

At Nestlé, we are convinced that there is potential in the plant-based food category. We see what is happening in Western Europe, even next door in Germany, where per capita consumption of meat substitutes is ten times higher. That has to come to us as well. Awareness of the category among Polish consumers is still low, so actions that can lead to trial are crucial, because once someone has tried it and is not disappointed with the taste, they will return to it.





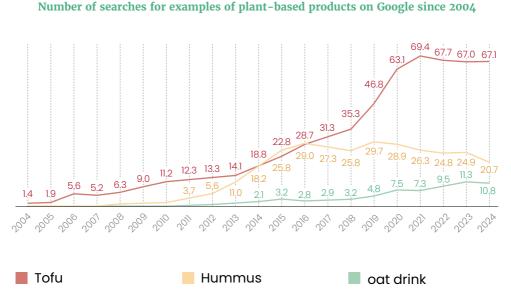
Plant-based products and their consumers

Since 2017, the availability and variety of plant-based offerings on store shelves have been growing rapidly. Products of this type have moved from the vegetarian niche to the mainstream, removing the limitation associated with the small percentage of vegans and vegetarians in the Polish population. In the pandemic years, development has only accelerated.

Importantly, this applies to the various product categories that fall under the definition of plant-based food.

Google statistics show that over the period from 2011 to 2021, the number of searches for the following keywords increased:





Own calculations based on: Google Trends

What does the Polish plant-based industry owe its success to? It seems that this is, first and foremost, due to two phenomena: the emergence of a trend to limit animal products and the openness to food novelties specific to Polish society.

WE LIMIT CONSUMPTION OF ANIMAL PRODUCTS

Limiting the consumption of animal products is an established trend that has been changing the eating habits of Poles and Polish women for several years. As of 2019, the percentage of our country's population declaring to limit meat remains around 40% (it was 38.5% in the 2019 RoślinnieJemy survey).

According to a study led by Prof. Dominika Maison for EIT Food in 2024, there are slightly The reduction in the consumption of animal products among Polish men and women is an established trend.

less, i.e. 30% of Polish residents, who are limiting their consumption of dairy products.

These figures show huge growth potential for plant-based products if they manage to fulfill the role of alternatives successfully. This is not at all obvious, given the category's numerous barriers, such as the high prices of these products or the low level of consumer knowledge about them.



Motivations for cutting down on meat consumption

I eat meat, but I try to limit it. Poland **40%**

44% it's too processed

> 39% concern for animals

36% too expensive

33% negative impact on the environment United Kingdom

24% it's too processed

> 29% concern for animals

52% too expensive

39% negative impact on the environment Germany

53%

22% it's too processed

> 55% concern for animals

40% too expensive

48% negative impact on the environment

Motivations for cutting down on dairy consumption

l eat dairy, but I try to limit it.

Method: EIT Food survey, quantitative

samples, online.

with representative

total: N=2157; PL: N=726; GE: N=714; UK N=717.

Method: EIT Food survey, quantitative with representative samples, online.

total: N=2157; PL: N=726; GE: N=714; UK N=717. Poland **30%**

33% health reasons

31% too processed, artificial ingredients

> 18% concern for animals

18% concern for the environment United Kingdom

13% health reasons

19% too processed, artificial ingredients

> 53% concern for animals

40% concern for the environment Germany

12% health reasons

27% too processed, artificial ingredients

> 26% concern for animals

32% concern for the environment

HEALTH AS THE PRIMARY MOTIVATION

The survey reveals Polish specificities in motivations for limiting animal products in the diet. First, health-related factors play a greater role than in Germany and the UK. Poles who limit their consumption of meat and dairy products also often point to their low quality, which is understood as the content of artificial, processed ingredients in both categories. If plant-based products are to serve as alternatives, they should be particularly concerned with "clean label," i.e., short and simple formulation and high nutrient content, in order to appeal to the Polish consumer market.

The survey also suggests that concern for farm animal welfare and the environment is less important to domestic consumers than in the UK or Germany. This can be seen especially in the case of dairy products, where Poles appear to be largely unaware of how these products affect the environment. We hope that the industry will succeed in changing this dynamic in the coming years.

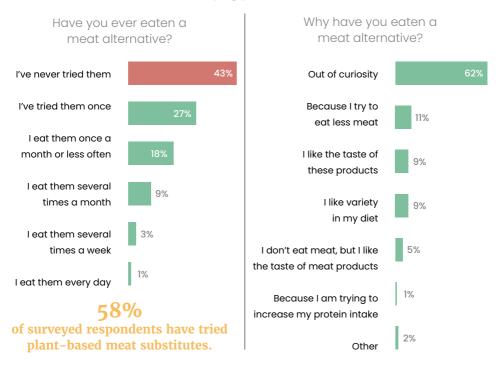




IT ALL STARTS WITH CURIOSITY

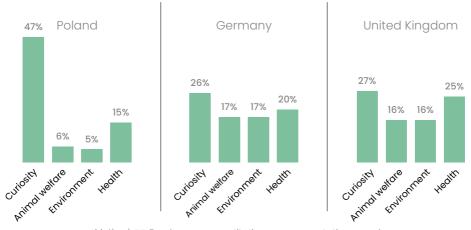
However, the primary motivation for Poles to try plant-based products is not a desire to reduce meat and dairy in the diet. It's mostly about... curiosity. This indicates openness to novelty and an enticing offer that can attract consumers. **Thanks to them, the industry has a chance to win over not only vegetarians, vegans, and flexitarians but also a wider range of consumers**. To do this, manufacturers must focus, first and foremost, on the sensory aspects of their products to prevent disappointment and consequent discouragement of consumers to explore the rest of the plant-based category.

Curiosity is much more important to us than to Germans and Brits. This may be because the plant-based food markets there have already reached stability, with greater consumer cut-through and understanding.



Main motivations for trying plant-based meat alternatives

Method: NCN survey, quantitative on nationwide representative sample, online



Main motivations for trying plant-based dairy alternatives

Method: EIT Food survey, quantitative on representative samples, online (total N=2157): PL (N=726); GE (N=714); UK (N=717).



