Anna M. Klepacka

Regenerative Agriculture in Practice: A Case Study of Lubuskie Angusowo and Its Role in Food Production in Poland

Abstract: This study investigates the motivations for adopting regenerative practices and evaluates success from the perspective of the owner of Poland's first regenerative farm. Selected research results based on the interview questionnaire indicate that, according to the owner, the primary motivator for implementing regenerative farming practices is the reduction in maintenance costs. This cost efficiency stems from regenerative methods not requiring expensive fertilisation or plant-protection products. The owner also underscores the importance of soil quality, emphasising techniques such as controlled grazing, sowing annual plants, and bale-grazing, which collectively enhance soil nutrition and directly improve food quality. The analysis of opportunities and challenges based on the subject literature reveals diverse environmental, economic, and social arguments both supporting and opposing regenerative farming practices in food production. Based on the experience of the owner of Lubuskie Angusowo, the implementation of regenerative methods demands substantial personal effort in terms of education, understanding of the system's principles, and persistence in their application. The transition to regenerative farming also necessitates a mindset shift, fostering awareness of the need to produce healthy food while embracing responsibility for all stages – from production to sale to the end consumer.

Keywords: regenerative agriculture, economic aspects, environmental and social aspects, food production, Lubuskie Angusowo, Poland.

Anna M. Klepacka, PhD Hab., Associate Professor, Department of Rural Economics, Institute of Rural and Agricultural Development, Polish Academy of Sciences, 72 Nowy Świat St., 00-330 Warsaw, Poland, e-mail: aklepacka@irwirpan.waw.pl, ORCID: 0000-0002-2828-5429.



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1. Introduction

The concepts of "regenerative agriculture" and "regenerative farming" gained prominence in the early 1980s, when the American Rodale Institute, a leader in the organic farming movement, adopted them. These approaches emerged as a response to rapid changes in agricultural practices, including mechanisation and the widespread use of artificial fertilisers

Robert Rodale, son of Jerome I. Rodale and an early proponent of regenerative agriculture (Rodale 1983), built upon his father's ecological practices while drawing inspiration from Allan Savory's concept of holistic management (Harwood 1985). He recognised the need for changes across various aspects of the natural system, including soil, water, air, plants, animals, landscapes and human health. Savoury criticised the reductionist approach to agriculture, which focuses exclusively on land cultivation, as the major contributor to the world's environmental problems (Gosnell, Grimm, Goldstein 2020; Salatin 2017). He emphasised the interconnections between the elements of a natural system. An innovative aspect of this approach was the inclusion of anthropological factors, especially related to the quality of life, such as social and economic well-being. Rodale argued that farmers' decisions should consider both short-term and long-term impacts on ecological, economic, and social well-being to support resilience in the processes of change – in effect, broadening the scope of organic agriculture to incorporate holistic management. This expanded concept, referred to as "regenerative organic", sought to move beyond agricultural sustainability toward the creation of resilient food and agricultural systems (Wilson et al. 2022). Soloviev and Landua (2016) further supported this approach by identifying different levels of regenerative agriculture and arguing that, at its best, it is an ecologically vibrant, socially just, culturally diverse, and spiritually meaningful global system of regenerative potential.

A review of the literature on the subject, including an analysis of 229 articles in scientific journals and 25 practitioner websites (Newton et al. 2020), categorises definitions of regenerative agriculture into several approaches. Firstly, these approaches can focus on processes, emphasising the inclusion of one or more agricultural principles and/or practices – such as integrating crops and livestock, no-till farming, or the use of cover crops – that qualify as regenerative. Secondly, definitions may centre on outcomes, highlighting measurable effects like carbon sequestration or changes in soil condition/environmental biodiversity – as indicators of regenerative agriculture (Newton et al. 2020).

Rhodes (2017) emphasises that regenerative agriculture not only seeks to restore soil health, leading to enhanced water quality, plant productivity, and land resilience, but also represents a method of food production with positive environmental and

societal impacts. Similarly, Giller et al. (2021) and Schreefel et al. (2020) agree, and describe regenerative agriculture as a means of supporting ecosystem services, furthering the goals of sustainable food production.

Regenerative agriculture has gathered significant attention in the literature from corporations, policymakers, and food-system researchers (Tittonell et al. 2022). Between 2015 and 2020, the amount of information on regenerative agriculture surged by 2982%, rising from 200 to 6,163 items, with a 2500% increase in the Web of Science database alone (from 2 to 52 items) (Giller et al. 2021). Despite this growth, the lack of scientific consensus on monitoring and verification methods limits effective implementation and transparency (De Olde, Bokkers, De Boer 2017), leaving many initiatives vulnerable to accusations of greenwashing (Northen 2011). One challenge lies in the diversity of interpretations for regenerative agriculture (Schreefel et al. 2024). Definitions often emphasise specific practices - e.g. notill, soil cover and crop rotation - while less frequently focusing on guiding principles, such as holistic design, fostering interconnections, or improving entire agroecosystems (Tittonell et al. 2022). The lack of an agreed-upon definition of regenerative agriculture and the often conflicting interpretations pose several challenges, including consumer confusion and misrepresentation by large food companies. The misuse of terms like "sustainable", "natural" or "produced through regenerative agriculture" (Moon, Costello, Koo 2017) can lead to greenwashing and the erosion of trust in regenerative initiatives (Levinovitz 2020).

1.1. Selected Aspects of European Union Policy

The development of regenerative agriculture largely depends on how the climate policy of the European Union (EU) is shaped. In 2022, the REASAC report (EASAC 2022) on regenerative agriculture was published, primarily referencing the EU Biodiversity Strategy to 2030 and the Farm to Fork Strategy, both integral components of the European Green Deal (EC 2020a, 2020b). These strategies outline several ambitious goals aimed at transforming the EU food system towards more sustainable food production and development. Food and agricultural production depend on many factors, e.g. environmental, economic, and cultural conditions or agricultural practices, but one of the main challenges is the conditions, properties, quality, and health of soils on which food crops are grown (Frac et al. 2022). Key objectives for food production and agriculture include: 1) reducing greenhouse gas emissions from agriculture by at least 55% by 2030; 2) cutting the use of chemical plant protection products by 50% by 2030 and minimising associated risks; 3) reducing nutrient losses by at least 50% and cutting fertiliser use by at least 20% by 2030; 4) increasing the area of agricultural land under organic farming to 25%

by 2030. The ambitious programme will be implemented through various actions designed to mitigate climate change, protect the environment, and restore and preserve biodiversity in European agriculture. Regenerative agriculture aligns well with the eco-schemes adopted in Poland under the Common Agricultural Policy (CAP), including six "area eco-schemes" and "animal welfare" initiatives.

Gish (2022) compared the recent EU CAP reform to the US Farm Bill, highlighting the unfavourable policy impact on the development of regenerative agriculture and influence on farmers' actions. She also conducted a direct analysis of the policy changes to assess their broader implications for the entire food system. Gish emphasised that these reforms are a crucial first step in providing support to farmers who want to change their traditional practices.

In livestock production, the Polish National Common Agricultural Policy (CAP) Strategic Plan (MRiRW 2023; TOP AGRAR 2022) and the guidelines of the European Green Deal (EGD) as outlined in the Farm to Fork Strategy, include initiatives aimed at improving animal welfare and reducing the use of antibiotics (antimicrobials) in livestock farming. Animal welfare is also addressed in Poland's Animal Protection Act (Ustawa 1997) and Act on Veterinary Inspection (Ustawa 2004), which authorises inspections from a legal perspective.

Animal welfare can be considered in two main areas. The first is food production – primarily slaughter – where strict requirements govern the preparation of livestock for transport and slaughter, along with humane slaughter methods. The second involves regulations on best practices at farms, particularly guidelines from the Chief Veterinary Officer, which help farmers implement appropriate measures at their farms. Technological innovations, such as low- or zero-emission livestock housing, can contribute to reducing greenhouse-gas emissions per unit of production and improving resource use efficiency, especially in livestock farming.

The article aims to explore the motivations behind managing animal production within the framework of regenerative practices at Lubuskie Angusowo. The main objective is complemented by an assessment of success, considering both the barriers and opportunities in food production.

The study addresses three research questions (Q) and proposes corresponding hypotheses (H):

- Q1. What are the conditions for running a regenerative farm?
- Q2. Do regenerative practices in food production offer more opportunities or limitations?
- Q3. What drives the growing interest in regenerative methods in food production?
- H1. Economic factors are the primary motivators for adopting regenerative practices on the farm.

- H2. Food production within regenerative frameworks remains niche, attracting both advocates and critics.
- H3. Sharing knowledge and experiences about regenerative methods enhances awareness among potential practitioners and consumers.

2. Materials and Methods

The motivation to undertake research with farmers implementing regenerative practices in animal production stems from the lack of statistics confirming the number of farms in Poland. While global reports describe the development of regenerative agriculture, European examples primarily focus on the rapidly growing British market and the German market, which holds the largest market share (Market Research Report 2022). The information gap regarding regenerative farms in Poland highlights a lack of scientific research on the subject.

To address this, the author sought to identify the potential for implementing regenerative practices on farms specialising in animal production in Poland. The definition of regenerative agriculture aligns with the assumptions outlined in Figure 1. When a farmer prioritises soil health, well-nourished soil becomes an invaluable source of food for animals, and humans benefit from consuming high-quality meat. The limited interest among farmers in adopting these practices may stem from insufficient knowledge transfer between institutions responsible for implementing CAP instruments and the farmers themselves. According to research conducted by BNP Paribas, 38% of farmers surveyed in Poland are unaware of what regenerative agriculture is (BNP Paribas Bank Polska S.A. 2023), which likely contributes to the limited interest in regenerative practices and food production methods.

The materials used in this article were sourced from a review of the relevant literature (e.g. Howarth et al., 2022) and an interview conducted with the owner of the Lubuskie Angusowo farm in April 2024. The interview questionnaire consisted of six comprehensive sections: general information about the person running the farm; general details about the farm, including crop and animal production; financial information; and subjective measures of success. The description focused on the farm-level attributes such as land area, pastures, crop renovation, fertiliser and supplement use, herbicide and pesticide application, livestock health protection measures, crop rotation periods, and the overall management process, including its components and organisational environment. The questionnaire also included questions measuring economic success, including the owner's perspectives on regenerative practices, their definition of a successful farmer, and their goals and key projects planned for the future. Most of the questions were multiple-choice,

supported by tables to complete, from which general conclusions were drawn. The section regarding the farmer's opinion included open-ended questions. As the study was qualitative and based on personal opinions and practices, no statistical analysis was performed. Research on farmers' preferences and motivations and the links between farmers' WTA and their assessment of knowledge of environmental values was included, among others, in the study by Czajkowski et al. (2021).

Descriptive and comparative methods were employed to achieve the aim of the article. The descriptive method was used to present a case study of the Lubuskie Angusowo farm, which was purposefully selected for research. Initially, a questionnaire was conducted with a sheep-production farm (regeneratywnie.pl). However, the Lubuskie Angusowo farm was ultimately chosen due to its extensive animal production and the farmer's ten years of experience. The case-study method, an empirical approach, analyses and evaluates real-world phenomena (Grzegorczyk 2015; Mielcarek 2014; Yin 2009). For exploratory problems, it provides insights into why specific phenomena occur. The author conducted an on-site visit to the farm to gain first-hand knowledge of its operational conditions.

3. Regenerative Practices on Food Quality

Food choices extend beyond taste and significantly impact human health. Dr Stephan Van Vliet collaborates with farmers, ecologists, and agricultural scientists to explore the critical links between sustainable agriculture, food nutrient density, and human health (The Van Vliet Lab 2024). His research examined a variety of foods - including beef (Krusinski et al. 2023), bison (Van Vliet et al. 2023), milk (Marshall et al. 2022) and other protein-rich foods (McAuliffe et al. 2023) grown or produced using different agricultural methods, including regenerative practices. The findings revealed that the use of regenerative practices positively influenced the nutritional quality of foods, including levels of vitamins, minerals, and antioxidants, as well as animal health (Leroy et al. 2022a). Van Vliet also conducted the first randomised controlled trial to assess human health responses to consuming a diet of foods produced using regenerative agricultural practices (Van Seijen, Van Vliet 2023). This research underscores the urgent need to address human and environmental health crises, highlighting the pivotal role of food systems in exacerbating climate change, biodiversity loss, and diet-related diseases (Rahman et al. 2024).

If farming and producing food using regenerative practices is healthier, what are the consequences of transitioning from traditional methods, and is such a shift feasible? Gosnell, Gill and Voyer (2019) conducted a study of 28 farms

located in New South Wales, Australia, to explore these questions. Their research focused on the farmers' management philosophies, the motivations behind their interest in alternatives to conventional agriculture, the nature and experience of their transition, and the benefits, challenges, and daily practices associated with regenerative farming. The study also examined the social networks farmers relied on for support and information and their perspectives on scaling up adaptive approaches to agriculture. Gosnell, Gill and Voyer (2019) proposed a conceptual model for the transformation associated with adopting regenerative agriculture, structured around three spheres: personal, political, and practical. This transformation was often triggered by crises that simultaneously hindered and facilitated change. The outcomes highlighted both the challenges and advantages of the transition. Key findings included (Gosnell, Gill, Voyer 2019):

- Acceptance of the idea that natural processes, rather than conventional inputs, can support production and financial goals.
- Redefining the concept of economic success, abandoning the idea that ecologically sound and economically viable behaviours are mutually exclusive.
- Courage required to deviate from cultural norms, embracing innovation despite societal expectations.
- Visible improvements in soil cover and resilience to extreme weather events, such as drought and flooding.
- Adoption of low-stress livestock management techniques, more flexible fencing and water infrastructure, and reduced reliance on heavy equipment.
- Development of educational and peer support networks operating on global to local scales.
- Increased public awareness of the links between soil health and human health, driving consumer demand for regenerative products, niche markets, and certified systems.