Potential of the plant-based food industry – strengths

Although Poland's plant-based food industry is not yet comparable in scale to European leaders, it has potential. Its strengths – high product quality, innovation, accessibility and a high level of commitment – can become the basis for strengthening this sector.

HIGH QUALITY

Producers of plant-based foods are characterized by a concern for product quality that is above the standard for the food industry. Both the sensory experience (e.g., taste or texture) and the formulation and nutritional profile of plant-based products are constantly being improved.

An increasing share of the category is taken up by products that can simultaneously offer the following:

 satisfying sensory properties – taste first of all, but also attractive texture and appearance,

- **high nutritional value** the priority for many manufacturers is to have the highest possible protein content, while care is also taken to include minerals such as calcium, iron and vitamins such as vitamin B12,
- "pure" ingredients they are free of preservatives, dyes, and so-called fillers.

Burger Planeat vs. beef burger



in 100 g	Burger Planeat	Beef Burger
kcal	171.2	294
Ffat (g)	7.9	14
Fatty acids Saturated (g)	4.5	5
Fatty acids. Unsaturated (g)	1.8	0.8
Carbohydrates (g)	7.3	2.4
including sugars (g)	0.5	0
Fiber (g)	1.2	0.9
Protein (g)	17.6	17
Salt (g)	2.2	0.16
Vitamins and minerals:		
Iron (mg)	7.77	2.9
B12 (µg)	0.57	1.4

Smarowaniec Wege Siostry vs. dairy sandwich cheese

in 100 g	Smarowaniec	Dairy sandwich cheese
kcal	272	226
Fat (g)	25	21
Protein (g)	5	5.4

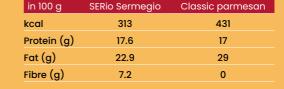


Dobra Kaloria's burger vs. beef burger

in 100 g	Burger DK	Beef burger
kcal	347	294
Fat (g)	22	14
saturated fatty acids (g)	2.1	5
Carbohydrates (g)	8.8	2.4
including sugars (g)	3.4	0
Fiber (g)	3.0	0,9
Protein (g)	26	17
Salt (g)	1.3	0.16
Mineral Ingredients:		
Iron (mg)	2.6	2.9

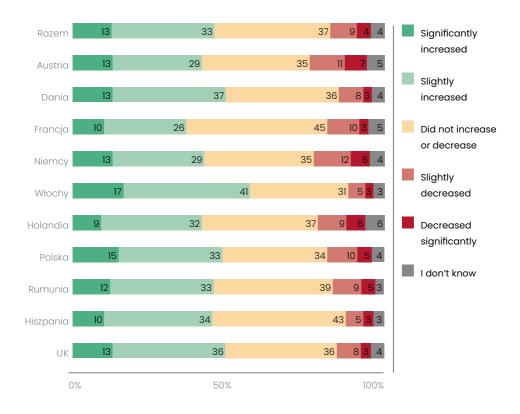


SERio Sermegio vs. classic parmesan





Such activities are recognized and appreciated by Polish consumers. There is a noticeable increase in confidence in plant-based alternatives. **48% of Polish consumers trust their quality and safety more than 3 years ago**, and only 15% trust them less.



Confidence in plant-based alternatives (%)

Question:

When you think about your overall knowledge and experience with plant-based meat and dairy alternatives, has your current confidence increased or decreased compared to three years ago? | Single choice



Andy Staniek

Planeat

We pay special attention to ensuring our products are high in protein, fiber, iron, and vitamin B12. Our goal is that Planeat gyros should not be inferior in nutritional value to chicken gyros so that consumers do not compromise on nutritional value when choosing our products.

Magdalena Kubit

MAGDA plant-based

We have been working for a very long time to develop the first recipe. It took so long because we wanted to ensure that our plant-based yogurt was simply delicious and that everyone who tried it would say, ,Wow.' Most of our audience is familiar with and appreciates traditional dairy flavors, so this was a big challenge.



INNOVATIVENESS

In the face of climate change and the need to transform the food system, innovation is becoming one of the key competencies of food companies. Seeking new solutions is in the plant-based industry's DNA. Entrepreneurs in this segment avoid the beaten path and set new standards. Their actions become a catalyst for other food sectors, which look to the plant-based industry for inspiration.

Innovation in the plant industry manifests itself in a number of ways, including:

- the search for new plant-based base ingredients. The Polish market already offers alternatives to meat and dairy products not only from soy, wheat protein, and tofu but also from peas, cashew nuts, sunflower sprouts, oyster mushrooms, or lupins. Such a wide variety gives consumers the chance to find plant-based products that meet their preferences and health needs.
- developing new recipes and production technologies that can replicate the properties of animal products (e.g. melting a plant-based alternative to cheese) or extend the shelf life. The latter makes it easier to transport and export plant-based foods.

creative product communication and packaging design. The industry works on product ingredients and variations and also on their promotion. With a focus on continuous development, the industry is developing processes to generate innovation.

Plant-based products are future-proof because they can adapt to consumer needs and demands. The plant-based food industry is open to working with research and development centers and developing its own R&D departments. However, this is not always possible without adequate investment funds, especially for start-ups. Regulation often does not keep pace with market innovation and is also a barrier.



Pea protein BEANPOL 📎



Karolina Kubara Dobra Kaloria

Our industry is characterized by very high innovation. It's one thing to create a new flavour of ketchup or yoghurt that's been around for years, playing with seasonal flavours, and it's another thing to create new products from scratch, searching for new ingredients, new recipes, developing new technologies, which is very expensive. We create Dobra Kaloria meat alternatives using either oyster mushrooms or sunflower sprouts, and these two ingredients set us apart - this is our proprietary, patented technology. There's a hunger to innovate within the company that drives us forward; we have our own R&D department that sets the bar high. For example, when we create a plant-based burger, we try to make it 25% or even 27% protein, just like good quality beef, so that it's more than just a plant-based burger.