An important question to consider is how profitable farming with regenerative practices is compared to conventional methods. Howarth et al. (2022) conducted a survey to compare the economic performance (2017/18–2020/21) of conventional and regenerative farms, aiming to define the value proposition for regenerative practices in New Zealand sheep and beef production. The study included eight pairs of regenerative and conventional farms (16 farms in total). Results indicated that conventional farms had higher incomes than regenerative farms, with product sales serving as the main revenue stream for all farms studied. However, breeding policies, animal performance, and sale/purchase decisions differed significantly between the two systems. Regenerative farmers were found to prioritise pasture and livestock health and land quality improvements over economic gains. Additionally, 36–57% of respondents expressed a willingness to pay an average of 20% more for

food produced sustainably. Despite economic differences, these findings suggest that regenerative agriculture will continue to appeal to a segment of farmers and consumers. Before transitioning to regenerative practices, farmers are encouraged to learn from the experiences of others through farm visits – ideally spanning an entire season – to better understand the system. Concerns about profitability when switching from conventional to regenerative methods are common and may act as a deterrent.

Paying the right price for nutrient-rich food will not be enough to achieve the dramatic transformation required to regenerate our soils. Regenerative practices and the farmers who implement them must be compensated for the ecosystem services they provide as by-products of their efforts, such as increased biodiversity and enhanced soil capacity to retain water and store carbon (Totaro 2021).

To balance the opportunities and threats associated with regenerative practices, based on the literature review, the author developed a classification of regenerative food production across three dimensions: environmental, economic and social, addressing both opportunities and threats (Table 1). This classification was informed by publications on regenerative food production from the past three years, focusing on analyses that involved several years of practice.

The literature most frequently highlights benefits such as a healthy soil profile and fertility, mitigation of the negative impacts of climate change, faster adaptation to climatic variations, and increased resilience of agricultural ecosystems. Moreover, societal benefits include food sovereignty and stronger ties within local communities. Critically discussed economic benefits included reduced input costs, decreased transport needs and the stimulation of rural development. However, on some farms, those benefits were preceded by a transitional period requiring financial support before they began to bring greater profits compared to the previous industrial-based agricultural model.

Barriers to adopting regenerative practices also emerge. Foremost is the fear of change, which may stem not only from insufficient management skills but also from limited or unavailable subsidies for crops or livestock production. In addition, concerns about profitability and return on investment further hesitance. Transitioning from traditional systems often involves significant costs, such as the underutilisation of existing machinery and lost profits during landuse transformation. Moreover, food production within regenerative practices can initially limit access to potential recipients (customers) due to undeveloped distribution channels and the inability to consistently align with consumer expectations or predict market trends. Additional difficulties include limited access to advisory services, knowledge gaps, and insufficient legislative support. The flow of information between producers, scientists and advisers is also inadequate.

 Table 1. Dimensions of regenerative food production

 Tabela 1. Aspekty regeneracyjnej produkcji żywności

Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats
Environmental	nental	Econ	Economic	So	Social
Soil fer	ertility	Stability and ir	Stability and income security	Farmer a	Farmer as an entity
greater resistance to soil erosion	use of non-synthetic pesticides (products containing copper)	generating several streams of income for the farm	financial profitability/ risk/lack of knowledge about benefits	strengthening the position and responsibility of the producer and the power to resist market pressure, climatic threats, political and economic crises	lack of advice, knowledge, social capital
greater water retention		resistance to market volatility and selected negative climate change effects		a sense of control over the farm through management and monitoring	lack of supportive policies/legislation
greater soil load- bearing capacity		building a strong brand		adaptation to any local context: culture, custom, society	unfavourable personal values or lack of experience in environmental programmes in agriculture
greater soil self- regeneration capacity					entry barriers for young people and women
reduction in eutrophication (water quality and quantity)					lack of clear, universal definitions of regenerative agriculture;

Table 1 – cont. **Tabela 1** – cd.

Benefits/Opportunities	s Barriers/Threats	Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats
Enviro	Environmental	Econ	Economic	So	Social
					time-consuming and complicated applications for funding programs; research funds allocated to single crops, not systems
Climate change mitige	Climate change mitigation/climate regulations	Reduction o	Reduction of input costs	Food so	Food sovereignty
reduction of greenhouse-gas emissions including: N ₂ 0 from synthetic fertilisers	carbon storage is highly reduction of costs dependent on soil of artificial fertilise type and can reach and pesticides saturation potential	reduction of costs of artificial fertilisers and pesticides	converting to regenerative practices is difficult and expensive; increased support will be needed for those who want to improve their methods, potentially at the expense of yields	development of local cooperatives	better channels of communication needed between producers, scientists and advisers
increase of carbon sequestration		reduction of veterinary expenses	farmers should be rewarded for their efforts to convert to regenerative practices, not for traditional production;	sustainable availability of food	insufficient policy makers' approach to regenerative agriculture
		reduction of infrastructure costs	the producer lacks the necessary machinery, fencing, or water infrastructure	production and protection of traditional local foods	cheap food narratives

Table 1 – cont. **Tabela 1** – cd.

Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats
Enviro	Environmental	Econ	Economic	Social	ial
			indirect costs of lost production from converted arable land		
			uncertainty about profitability and return on investment		
Sustainable agric	Sustainable agricultural ecosystem	Diversification of	Diversification of income streams	Social ties	l ties
reducing flood risk	agricultural infrastructure or equipment barriers – machinery must manoeuvre around shelter-belts or restored wetlands	exploiting niche markets	the problem of inability to predict market trends and ensure the costs and efficiency of natural fertilisers on a regional basis	development of family and multi-generational agriculture	lack of trusted, experienced mentors and leaders and knowledge sharing among peers
healthy freshwater and marine aquaculture	high degree of variability in organic yields compared to conventional agriculture	diversification of offerings	limited markets or processors available to them	development of social networks related to the exchange of knowledge and experience	uncertain land tenure and succession and farmer demographics (older age – too difficult approach to change)
			personal perception of risk and profitability, personal level of risk tolerance	direct contact between producer and consumer	local inflexibility
					significant time and professional commitment may require changes in family lifestyle

Table 1 – cont. **Tabela 1** – cd.

Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats
Environmental	mental	Economic	omic	Social	ial
Biodiversity-frie	friendly landscape	Reduction of other costs	other costs	Health and soc	Health and social well-being
reduced desertification	the need for evidence-based guidance to implement practices in a holistic, systems-based approach relevant to the prairie agroclimatic context	lower transportation costs using shorter supply chains	certification costs	good health and well-being	problems of complex and unpredictable regulation
greater diversity of habitats and species of plants and animals	lack of efficacy in pest control	minimising the costs of eutrophication		self-efficacy	
protection of wild fisheries resources		regenerative farming systems provide farmers with greater ecosystem services and profitability than high-input production models		value-based decision-making	
protection of pollinators		lower healthcare costs for farm workers			

Table 1 – cont.