Magdalena Kubit MAGDA plant-based

When we talk about dairy products, we talk about cow's milk, sheep's milk, and goat's milk. They have very similar parameters in terms of macronutrients. But there are many other base ingredients that can be used to make plant-based yoghurt or milk. You can use hemp seeds, cashew nuts, almonds, and other raw materials. You get amazing variety of parameters. I think it's a resource that hasn't been fully exploited yet because consumers know little about it. However, I believe that in the future, plant-based raw materials will be composed so that their functionality meets individual needs.





Michał Gaszyński SERio

What's unique about SERio is the composition of its ingredients: our products are high in protein and lupin. Our plant-based cheese is something new, not just another cheese alternative. We are proud of our branding and creative name. We have exciting packaging made from raw materials recovered from waste paper.





Andy Staniek Planeat

We create products that are reminiscent of traditional cooking but reimagined. Everyone in the industry does it a little differently, using different basic ingredients. For example, we mainly use peas, but we have recently started testing protein from hemp. There are many possibilities and base ingredients that can be used. If a large enough consumer group tells us that they want, for example, a certain type of texture, chunks of a certain size, a certain type of nutritional value, so much so as fat or calories, then we can design a product from scratch to deliver the end result they need.

INCREASING AVAILABILITY

Over the past decade, plant-based foods have moved beyond the confines of organic specialty stores and vegan restaurants. They have become a staple of small and large shops, restaurant chains, and petrol stations. You will often see plant-based products on display – in refrigerators or at the entrance to stores.

Today, many retail chains offer plant-based products under private labels. This is evidence that retailers do not see plant-based foods as a passing trend. They are willing to invest in it, recognizing the sector's potential. PPBFPA member manufacturers emphasize that they aim to make plant-based alternatives more widely available. They want to secure the broadest possible distribution and affordability.

One of the PPBFPA's demands is that public institutions such as hospitals and schools should be able to offer a plant-based alternative option.



Karolina Kubara Dobra Kaloria

Our strategy is to create products for the broadest possible consumer group. That's why we try to make our products affordable and our communication easy to understand. We aim to make consumers aware that these are healthy, natural foods available to everyone.



Iga Czubak Roślinny Qurczak®

Significant government support is needed to facilitate access to public institutions (e.g., cafeterias) because we can't do it ourselves. In my experience, there is a lot of resistance to doing this. It's a matter of mindset, which is influenced by the beliefs and traditions in which we were raised.



Hanna Zaleśkiewicz SWPS (University of Social Sciences and Humanities)

The environment in which we live plays an important role in our food choices, either facilitating or hindering the transition to a greener diet. The concept of the food environment emphasizes the strong link between infrastructure (stores, restaurants, schools, markets), socio-political context, consumer choices, and their consequences for health and the planet. Research shows that a key factor in the built environment that supports decisions to purchase alternative protein sources is their availability. Limited availability is one of the main barriers consumers face in supermarkets, grocery stores, restaurants, or schools. Many of these products are often found only in online stores,

which limits their accessibility for the average shopper.

Our research at SWPS University, part of the LIKE A PRO project funded by the Horizon Europe grant, highlights a cycle that may explain why consumers rarely opt for protein alternatives. It begins with retailers' beliefs, such as expectations of increased demand or concerns that a larger presence of alternative products in their stores could negatively impact their profits. Consequently, they decide to sell these products exclusively online. However, consumers are expressing a desire for more availability of these items in traditional retail locations, and they exhibit a lack of trust in products that are only available online.

Consumer confidence is crucial when it comes to purchasing and trying new foods. By increasing the availability of alternative protein sources in everyday shopping locations, we could significantly boost their popularity.



THE PLANT-BASED FOOD INDUSTRY IN POLAND 2024 - DATA, OPPORTUNITIES AND CHALLENGES



CONSOLIDATING THE INDUSTRY

The establishment of the Polish Association of Plant-based Food Producers is the first step in the consolidation of the industry. Its member producers are ready to cooperate with each other and share knowledge and experience to bring about the development of the plant-based food market in Poland.

In December 2023, the Polish Plant-Based Food Producers Association consulted on a draft regulation on the naming of plant-based meat alternatives conducted by the Ministry of Agriculture and Rural Development. Work on the project was suspended. Founding members of the Polish Plant-Based Food Producers Association

The PPBFPA also submitted an application to the Polish Central Statistical Office for the introduction of a specific PKD (Polish Business Classification System) code, as currently, plant-based food producers operate under the class number 10.89.Z. This class concerns "production of other foodstuffs, not elsewhere classified." The allocation of a specific PKD code will enable the industry, among other things, to carry out aggregate analyses of sales values and accurately monitor individual plant-based production segments. The establishment of the Polish Plant-Based Food Producers Association is the first step in the consolidation of the industry.



Łukasz Wesołowski Lunter

We are still a fragmented market. Now, our goal should be the strengthening of PPBFPA members and the creation of a unified position vis-à-vis the retail chains. If we examine Western markets, such as those in France or Scandinavia, we can observe the power of farmers' cooperatives. The large companies that have emerged in those regions are often founded on such cooperatives, leading to a demand-driven market. I'm not suggesting that we should replicate that model exactly in our country; rather, our objective is to find solutions that help us unite for now.





Barriers and challenges in the plant industry

SYSTEMIC BARRIERS

WHY IS ADDRESSING SYSTEMIC BARRIERS SO IMPORTANT?

Currently, Poland lacks a comprehensive government-level effort dedicated to a **sustainable food system, of which plant-based foods are a part**. The plant-based food industry is not included in Poland's development strategies.

PPBFPA wants the government to recognize the importance of plant-based foods for Poland. Our goal is for the state to start investing public funds in the cultivation of plant protein sources for human food (and not just animal feed), to develop a system of subsidies for innovation in this sector, or to develop a comprehensive strategy for Polish plant-based food production.

Many countries' governments, strategically concerned about their future and food security, have already taken such steps. The Danish government, for example, has published the world's first national action plan outlining how the country can transition to a more plant-based food system.

LEGISLATIVE CHALLENGES

Legislative turbulence and a lack of regulatory clarity can effectively discourage entrepreneurs from taking risks and entering the sector. Such problems give the impression of instability in the legal environment of plant-based food companies. They find themselves in an area of legal uncertainty, as the rules governing them are often unclear. This leads to situations such as determining which VAT category an item should fall into. Representatives of the industry need to be sure **that they will not be overlooked in the process of developing important legislative and strategic projects** and that their voice and experience will be valuable to decision-makers.

NAMING

The media often reports disputes and law restrictions concerning using traditional meat names by plant-based alternatives. Such cases are resolved by both Member States and EU institutions.

In late 2023, the Polish Ministry of Agriculture and Rural Development published a draft amendment to a regulation aimed at plant-based food companies, which aimed to prohibit them from using names associated with meat products – such as the Polish words "szynka" ("ham"), "wędlina" ("deli slices"/"cold cuts"), "wędzonka" ("smoked meat"), or "kiełbasa" ("sausage"). Thanks to consultations in which the PPBFPA participated, work on the draft amendment was suspended.

In October 2024, the European Court of Justice ruled that EU member states do not have the right to prohibit food manufacturers from labeling plant-based products with the term "meat" unless a country has established a specific legal name for a plant-based protein food product. This decision means that issues around labelling for the plant-based industry may stabilize in the future.



Aleksandra Środa Nestlé

When creating new plant-based products and offering them to Polish consumers, we are faced with certain risks. We would like the names of the products and the information about them to be as understandable as possible for our consumers, but we are faced with a rather unstructured legal system. It's different when we launch a new seasoning. There's no risk at that point because the law is more mature in that category.

PROCEDURES TO ALLOW INNOVATIVE INGREDIENTS ON THE MARKET

Another type of uncertainty affects manufacturers who want to market 'novel' products with innovative ingredients such as mung bean protein or leghemoglobin. The EU process for approving the use of these ingredients is long, complicated and prone to delays.



Agnieszka Szymecka-Wesołowska FOODLAW

The subject of so-called novel foods is regulated by EU Regulation 2015/2283, which states that when one wants to market a food or ingredient that was not used in the European Union before May 15, 1997, an appropriate procedure is needed. A scientific assessment issued by the European Food Safety Authority (EFSA) and approval of the product by the European Commission are required. It's not just proteins from insects or cultured meats, but also some seeds and other plant-based products that can qualify as novel foods. Often, interesting ingredients referred to as "superfoods", i.e. ingredients that have some great health-promoting properties, also qualify for this procedure.

LACK OF SPECIFIC PKD ACTIVITY CLASSIFICATION

The lack of a specific PKD economic activity class means the plant-based products industry is not considered a separate market sector. As a result, entrepreneurs in this sector have limited access to programs tailored to their needs. Insufficiently targeted financial support makes it difficult to move from the initial, often start-up, nature of the business to the mature enterprise level. It also limits the ability to invest in innovation. In addition, creating a separate PKD class would allow for effective measurement and implementation of sustainability goals. In 2024, as PAPFP, we submitted to the Central Statistical Office of Poland the need to create a separate PKD class for the plant-based industry. It will likely be included in the classification effective from 2025.



Magdalena Kubit MACDA plant-based

Without a PKD class, we are in constant redefinition mode, which makes things difficult in many situations. For example, the 0% VAT exemption for dairy products that was in place for almost a year caused a lot of confusion. We wondered whether we should be part of this relief according to our logic. Any situation of this kind generates a flood of inquiries to various institutions.

The plant-based food industry is fighting for equal treatment with other industries. We believe a separate PKD class is a basic tool to show that this industry can be important for the Polish economy. We need it to be able to apply for subsidies, subsidies that apply to all agricultural industries, dairy, livestock, and agriculture. We are constantly trying to show how important this industry is, how fast it is growing, and that there are few industries with such a high employment growth rate.



HIGHER VAT VS ANIMAL PRODUCTS

PPBFPA members point out that the plant-based industry is treated as secondary to the animal products industry. The latter benefits from lower VAT rates and targeted subsidies. The plant-based sector deserves a level playing field, especially as it is more in line with sustainable development objectives and the necessary nutritional transformation. VAT rates and subsidies should therefore be equalized across the production platforms in Poland.

NO CONSUMER EDUCATION

25% of Polish consumers say that a barrier to choosing plant-based alternatives is a lack of knowledge about them (Data: Evolving appetites: an in-depth look at European attitudes towards plant-based eating – Smart Protein Project, 2023).

Many Poles believe such products are unpalatable and of low nutritional value, so basing their diet on them can lead to deficiencies. They also incorrectly believe that they are unable to build a healthy, balanced diet using plant-based foods. Even doctors tend to reproduce these myths, as plant-based foods receive little attention in Polish medical studies. Meanwhile, major medical and nutritional organizations worldwide confirm that a plant-based diet is safe and has health benefits. Our industry lacks large-scale systemic support with educational programs on plant-based foods. Research shows that these are needed for both consumers and those who create and recommend diets such as doctors and nutritionists.



Marta Łojewska Danone

Raising awareness of the benefits of eating plant-based products is key. By reaching for them just a few times a week, you're not only taking care of your health, you're also taking a step towards caring for the planet. Ultimately, it's important for a consumer who wants to limit their consumption of animal products to be able to prepare their favorite dishes using plant-based products, such as a breakfast of cereal or pancakes with a plant-based drink. **38%** Plant-based alternatives are **too expensive**.

30%

Plant-based alternatives are not tasty enough.

Top 5 barriers to buying plant-based alternatives

23% I don't want to change my eating habits.

24% I would be concerned about my health (excl. iron and protein). 25% I need more information

on plant-based alternatives.

Question: Which of the following are barriers to choosing plant-based alternatives? Multiple choice (maximum 5) | Total number of answers = 7500 Data: Evolving appetites: an in-depth look at European attitudes towards plant-based eating – Smart Protein Project, 2023



MARKET CHALLENGES

HIGH PRODUCTION COSTS = HIGH PRICES

The plant-based alternatives industry is young and still faces financial challenges despite its rapid growth.