Tabela 1 – cd.

	barriers/ Inreats	Benefits/Opportunities	Barriers/Threats	Benefits/Opportunities	Barriers/Threats
Environmental	nental	Economic	ımic	Social	le
Livestock welfare	welfare	Economic development of rural areas	nent of rural areas	Consumer patterns	patterns
the possibility of natural and instinctive behaviour		increased employment in agriculture	lack of impartial agronomic advisers – most are also involved in selling products	quality instead of quantity as added value	
greater immunity and health		reduced outflow of people from agriculture		awareness of the need for a holistic lifestyle	
				high-quality food as an element of preventing overconsumption, thus providing high nutrient value	

Radkowska, Radkowski 2023; Roberts, Hawes, Young 2023; Brown, Schirmer, Upton 2022; Montgomery i in. 2022; Wilson 2022; Hawes, Iannetta, Squire 2021; Lane Radkowska, Radkowski 2023; Roberts, Hawes, Young 2023; Brown, Schirmer, Upton 2022; Montgomery et al. 2022; Wilson 2022; Hawes, Iannetta, Squire 2021; ane 2021; McDonald et al. 2021; Sharma et al. 2021; Gosnell, Grimm, Goldstein 2020; Salomon 2020; Olsson et al. 2022; Piwowar 2019; LaCanne, Lundgren 2018). Barriers/threats – own study based on: (FWWF 2024; Lemke et al. 2024; Möller 2024; Hurley et al. 2023; Gish 2022; Kuhne et al. 2017; Seufert, Ramankutty 2017; źródło: korzyści/szanse – opracowanie własne na podstawie: (AGW 2024; Czapiewska 2024; Möller 2024; Ramkumar i in. 2024; Alexanderson, Luke, Lloyd 2023; 2021; McDonald i in. 2021; Sharma i in. 2021; Gosnell, Grimm, Goldstein 2020; Salomon 2020; Olsson i in. 2022; Piwowar 2019; LaCanne, Lundgren 2018). Bariery/ zagrożenia – opracowanie własne na podstawie: (FWWF 2024; Lemke i in. 2024; Möller 2024; Hurley i in. 2023; Gish 2022; Kuhne i in. 2017; Seufert, Ramankutty Source: benefits/opportunities — own study based on: (AGW 2024; Czapiewska 2024; Möller 2024; Ramkumar et al. 2024; Alexanderson, Luke, Lloyd 2023; 2017; USDA AMS 2015). **USDA AMS 2015).**

According to Leroy et al. (2022a), well-managed livestock farming plays a crucial role in ecosystem management and soil health, while also producing high-quality food. These farms recycle resources by utilising marginal land and inedible materials, such as feeds and by-products, through the integration of livestock farming and crop production. This approach aims to enhance plant food production by improving nutrient recycling, while also minimising the need for external inputs, such as fertilisers and pesticides.

4. Results

4.1. Pilot Study

The guideline for conducting the target interview questionnaire was based on an interview with a farmer from the regeneratywnie.pl farm in January 2024.

4.1.1. General Information about the Person Running the Farm

The respondent is 38 years old and a veterinarian by profession. She has been managing and working on a farm for three years. The farm is made up of three adults and two minor children, with no decisions made regarding additional children due to their young age. The respondent purchased the farm in 2021, which had not been used for the last ten years. At the time of purchase, the farm included a barn from the 1960s, farm buildings from the 1980s, and a residential house in a closed-shell state and six hectares of wasteland.

4.1.2. General Information about the Farm, Including Crop and Livestock Production

The farm is located in the Silesian (Śląskie) Voivodship, in the town of Zawiercie. The farm has the status of a commercial farm. The total area of land is 11 ha (including 6 ha of owned and five ha of leased), including seven ha of agricultural land. The soils are mainly class 5. The owner does not order soil testing for the amount of carbon and soil organic matter. In addition, she does not use herbicides or pesticides. At the time of purchase, the land was overgrown with trees in 20%, shrubs in 25%, grass in 70% and goldenrod in 15%. The main assumption when buying the land was the possibility of intensive rotational grazing of sheep, which naturally fertilises the soil with manure from animal excrement. Currently, seven ha are grazed in a rotational system, one to two days in the grazing season (1 May to 1 December) and one to three weeks in the winter season. Animal production is

mainly focused on sheep breeding (around 70), although chickens (around 30) also play an important role. Animal feeding is based on pasture greens and hay. Animals undergo medical and veterinary procedures, mainly castration of lambs, which takes place in the tenth week of their life. The farm does not have extensive machinery. The owner has her own trailer. In addition, she rents necessary agricultural services.

4.1.3. Finance

The farm is supported by 60% of its income from agricultural activities and 40% from renting and leasing real estate. In addition, the owner runs a publishing house as a non-agricultural activity. The driving force behind this decision was primarily the lack of subject literature on regenerative agriculture published in Polish. Hence, the activities related to the translation of two books by Joel Salatin: *You Can Farm: How to Set Up and Run a Profitable Farm* and *A Profitable Farm: Production, Profits, Pleasure.* A few years earlier, the owner came across a TED lecture by Allan Savory, which she remembered very well. It turned the entire knowledge of the respondent upside down, and in such a way that the action of nature suddenly made sense. When analysing the revenues and expenses for 2023 compared to 2022, a positive financial result is expected.

The main source of costs was external services and land leases. The sources of investment financing used in running the farm came from own funds, spent in the first year of operation (2021) on the purchase of land and continued purchase of animals, fencing of the area, and purchase of necessary agricultural equipment in the years 2021–2023. The primary motives for investment activities are: reducing production costs, increasing income, expanding production scale, and protecting the natural environment. In 2024, the owner plans to continue investment activities related to the continuation of fencing of areas, purchase of an agricultural quad, and development of agricultural retail trade, including meat sales. The respondent assesses the financial situation of the farm in 2024 as very good, due to the increase in profits compared to 2023.

4.1.4. Measures of Success: Subjective Approach

When asked, "What do you like about regenerative agriculture?" the respondent indicated: "The type of work in this agricultural system is very satisfying. It is mainly based on outdoor work, without the presence of heavy machinery, and the effects of proper management, without the use of artificial products (such as pesticides/fertilisers), are quickly visible. Additionally, this is cheap farming to start - we have to invest mainly in good fences and animals, without having to build expensive

buildings and machines". On the other hand, among the main barriers to running a regenerative farm, she identified a lack of access to knowledge in Polish, small genetic resources of animals adapted to this breeding method, and a focus on direct sales, which is related to obtaining knowledge about marketing and reaching customers. Among the key activities that the respondent would like to implement in 2024, the following should be noted: continuation of fencing for grazing areas, introduction of a mobile hen house, and development of agricultural retail, including the sale of meat, eggs, and chicks. As part of the introduction of changes in the development of the land on the farm, she plans activities related to adapting wasteland, without altering the development, planting trees useful to people and animals, and reducing the number of pioneer trees and shrubs, such as pine, hawthorn, and birch.

As part of the five-year plan for changes to the farm, the owner plans to devote her time to increasing income, continuing her active involvement in raising public awareness of why it is worth running a regenerative farm, and maintaining her lifestyle, including partially treating work on the farm as a form of spending free time.