The relatively small scale of production compared to animal products, the high cost of base ingredients, and the drive to create products that meet the highest nutritional and sensory standards mean that the industry is burdened by high costs. Some of the base ingredients used in plant-based food production are not grown in Poland, so importing them further increases costs, such as plant proteins isolated from soybeans, peas, or hemp. We are slowly seeing the first Polish producers emerge, but targeted policy and systemic support is needed to reduce prices and make domestic inputs more accessible for Polish plant-based producers.



Jakub Kuliński BeanPol

Beanpol is a family-owned company that purchases, processes, and exports legumes, mainly beans and field peas. We operate in the Lublin province, the Polish center of bean and other legume cultivation.

Observing plant-based trends in the domestic and global market, we decided to go one step further and start more advanced production, namely protein concentrates. We continue to focus on legumes, namely peas and beans, used in plant-based meat alternatives. This is why we are a member of the Polish Association of Plant-based Food Producers.

The plant food industry has developed in recent years, as our customers at home and abroad unanimously confirm. This is particularly evident at international food fairs, where plant-based foods occupied individual stands just a few years ago, but now they occupy entire halls. We want to be part of the development of this category because we see it as a highly prospective one.

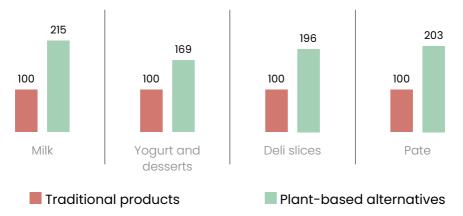
As many as **38% of Polish respondents consider high prices to be one of the main barriers to trial** and repeat purchases of plant-based alternatives (Data: Evolving appetites: an in-depth look at European attitudes towards plant-based eating – Smart Protein Project, 2023).

Despite efforts to ensure affordability, the cost of plant-based products is still significantly higher than their animal-origin counterparts. This difference can be seen in price indices based on NielsenIQ data. For example, plant-based milk and pâté alternatives are twice as expensive as traditional products.



PRICE COMPARISON OF ANIMAL PRODUCTS AND THEIR PLANT-BASED ALTERNATIVES

The prolonged period of economic instability is having a profound impact on consumer shopping behavior. The need to save money leads to a reduction in trying new products. As a result of the crises we are seeing a decrease in the frequency with which customers visit the HoReCa channel, which is a good place to introduce plant-based products and explain how they are prepared and what they are used for.



Price indexes of plant-based alternatives (prices of animal products = 100)

Data: NielsenIQ – Retail Panel, Whole Poland (Food), comparison of weighted average prices of indicated categories, September 2023 – August 2024, selected categories described in the chart

BARRIERS TO THE DEVELOPMENT OF PRODUCER BRANDS IN RETAIL CHAINS

Retail chains – especially discounters – have and continue to play a key role in democratizing plant-based categories in the Polish market. However, some of their practices can hinder the sector's development.

The chains exert strong price pressure on plant-based food producers, manage shelf

space, and decide on product positioning. In doing so, they sometimes relegate plant-based alternatives to the sideline limiting their visibility to consumers and severely hampering their potential role as alternatives to animal products.



Tomasz Paczkowski Wege Siostry

The placement of plant-based products in stores is problematic – they often stand in other places, separated from the rest. This means that even a consumer who is open to novelty and interested in plant-based foods may not find these products in the store because they are on the vegan shelf, a retail area that consumers may not habitually visit.

Another obstacle for entrepreneurs is retail chains' preferential treatment of private labels. This leads to the marginalization of plant-based foods under manufacturers' brands. By replacing producer brands with private labels, communication and education related to plant-based alternatives become dependent on the strategy of the retail chains, which often prefer to support categories with better turnover at the expense of younger categories, such as plant-based alternatives, from their promotional efforts. This deprives producers of the opportunity to conduct promotional and communication activities in retail stores. In addition, there is concern that investing exclusively or primarily in the private label portfolio, while exerting strong price pressure on their plant-based suppliers, may lead to a decline in the quality and innovation of the category, which will have to focus more on cost reduction.



Łukasz Wesołowski Lunter

The biggest opportunity for the Lunter brand has been the ability to offer private labels to the chains – this has been the biggest growth driver for the company in Poland. Private label gives you business and volume, but it also takes something away because it's not really our product. This is a risk because the chain may choose another supplier. You are unsure whether the business will end in six months or a year. Then it's difficult to invest and buy production machinery.



Prospects for the plant-based food industry

The trend of reducing animal-origin food production in Europe in the coming years will not only continue but also strengthen. This will happen for systemic reasons, such as the need for nutritional transformation in the face of climate change. At the same time, determinants arising from consumer attitudes and behavior will also be important for the trend to continue.

Plant-based foods have a special role in this process because they are alternatives to certain animal products. Their preparation and consumption do not require consumers to change their daily eating habits.

PLANT-BASED FOOD IS THE FUTURE OF THE NUTRITIONAL TRANSFORMATION

Polish food producers today face numerous challenges related to climate change and the need for nutritional transformation which is already being implemented in other European Union countries. They face problems of poor soil quality, dwindling water resources, and the gradual decline of certain base ingredients. 70% of farmers believe that climate change is having an impact on agricultural production in Poland, and 52% of farmers say they have felt it firsthand, having suffered losses in the last 5 years.

Increasing the number of crops, especially those producing alternative proteins, is one of the priorities in programs to combat or adapt to the effects of climate change. Polish farmers show openness in this regard:55% say they are willing to reduce the negative impact of their agricultural production on the environment, and 54% are willing to support the introduction of subsidies to encourage entrepreneurs to switch from livestock farming to growing crops for use in plant-based foods. As the 2023 RoślinnieJemy report "Attitudes towards the food system transformation" shows, such measures are also gaining support among Polish consumers. More than half of respondents said that marketing meat or dairy alternatives based on plant-based protein sources is a good direction for agricultural production. More than half of those surveyed would support government action to increase investment in producing meat and dairy substitutes from plant-based protein sources.

The Planetary Diet is seen as the optimal diet for consumers to support the transformation of the global food system. It is a planet-friendly diet based primarily on plant-based products. Within this framework, the consumption of animal products is limited.