According to the owner, the meaning of being a successful farmer is defined as: "Such a farmer is a person who earns decent money from his work, and his customers are satisfied with the quality of the products received. This is difficult to achieve in conventional agriculture because 'decent income' is reduced by the necessary investment loans. A successful farmer is also a farmer who feels secure, which is related to the diversification of income and independence from purchasers/intermediaries who dictate prices". Among the goals and aspirations, the owner emphasised that the following are important: increasing financial results, taking care of the land and resources she manages, and improving the genetic quality of the animals under her care, specifically by selecting for resistance to weather conditions, productivity, and the avoidance of treatment. To summarise the strengths and weaknesses, opportunities and threats of running a regenerative farm, as perceived by the owner, the proposed elements were incorporated into the SWOT analysis (Table 2).

According to the respondent's statement regarding food, customers are unable to find producers of high-quality meat and animal products, such as grass-fed and pasture-raised meat. Health value is key. Customers are therefore willing to pay for tasty food with a high nutritional value. Another advantage of food within regenerative practices is its use for hypersensitive children and those with allergies. After eating pasture eggs, they do not show allergic symptoms. A certain inconvenience is the seasonal availability of products. To produce the highest quality lamb, it must be available for only a few weeks in the autumn. Among consumers, the respondent indicates a significant group living in larger cities and/or people who are nutritionally aware and interested in healthy food. Customers buy directly from

Table 2. SWOT analysis of the pilot farm

Tabela 2. Analiza SWOT gospodarstwa pilotażowego

Strengths	Weaknesses
Low-capital-intensive start-up and running a farm	A form of management for small and medium- sized farms
No credit	A form of management rather for new farms
Increasing soil productivity without financial investments	than those with many years of experience, which already have the necessary infrastructure, which is expensive to maintain
Satisfactory profits	•
Financial security	Direct sales may be a challenge for some farmers
Opportunities	Threats
Use of conventionally useless soils – slopes, class	Local wolves
6 soils	
A large niche in the high-quality food market	Legal restrictions on keeping animals outdoors

Source: own study based on the questionnaire. Źródło: opracowanie własne na podstawie ankiety.

the farm and online. A direct relationship with the opportunity to see the farm/talk about food and its production leads to the formation of a bond between the buyer and the seller. Alternative agricultural methods that have a positive impact on the environment and biodiversity are a frequent topic of conversation. Knowledge transfer occurs mainly through education. Hence the respondent's activity in giving interviews and presentations in environments interested in healthy food, activities in social media, groups, and forums related to regenerative agriculture and healthy food and "keto" nutrition.

4.2. Target Case Study

4.2.1. General Information about the Person Running the Farm

The respondent is 50 years old and holds an education in telecommunications. He has been managing and working on the farm, which he set up from scratch with his family, for almost ten years. The farm household comprises five adults and one minor. The average working time at the farm is four hours daily for one person in winter and about five hours daily for two people during the growing season. One of the family members will continue running the farm in the future. The farmer's passion for regenerative agriculture stems from the awareness and desire to consume high-quality products, by taking care of soil health and animal welfare, and the implementation of regenerative food production is possible thanks

to the knowledge acquired based on the experience of specialists such as Salatin (2017, 1998), Perkins (2020), Savory and Butterfield (2016).

4.2.2. General Information about the Farm, Including Crop and Livestock Production

The farm is located in Lubuskie Voivodeship, Nowa Sól County, Otyń Municipality, Ługi Village (Figure 1). It is a commercial farm. The overall land area is 18 ha (including 16.5 ha owned by the farmer and 1.5 ha under lease), of which 17.5 ha is farmland. The soil being farmed is mainly class IV–VI. The owner does not use calcium and chalk. As part of his fertilisation policy, which involves improving the soil, he uses manure from livestock bred on the farm, in the amount of 150 tonnes per 4 ha, once a year (in November). The farm owner does not usually order soil valuations. Nevertheless, in June 2022, the Terra Nostra Foundation conducted an extensive survey of the soil under the EIT Food programme, called Regenerative Revolution in Agriculture, to determine the amount of micro- and macro-elements in the soil and recommend further fertilisation measures.



Figure 1. Location of the Lubuskie Angusowo regenerative farm in the background in Poland and Europe

Rysunek 1. Lokalizacja gospodarstwa Lubuskie Angusowo na tle Polski i Europy

Source: own study.

Źródło: opracowanie własne.

The main land area on the farm is occupied by pastures, where controlled grazing is practised (Teague, Kreuter 2020). In the winter season, the owner switches to bale grazing; after the winter period, annual plants are sown to produce biomass for feeding large ruminants. Over the last three years (2022–2024), a mixture of annual plants was grown on 1.5 ha. Regarding livestock production, the number of animals fluctuated depending on birth results and the sale of calves/weanlings as well as slaughter (Table 3).

Livestock production is concentrated mainly on raising hens and broiler chickens, although a significant role is also played by beef cattle, and in the years 2023–2024, Mangalica pigs (Table 3). The livestock receive veterinary care, mainly deworming, every three to four years. Regarding farming equipment, the farm's owner has a 30-year-old trailer, a 20-year-old delivery van, and a 40-year-old loader. At the same time, he outsources agricultural services when needed.

Table 3. Number of animals in the studied farm Lubuskie Angusowo (2022–2024)

Number of animals	06/2022	12/2022	06/2023	12/2023	03/2024
Beef cattle	61	42	67	40	39
Dairy cattle	2	2	2	2	2
Mangalica pigs	15	21	19	34	34
Goats	23	23	21	20	18
Hens	250	180	200	150	110
Broiler chickens	Annual prod	uction 1 930	Annual nrod	uction 2 283	Planned 3 100

Tabela 3. Liczba zwierząt w badanym gospodarstwie Lubuskie Angusowo (2022–2024)

Source: own study based on the survey questionnaire. Źródło: opracowanie własne na podstawie ankiety.

4.2.3. Farmer's Independent Observations of the Quality of the Pasture Sward Using Appropriate Methods of Soil Profile Regeneration

Grazing systems are common worldwide, dominating key meat-producing countries (e.g. Brazil, China, New Zealand, and the USA). They provide 50% of global meat production and 90% of milk (Gerbens-Leenes, Mekonnen, Hoekstra 2013). Grazing systems, whether mixed or not, are also key production systems in countries of the global South (Leroy et al. 2022b). In Poland, there are a small number of livestock farms practising regenerative agriculture.

Lubuskie Angusowo mainly manages pastures and animal movement on pastures, taking into account regenerative food production while focusing on the construction of the soil profile – i.e. increasing the resources of organic matter in the soil. The methods used on the farm include rotational grazing of ruminants during the growing season on permanent pastures, quartered poultry farming: layers and broilers, and bale grazing – an element shaping the ecosystem services of grasslands (Hawes, Iannetta, Squire 2021) outside the growing season together with sowing annual plants in the residues left after bale grazing, composting residues from the runs of goats, pigs and bulls remaining in separation during the winter season. Currently, 17.5 ha are used for rotational grazing. Beef cattle change pastures every 12 hours during the growing season, and dairy cattle every three to four days. In winter, Red Angus cattle graze on a pasture for bale grazing, which consists of five bales for two days, while hens are moved depending on the weather, on average every seven to 15 days (in summer every four to five days). The livestock feed is based on pasture greens in the summer season and hay and straw in the winterspring season (from December to April, 550 bales, 150 cm). Throughout the year, the animals' diet is supplemented with various cereals (approx. 20 tonnes per year).

The farm places great emphasis on its own, independent observations of the quality of the pasture sward after applying appropriate methods of soil profile regeneration in the area of three distinct zones:

- The first zone is based on rotational grazing of all types of animals that can be kept in pasture conditions (area of about 3.5 ha). These animals include: a herd of Red Angus beef cattle in the amount of about 70 head in the growing season, two dairy cows with two calves, a herd of 17 goats, a pasture broiler herd six "throws" of about 600 head, and laying hens, about 200 head. The farmers appropriately manage the movement of animals on the pasture. For example, poultry can stay only once per season in a given place on the pasture, while the herd of Angus stays for about three weeks. Goats and dairy cows have constant access to the pasture. The farmer's observations indicate that in the first zone, the pasture turf is becoming increasingly dense. It is primarily composed of two types of plants: various types of grass and white clover. Clover is spreading very widely, reaching up to 70% of the ground surface. This is due to the poultry arriving at the pasture. A natural symbiosis was observed, where poultry prefers clover leaves, while poultry droppings have a beneficial effect on clover growth (Photos 1–3).
- The second zone is based on rotational grazing of a herd of Red Angus cattle during the growing season, numbering about 70 head and bale grazing outside the growing season with a reduced herd of 35 head (area of approx. six ha). During the growing season, quarter grazing is practised, where each quarter provides a suitable food ration for the entire herd over 12 hours. Outside the growing season, the Angus herd is fed in a bale grazing system, using five bales of hay and straw every two days on average, around 70% hay and 30% straw during the season. After the bale-grazing season, annual plant seeds are sown to build







Photos 1–3. Zone one – poultry grazing quarters

Fotografie 1–3. Strefa pierwsza – kwatery wypasu drobiu

Source: photos by T. Jakiel. Źródło: fot. T. Jakiel.

> biomass, which the farmer can use for grazing the Angus herd during the growing season. As a result of the decomposition of residues from bale grazing and the remaining biomass of root systems, the soil profile is built up very quickly, and the humus level increases. The humus content achieved by the farmer was 5.31% at a depth of 30 cm, as demonstrated by research conducted by the Terra Nostra Foundation. An appropriate soil profile and increased organic matter in the form of humus can contribute to the resilience of agricultural ecosystems to climate change. The pasture in zone two is more resistant to drought but has a lower degree of turfing compared to zone one. Moreover, with sufficient annual rainfall - a minimum of 200 mm during the growing season, and rainfall occurring at least every two weeks - the pasture is capable of producing large amounts of biomass. Two years after the conclusion of bale grazing, the pasture sward became very diverse, featuring various types of grass, clover (white and pink), knotweed, vetch, and numerous flowers, including cornflowers. Thanks to the use of bale grazing, the common rush, which has been a significant nuisance in the commune, has also significantly receded (Photos 4–11).

– Zone three is exclusively dedicated to rotational grazing of the Red Angus cattle herd during the growing season, with the soil enriched by compost after grazing is completed and applied before the winter season (covering an area of approx. four ha). In this zone, a diverse pasture sward can be observed, characterised by a significant presence of white and pink clover (approx. 30%) and abundant biomass. Angus cattle, grazing in designated quarters, remain in this zone for up to 50 days. Over time, the density of the pasture sward increases (Photos 12–15).





Photos 4–5. Zone two – Angus grazing in the vegetation season **Fotografie 4–5.** Strefa druga – wypas bydła rasy Angus w sezonie wegetacyjnym

Source: photos by T. Jakiel. Źródło: fot. T. Jakiel.









Photos 6–9. Zone two – bale grazing (providing bales of hay and straw outdoors) of Angus cattle outside the growing season

Fotografie 6–9. Strefa druga – wypas typu *bale grazing* (udostępnianie bel siana i słomy pod gołym niebem) bydła rasy Angus poza sezonem wegetacyjnym

Source: photos by T. Jakiel. Źródło: fot. T. Jakiel.

It is important to highlight that the methods outlined help sustain a vital chain of interdependencies (Figure 2): 1) farmers ensure proper soil nutrition; 2) well-nourished soil supports plant health; 3) healthy plants provide nutritious feed for animals; and 4) well-fed animals produce high-quality food.

Food production and agricultural production rely on multiple factors, including environmental, economic and cultural conditions or agricultural practices. However, one of the primary challenges remains the condition, properties, quality, and health of the soils used for growing food crops (EASAC 2018). According to Albrecht's method of approaching soil fertility, the nutrient ratios of calcium,



Photos 10–11. Zone two – Angus grazing on annual plants in the first season after bale grazing

Fotografie 10–11. Strefa druga – Angus wypasany na roślinach jednorocznych w pierwszym sezonie po wypasie typu *bale grazing*

Source: photos by T. Jakiel. Źródło: fot. T. Jakiel.



Photos 12–15. Zone three – rotational grazing of Angus cattle during the growing season

Fotografie 12–15. Strefa trzecia – wypas rotacyjny bydła rasy Angus w okresie wegetacyjnym

Source: photos by T. Jakiel. Źródło: fot. T. Jakiel.

magnesium, and potassium in the soil are crucial (Hurley et al. 2023). Albrecht emphasised the decrease in soil quality resulting from a lack of organic material, major nutrients, and trace elements, which consequently translates into low yields and pathological conditions in animals fed deficient food from inanimate soils (Hurley et al. 2023). Möller (2024) outlined six steps for implementing regenerative

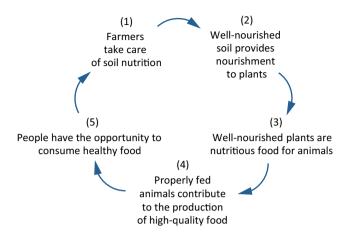


Figure 2. Chain of custody in food production using regenerative practices **Rysunek 2.** Łańcuch dostaw w produkcji żywności z wykorzystaniem praktyk regeneracyjnych

Source: own study based on an interview questionnaire. Źródło: opracowanie własne na podstawie ankiety.

agricultural practices: 1) fertilise according to Albrecht's soil analysis; 2) maintain constant soil cover with mixed crops, catch crops, and under-sown crops; 3) nourish the soil with vegetation (surface rot); 4) conduct putrefactive processes (effective microorganisms for surface rotting); 5) "revitalise" crops and keep them healthy (use of ferments, e.g. compost tea); 6) practice deep loosening. However, for step 4, Möller (2024) noted that there was no significant impact on yields, nitrate leaching risk, or humus content. Similarly, for step 5, there was no measurable improvement in crop health, yields, or soil quality.