The concept of the Planetary Diet was presented in 2019 by a group of scientists and specialists in the prestigious medical journal The Lancet. There are several reasons why it is the best option for those who want to join the fight against climate change:

- Reducing greenhouse gas emissions: Food production, especially meat and dairy, generates a significant portion of theglobal emissions of greenhouse gases, including methane and carbon dioxide. A planetary diet can significantly reduce its negative effects.
- **Sustainable use of resources**: The Planetary Diet promotes a reduction in resource consumption by reducing the amount of water and land required for animal-origin food production.

Conservation of biodiversity: Livestock production and industrial agriculture are among the main causes of global biodiversity loss. Solutions proposed by the Planetary Diet, such as reducing meat consumption in favor of legumes, fruits, vegetables, and nuts, can support less invasive, more sustainable agricultural activities. (Data: *How do Polish farmers see the future of food production?* – RoślinnieJemy, 2024)





Anna Matusiak Flora Food Group



Maciej Otrębski RoślinnieJemy

The category of plant-based products should be important in our country, not only for ecological reasons. Studies clearly show that up to ten times less water is used in the production of plant-based foods than in the production of animal products. Contrary to popular belief, Poland is one of the countries with the least amount of water resources in all of Europe. Sometimes our cities run out of water in summer.

PLANT-BASED FOOD IS THE FUTURE OF POLISH FOOD SECURITY

Positive changes in the variety of basic ingredients used, especially those that are alternative sources of protein, can strengthen Poland's food security and the country's resilience to crises in the traditional meat and dairy industries.

Developing vegetable crops in our country can also help reduce dependence on food imports, which is particularly important in the event of geopolitical, economic, and health crises such as the COVID-19 pandemic. The environment and food security are key arguments for supporting the plant-based industry. Plant-based production has a significantly lower impact on our natural environment while providing a higher conversion of calories. It takes 9 plant calories to produce one calorie of meat, and that's with the most optimal chicken production.

Human protein consumption should shift to plant-crop sources. The Polish government often says it supports plant-crop production, but this really means animal feed production.

We look at our neighbors, for example, Germany, which is already experiencing a significant decline in meat consumption and livestock production. These changes will come to Poland as well, but it will take some time. It is worth preparing for them. That's why the Polish Plant-Based Food Producers Association was founded. We want to show that we care about becoming a competitive market. In other words, we want to lead the changes already occurring in more developed countries. "To produce 1 calorie of meat, it takes 9 calories of plants, and that's with the most optimal production of chicken meat".



"t's like making 9 meals and throwing away 8 of them".

PLANT-BASED FOOD IS THE FUTURE OF THE POLISH ECONOMY

The production of plant-based foods, especially high-protein foods, is not only a valuable solution to an environmental problem, but also a means of strengthening Poland's economic position.

Poland has natural conditions for agricultural production, which makes it the fourth largest food producer in Europe after France, Germany, and Spain. The value of Polish agri-food exports in 2023 was 51.8 billion EUR, or about 236.4 billion PLN – an increase of 8% compared to 2022 (data: Polish Food Day – Ministry of Agriculture and Rural Development, 2024).



Our production matches and even surpasses food products from other European countries in terms of quality and innovation while maintaining competitive prices. With its raw material resources, production and logistic capabilities, and human capital, Poland has the natural potential to become a strong player in the production and export of plant-based alternatives.

Given the growing number of people turning to plant-based products in foreign markets, especially in Europe, the development of this export sector appears to be an opportunity to expand Polish domestic food exports and it could represent a safety valve for the Polish economy in the event of a decrease in animal product exports

Many Polish plant-based food producers are already successful in the European and world markets. For this reason, some of them have rebranded and changed Polish names to English ones. Roślinny Qurczak® became Planteris, and Bezmięsny became Plenty Reasons and is already present in more than a dozen markets, such as Iceland and Ukraine. Meanwhile, you'll find yogurt alternatives from Magda Roslinna in Romania and Portugal. Plant-based foods provide a safe and beneficial basis for many diets.

PLANT-BASED FOODS ARE THE FUTURE OF A HEALTHY DIET

Diets that limit the consumption of animal products, such as the Planetary Diet, have the approval of the medical community. The National Center for Nutrition Education emphasizes that an all-plant diet is safe at any stage of life as long as it is balanced (Data: *How to Eat Healthy and Care for the Planet. The Planetary Diet in Practice. – National Center for Food Education*, 2023). Increasing the number of plant-based meals in the diet can provide many benefits to consumers, including reducing the risk of cardiovascular disease, type 2 diabetes, and some cancers, as well as improving lipid parameters and lowering blood pressure.

Health motivations are already influencing decisions to reduce animal product consumption. This is partly due to increased general food awareness and the growing number of allergies and dietary exclusions. Dietary changes are also influenced by negative perceptions of the quality of many animal products on the market.

Plant-based foods are a safe and health-promoting basis for many diets, including those limiting cholesterol, lactose, or cow's milk protein, and will, therefore, become part of the daily routine of an increasing proportion of the population, whether by choice or necessity. Already today, 8% of children up to 15 years of age and 12% of children between 3 and 5 years of age exclude dairy products from their diet (data: *Pole's Plate – Zymetra for Danone*, 2023).



Łukasz Wesołowski Lunter

If the products are widely available, they will become more established in our consciousness every year. The average tofu consumer is a young person under 35 who is just starting to teach their children to eat less meat and more plant-based products. This generation is growing up, and the generational shift may take several decades.

THE PLANT-BASED FOOD INDUSTRY IN POLAND 2024 - DATA, OPPORTUNITIES AND CHALLENGES

Policies and actions implemented in the area of plant food in other European countries



DENMARK ANNOUNCES NATIONAL PLAN AND RECEIVES RECORD SUPPORT

In late 2023, the Danish Ministry of Food, Agriculture and Fisheries published the **world's first comprehensive national action plan for plant-based foods**, broadly defined as including plant-based animal product alternatives. The document includes education and promotion initiatives and support for innovation, research, and export at every stage of plant-based food production – from farming to the end consumer. As part of the adopted plan, the world's largest plant-based food support fund worth 675 million DKK (more than 90 million EUR) will be distributed between 2023 and 2030. This fund will support the Danish market for producers in this segment and end consumers such as schools and restaurants through grants and subsidies.



DENMARK PRIORITIZES

The Danish government also has measures in place to support innovation. The Innovation Center Denmark helps startups access capital and partners, and test and adapt their solutions to the international environment. In addition, the Danish Veterinary and Food Administration assists smaller companies and start-ups in obtaining regulatory approval for new food products.

The "Replanted" project, which aims to develop new plant-based alternatives to fermented dairy products, will be implemented between 2022 and 2025. It includes the development of processes and cultures to produce plant-based fermented foods similar to yogurt based on peas, oats, and potatoes. Successful implementation of the patented dairy alternatives could reduce greenhouse gas emissions by up to 80% compared to standard dairy yogurts.

In January 2023, a new "green" food contract will be released, requiring any food supplier to public institutions to offer more plant-based meals and products and meet sustainability guidelines. Among other things, the supplier selected in early 2024 will double the number of plant-based products, including more than 100 types of plant-based meals. They will use plant-based alternatives to products such as meat, milk, eggs, and ice cream. The German government has allocated 38 million EUR from the national budget to support alternative protein sources and plant-based production.

The Danish Organic Agriculture Fund has already received 54 million DKK (~7,2 million EUR), to be distributed between 2021 and 2024, to train kitchen staff and chefs in plant-based cooking.

GERMANY SUPPORTS FARMERS IN TRANSITION

The German government has allocated 38 million EUR from the 2024 national budget to promote alternative protein sources and reorient agriculture towards plant-based production. **20 million will be used to support farmers transitioning from livestock to crop production**. 10 million will be used to promote innovative production and processing methods for plant-based, fermented and cultured protein sources. The remaining €8 million will be used to promote the production of protein sources for direct human consumption rather than animal feed.

FRANCE PROVIDES A STARTUP COMPANY WITH A FACTORY

Umiami, a startup dedicated to producing fully vegan, high-protein whole meat substitutes with realistic taste and appearance, has received 7.4 million EUR from the French government. The amount was used to purchase a factory formerly used by Knorr.

Umiami's operations were subsidized through the "Première Usine" (French for "First Factory") program, which supports innovative companies looking to launch on an industrial scale.



Investors emphasize that Umiami's operations are driving France's reindustrialization and contributing to the country's stronger position in the global food market.

The purchase contributed to the company's success in the domestic market. Then, with the help of a French public investment bank, Umiami raised an additional 32.5 million EUR to begin operations in the U.S. market.

Investors emphasize that they are backing the startup not only because of the growing demand for plant-based meat alternatives but, more importantly, because Umiami's operations are driving the reindustrialization of France and contributing to the country's stronger position in the changing global food market.





FINLAND PRIORITIZES

The Finns have formed a consortium of food manufacturers to jointly develop technologies for the efficient production of protein-rich foods with better taste and texture. The initiative also aims to improve supply chains. The project has received 3 million EUR in government funding from Business Finland and is expected to operate between 2023 and 2026.

An important element of the Finnish project is that the protein will be sourced from plants that can be grown in Finland, such as oats, peas, and broad beans. This will increase the country's independence and food security and create a greener crop. The initiative also aims to increase Finnish exports by at least 500 million EUR between 2023 and 2026.

UK INVESTS IN AMARANTH AS AN ALTERNATIVE PROTEIN SOURCE

In 2023, the UK's VIP Leaf project received government funding through the Innovate UK program. Its developers are working to create vertically grown amaranth as an alternative source of protein. It is expected to be cheaper than protein from peas. By growing the crop indoors, it could be grown year-round.

The initiative aims to reduce the country's dependence on soy and pea imports and cut greenhouse gas emissions. This is key to achieving the UK's green target of zero net gas emissions by 2050.



PPBFPA recommendations

Separate PKD Activity Class for plant-based food

The plant-based food industry has been building its position for years but is still considered as niche. On the other hand, it is definitely a branch of the economy with great potential, both in Poland and worldwide - for several years, there has been a dynamic increase in the consumption of plant-based products. The sector does not have its own PKD activity class and must use the number 10.89.Z, which stands for "production of other foodstuffs, not elsewhere classified". PAPFP has already applied for an updated PKD classification in October 2023 that would take effect in 2025. It would create a new activity class for plant-based products that are alternatives to animal-based foods.

Recognizing the plant-based industry's existence and defining its specificities will allow it to build relationships with the food industry and its stakeholders: suppliers, customers, legislators, and regulators. A dedicated PKD class will allow the industry to, among other things, collectively analyze sales values and provide the opportunity to monitor individual segments of plant-based production accurately. Most importantly, it will stabilize plant-based companies' regulatory and tax environment,

reducing uncertainty about the proper classification of plant-based producers' economic activity.

Recognizing the plant-based segment as a separate entity will also help raise its visibility as a part of the food industry that has been effectively pursuing sustainability goals for years.

Recognizing the plant-based segment as a separate entity will also help raise its visibility as a part of the food industry that has been effectively pursuing sustainability goals for years.

Bring the VAT rate for plant-based alternatives in line with the VAT rate for the meat and dairy industry (5% instead of the current 8%)

As we mention in the report's introduction, given the environmental and social costs of intensive livestock farming, it is essential to shift the balance toward plant-based options and allow consumers to participate actively in the transformation of the food system. **Preferential taxation of plant-based foods will address a primary consumer barrier of plant-based products being priced higher than those of animal-origin competitors**.

62% of Poles support the abolition of taxes on foods with significantly less negative environmental impact (Data: Evolving appetites: an in-depth look at European attitudes towards plant-based diets – Smart Protein Project, 2023). Our call aligns with the European Commission's recommendations to introduce fiscal instruments in the form of tax cuts, which would provide an opportunity to encourage consumers through price signals. The government should use social and fiscal policy tools to ensure the availability of good-quality, sustainable, and nutritious plant-based foods, especially for low-income consumers.

Equalizing the VAT rate will make the industry more competitive, but most importantly, it will make it easier for consumers to make sustainable consumer decisions.