However, according to the owner of Lubuskie Angusowo, the Albrecht method has not been fully implemented, as it does not account for animal production within the cycle (Figure 2). Integrating animal production and the social aspect into the chain of dependencies is therefore innovative for farms specialising in regenerative practices.

4.2.4. Finance

Currently, 40% of the farm's income is derived from agricultural activity, while 60% is generated from non-agricultural economic activities. The farmer plans to change the proportion in the near future. This shift is attributed to the growing involvement of the entire family, including daughters and their husbands,

in agricultural activities. Currently, the oldest daughter and her family derive 80% of their income from the father's farm. In comparison, the income of the middle daughter accounts for approx. 50–60% of her total revenue from the father's farm.

An analysis of income in 2022 and 2023 compared to 2021 shows a positive financial result of 75% and 143% respectively. However, the purchase of grain, feed, and hay constituted a significant portion of total expenses, accounting for 45% in 2022 and 41% in 2023. This significantly contributed to the lower-than-expected profit (Table 4). The source of financing for the investments needed

Table 4. Revenue and spending in the studied farm Lubuskie Angusowo (2021–2023; in %)

Tabela 4. Dochody i wydatki w badanym gospodarstwie Lubuskie Angusowo (2021–2023; w %)

Revenue	2021	2022	2023
Sale of Angus weanlings	45.61	32.81	32.41
Sale of Mangalica pigs	6.39	1.52	6.65
Sale of chicken carcasses	5.45	39.33	38.86
Sale of other livestock: rabbits, goats	0.71	0.09	0.20
Sale of eggs	17.35	10.44	9.84
Area subsidies, animal welfare payments, and LFA subsidies	23.33	14.92	10.92
Fuel excise tax refunds	1.15	0.90	1.13
Total	2021 = 100	75	143
Spending	2021	2022	2023
Purchase of livestock: laying hens, broiler chickens, Angus cattle	16.61	15.99	15.25
Purchase of cereals, feed and feed additives	40.77	27.72	23.09
Purchase of hay	16.66	17.69	18.14
Purchase of consumables (including fuel, oil, tyres)	15.13	8.04	10.15
Purchase of a feed grinder	0	0.62	0.76
Investment in fencing/electric fences	5.05	0.54	0.47
Investment in a chicken tractor	0	6.58	5.42
Veterinary costs	1.78	0.15	0.58
Slaughter	1.63	2.04	0.51
Mineral licks for livestock + Ems	2.38	1.15	0.85
Outsourced services: manure spreading	0	0.96	0.91
Costs of hiring a worker for the pastured-chicken system	0	18.52	23.86
Total	2021 = 100	169	208
Balance (Revenue – Spending)	2021 = 100	-10	84

Source: own study based on the survey questionnaire.

Źródło: opracowanie własne na podstawie ankiety.

to run the farm was the farm's resources, which were spent mainly on livestock and infrastructure, including a tractor for transporting and grazing broiler chickens. The primary reasons for these investments were to reduce production costs, increase farm income, scale up production, and streamline various tasks, thereby enhancing the farm's overall efficiency. In 2024, the owner plans to continue investments to modernise the broiler-chicken grazing system, i.e. replacing the roof of the tractor used for transporting chickens with a metal one; relocating and improving access to feed rooms for goats and dairy cows, replacing part of the pigsty fence, upgrading the feed table in the bullpen, reorganising the electric fencing system, and enhancing the working conditions at the chicken slaughterhouse.

Regarding the farm's current financial condition, the owner considers it neither good nor bad, although the balance improved by 84% between 2021 and 2023. The owner does not maintain formal annual financial statements but prepares a yearly balance sheet of revenue and costs for personal use to assess the farm's profitability.

4.2.5. Measures of Success: Subjective Approach

A subjective approach refers to examining issues from an individual perspective, shaped by personal beliefs, views, and feelings. In other words, it is a particular approach where the perspective is determined by the person examining the issue. The success of an enterprise is reflected in the satisfaction levels of all its key stakeholders. All stakeholders in an enterprise aim to achieve success. Empirical studies (Shenhar, Levy, Dvir 1997) identify four dimensions of enterprise success: 1) project efficiency, 2) customer impact, 3) direct business benefits to the organisation or producer, and 4) fostering new future opportunities.

To understand the measures of success from the respondent's subjective approach, several questions were posed: What do you like about regenerative agriculture? Why did you decide to pursue this type of management? What was the motivator? What are the barriers to running a regenerative farm? What should farmers who want to start regenerative production pay attention to? Additionally, questions were asked about planned changes to the farm.

When asked what the farmer liked about regenerative agriculture, the respondent replied that it was the only solution for running a low-cost farm. He explained that there is currently a very narrow margin for decision-making on product prices, while it is possible to reduce production costs. In the equation where profit equals revenue minus costs, only two variables can be changed: revenue and expenses. While revenue can only be adjusted slightly, there are more options for reducing costs, such as not using synthetic or mineral fertilisers. The solution is farming focused

exclusively on rebuilding the soil profile using methods such as controlled grazing, sowing annual plants, and bale grazing. In this approach, soil quality improves over time, which, with favourable water conditions (i.e. no drought), ultimately allows for increased biomass production without expanding the farmed land area. As a result of these activities, the livestock grazing period is extended, allowing the regenerative farm to make significant savings by reducing winter feed costs.

The farmer inquired about the barriers to running a regenerative farm and offered suggestions for farmers considering launching regenerative production. The respondent noted that livestock grazing on pastures requires a lot of self-activity from farmers, including education, understanding the principles of this system, and perseverance in applying them. The effects of their work will only become noticeable after a few years. Self-activity requires patience from regenerative farmers. Today, it is only possible for farmers to effectively make money on agricultural products if production, acquisition of resources and distribution with final sales are done by the farmers themselves. Regenerative agriculture is not just about producing highquality products; it also requires effective marketing and sales strategies. These last activities are a great problem for most farmers, who are more focused on production and are willing to cooperate with middlemen, who often profit more than the producers from such an arrangement. Regenerative agriculture is a great opportunity for small farms, which can promote products that are healthy and of great nutritional value. The biggest barrier is the lack of awareness of the need to produce nutritious food, as well as the fear associated with taking responsibility for all the stages involved, from production to selling to the end consumer. According to the respondent, regenerative agriculture means biodiverse agriculture, focused on livestock breeding and raising, with a relatively high return on investment and satisfactory profit. However, one of the key obstacles is the legislative framework governing market access for such products. For instance, there are no regulations that allow livestock farmers to slaughter animals on-site at the farm of origin - what is known as a "pasture farm slaughtering" - which presents a significant barrier. Additionally, producing the highest quality beef requires 30 months of care, ensuring comprehensive animal welfare, including natural feed during winter, biodiverse pastures in the growing season, and stress-free conditions within the herd, where the animals feel completely safe.

The key activities that the respondent would like to pursue in future include increasing the number of livestock, specifically pastured broiler chickens, and further developing his operations by expanding his sales market to boost product demand and raise prices.