Targeted subsidies and preferential loans for the industry

Grants and loans will support producers and the entire chain associated with the industry, including producers of materials used. This is also adequate support for farmers, who will shape a sustainable food production system in Poland by investing in cultivating vegetable protein sources. **This form of systemic support for farmers can allow them to diversify their crops and focus moreon protein-rich crops**, such as soybeans, peas and lentils. 52% of Polish women and men would support government investment to support the production of meat and dairy substitutes based on plant-based protein sources (such as legumes). Opponents of such measures are in the vast minority, accounting for only 25% of respondents (data: Biostat, 2023).

It should also be noted that 57% of Polish women and men support the idea of the state supporting farmers who want to switch to plant-based crops (Data: *Evolving*



appetites: an in-depth look at European attitudes towards plant-based eating – Smart Protein Project, 2023).

Institutional support tools such as **targeted grants and preferential loans** to the industry will also enable local markets to develop. The local production of plant-based protein sources for consumption can help increase food security in our country. The cultivation of legumes for consumption should be prioritized to maximize environmental benefits and production efficiency and increase the economy's resilience to climate change. Due to their high drought tolerance, more and more countries are investing in legume production. The above measures can increase the financial stability and resilience of agriculture to market changes and support adaptation to changing climate conditions.

Broad support for innovation

The proposed support for the plant-based industry – including subsidies for R&D activities and cooperation with R&D centers – will lead to an increase in the quality and attractiveness of plant-based offerings on the domestic and foreign markets. Strengthening the supply will benefit the country's economy and allow Poland to increase its innovation potential.

So far, the NCBIR (National Center for Research and Development) has been the only public institution to highlight alternative protein sources as an innovative technology in the Nutritech 2023 competition, recognizing their role in Poland's sustainable future economy. In contrast, the draft document published by the Ministry of Development – the Concept for National Development 2050 – does not mention the need to increase the share of plant-based food production in the future scenarios presented for Poland. The PAPFP sent a comment emphasizing the need to recognize the role of innovative plant-based food and plant-based agricultural production as a key element of a sustainable future for the agrifood system.

In the process of transforming the Polish food system, consideration should be given to launching targeted funds to support technological innovation in food production, especially alternative sources of protein. Environmentally friendly food, including plant sources of protein for consumption, should be included in the preference for green investments.

Supporting export potential

Poland can become a leader in the production of plant protein sources for human consumption, opening up new export markets. The demand for plant-based protein products is growing worldwide. According to the report "Food for Thought: The Protein Transformation," published in 2021 by The Boston Consulting Group and Blue Horizon Corporation, the market for meat, egg, dairy and seafood alternatives will reach at least \$290 billion by 2034. Assistance in finding foreign business partners and subsidizing the participation of the plant industry in foreign food fairs will enable Polish producers to grow their exports dynamically. At the same time, it will guarantee a level playing field for the development of plant-based products against their animal-origin counterparts.

Legal stability for long-term development





Photo Polityka Insight

Companies involved in the production of plant-based alternatives to meat or dairy products in Poland are often family-owned businesses that grow with their own resources. PPBFPA is concerned about actions that impede the long-term development of plant-based operators – the undermining of current regulations on the government's draft regulation regarding the ban on the use of nomenclature referring to meat products on their plant-based alternatives is an example of an additional, non-market factor that disrupts the ability of plant-based food producers to develop.

Proposals such as the aforementioned regulation also directly hurts Polish producers – plant-based meat alternatives produced outside Poland would not be covered by the regulation, which will put domestic companies at a disadvantage. The cited drafts also negatively position plant food producers vis-à-vis distributors or retail chains.

PPBFPA's key demand is that friendly conditions be provided for plant-based food producers to invest and make long-term plans for the development of their companies.

Incorporating environmental considerations into public procurement criteria

57% of Poles support the demand for more plant-based meals in school cafeterias, hospitals, public events, etc. (Data: Evolving appetites: an in-depth look at European attitudes towards plant-based eating – Smart Protein Project, 2023).

The European Commission, in its report from the Strategic Dialogue on the Future of Food and Agriculture, points to the need for further action by Member States to create a more advanced public procurement framework for sustainable food. As the PAPFP, we advocate the inclusion of environmental and public health impact criteria when considering public procurement related to the above areas. Increasing the availability of plant-based foods in government educational and health institutions and at public events will help democratize a more plant-based, healthy diet as an accessible option for broad segments of society.

The National Center for Nutrition Education also emphasizes the need to increase plant-based protein sources, pulses in particular, in the diets of children and adolescents. In published materials, experts stress the need to increase awareness of the benefits of legume consumption among Poles.

Considering criteria beyond purely economic factors will encourage food suppliers to introduce less burdensome and more, environmentally friendly solutions.



Photo Polityka Insight

Raising consumer awareness of the benefits of a plant-based diet

Increasing public awareness of the benefits of a plant-based diet will help in the fight against lifestyle diseases. This will positively impact public finances, well-being, and the labor force participation of an aging population.

Particular attention should be paid to the principles of the Planetary Diet developed by the international team of scientists of the EAT Lancet. This approach aims to improve

health while ensuring sustainable food production, thereby reducing further damage to the environment.

Environmental education projects should include education on sustainable food, the planetary diet, and a balanced plant-based diet. These topics should also be included in higher education in gastronomy, dietetics, and medicine.

Recognizing the plant-based industry as a valid agent in the public debate about the future of food

This report highlights the need to recognize the plant-based food industry in political and public debates, discussions, and meetings on the future of food production and agriculture in Poland. The Polish Association of Plant-based Food Producers, as an entity uniting the most important food companies in the plant food segment, seeks to be involved in political debates and discussions, consultations, and legislation, especially in view of the European Commission's recommendations in the Strategic Dialogue on the Future of Food and Agriculture report. The **need for a strategic plan to increase the share of vegetable protein was emphasized**, as well as the need to increase the role of entities such as our organization in creating solutions for a better future of the food system in Poland and Europe.

We advocate for the plant-based industry to be seen as a valid actor.



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