Under a five-year plan for changes at the farm, the owner plans several activities. These include increasing revenue, actively engaging in raising awareness about

why it is worth running a regenerative farm, and continuing his nature-based lifestyle while maintaining a balance between work and leisure. All of these elements contribute to a trend of regenerating the farm's resources, including the regeneration of the farmer himself.

According to the farm's owner, the meaning of being a successful farmer is defined as "a state in which we are pleased with and proud of our achievements." However, there is no single definition of success – there are many different ones. Among them are: building a connection with the end customer, who is happy to buy the products while willingly paying more than the market price; receiving expressions of satisfaction from customers pleased to have the opportunity to purchase local products directly from the regenerative farmer/breeder; customers queuing or signing up for a waiting list to buy the products; farmers eager to participate in courses teaching them how to run a regenerative farm; and the contentment of the animals, which live happily and reproduce in the comfortable, stress-free conditions created for them.

Among his goals and aspirations, the farm's owner emphasised the importance of taking care of the land and the resources under his management, as well as maintaining good relations with the people he cooperated with. In the near future, the respondent plans to expand his non-agricultural economic activity to include courses, traineeships and study visits for a wider group of people.

To summarise the farm owner's perception of the strengths and weaknesses, as well as the opportunities and threats involved in running a regenerative farm, the proposed elements were incorporated into a SWOT analysis (Table 5).

Among the strengths related to biodiversity and product recognition, the respondent indicated that the history of the product, its quality, exclusivity, uniqueness, and availability are important to customers. Products are available seasonally because they are not mass-produced. In this case, free-range hens or freerange eggs are not available year-round. The solution is therefore to vacuum-pack selected products and store them in freezers, where they retain their nutritional value. This type of solution suits customers. Customers buy locally 70%. This group includes people who buy Lubuskie Angusowo products at local agricultural markets. For mobile customers, a collection point for ordered products was created under the name "Zakątek Lubuskie Angusowo" (Lubuskie Angus Farm Corner), located on the farmer's property. There is a visible increasing trend of online purchases. Building a customer database and sending them information via text messages about purchase options supports the sales plan. Additionally, pre-orders (gift options for chicken vouchers) tailored to customers' preferences are convenient for maintaining revenue streams. Moreover, thanks to Lubuskie Angus Farm Corner, there is no need to rent warehouse space or hire employees because sales are based

Table 5. SWOT analysis of the studied farm Lubuskie Angusowo

Tabela 5. Analiza SWOT badanego gospodarstwa rolnego Lubuskie Angusowo

Strengths	Weaknesses
Building a good soil profile	Buying winter feed for livestock on the market
Building a strong brand	Instability of prices, especially for fuel
Product recognition on the market	The necessity to commute daily to the farm
Biodiversity of products and the ability to sell them	Legal and infrastructure restrictions
Generating several revenue streams to the farm Knowledge, experience, family business and still a	a niche market
Opportunities	Threats
Expanding the sales channels for the products	Temporary unavailability of fuels could make the farm difficult to access
Expanding the educational base offered by the farm in the form of courses	Old equipment and its failure rate
Limited agritourism	Illness among the team members

Source: own study based on the survey questionnaire. Źródło: opracowanie własne na podstawie ankiety.

on the collection of goods from the "parcel locker". The key resource that the farmer is proud of is the value proposition, which encompasses knowledge, experience, the family nature of the project, and niche activities in the country (Kim, Mauborgne 2015). To reach a wider group of interested customers and establish partnerships with them, Lubuskie Angusowo utilises social media, specifically YouTube and Facebook, and shares videos from participation in conferences, seminars, and study visits. Similar educational practices are implemented worldwide (Investing in Regenerative Agriculture and Food 2024).

The findings from the interview questionnaire suggest that there are opportunities for developing regenerative practices in Poland. For regenerative agriculture to grow, it is crucial not only to have government support but also to invest in knowledge transfer and foster cooperation between farmers with shared interests at local, regional, national and international levels. This year, the owner of the farm organised two highly attended workshops titled "How to become a regenerative farmer", attracting interest from potential regenerative farmers, consumers and scientists. Given the challenge of lacking a database of farmers implementing regenerative practices in Poland, the author plans to continue researching regenerative practices implemented among farms specialising in animal production. Financial resources are needed to conduct research, hence project plans that can enable its implementation.

5. Conclusions

This study aimed to identify the motivations behind managing within the framework of regenerative practices implemented and to assess the measures of success from the owner's perspective at the Lubuskie Angusowo farm. To address this aim, three questions and research hypotheses were formulated.

In the owner's view, the primary motivator for running a regenerative farm is the low level of maintenance costs. These outcomes, among others, stem from regenerative methods that do not require expensive fertilisation or the use of plant protection products. The respondent emphasised the importance of soil quality, highlighting methods such as controlled grazing, sowing annual plants, and bale grazing. As a result, well-nourished soil directly influences the quality of food produced, which is a secondary motivation. Based on this, the first research hypothesis is only partially supported, as the respondents' responses highlighted economic well-being first, followed by social well-being, such as quality of life or human health.

In response to the second research question - whether there are more opportunities or limitations in food production with regenerative practices - it is worth noting that this depends on where the meat is produced. Regenerative practices are not as well recognised in Poland as they are in countries such as New Zealand or the USA. They should not be viewed as competing with traditional farming methods but rather as complementary practices for a niche group of farmers. When analysing the opportunities and challenges based on the subject literature, we encounter numerous environmental, economic, and social arguments on both sides. Depending on the context, they are both a support and a hindrance. Based on the experience of the owner of Lubuskie Angusowo, implementing regenerative practices requires significant personal effort in terms of education, understanding the system's principles and perseverance in their application. The results of these practices are noticeable only after several years. According to the respondent, regenerative agriculture involves biodiverse farming focused on breeding and raising farm animals, offering a relatively high rate of return on investment and satisfactory profits. However, a major limitation is the legal framework surrounding the introduction of products to the market. There are also no regulations that allow animal farmers to slaughter animals on a "pasture farm". The most significant barrier, however, is the lack of awareness regarding the need to produce healthy food, along with the fear associated with the risk of taking responsibility for all stages from production to sale to the final consumer. We therefore accept the second hypothesis that food production as part of regenerative practices has both supporters and opponents.

To answer the third research question, the third hypothesis should be accepted: that the increased interest in regenerative methods in food production primarily results from the desire to share knowledge and experience, which contributes to increasing awareness among practitioners and consumers. The respondent's involvement in scientific conferences, workshops, and social media serves as evidence of his commitment to the implementation of regenerative practices and the production of food using these methods.

References

- AGW (A Greener World). (2024). *Certified Regenerative by AGW Standards*. A Greener World, Terrebonne, OR. https://agreenerworld.org/certifications/certified-regenerative/certified-regenerative/standards/ (access: 16th August 2024).
- Alexanderson M.S., Luke H., Lloyd D.J. (2023). Regenerative farming as climate action. *Journal of Environmental Management*, 347(1), 119063. DOI:10.1016/j. jenvman.2023.119063.
- BNP Paribas Bank Polska S.A. (2023). Brakuje wiedzy na temat rolnictwa regeneracyjnego. *Agronomist*, 24.04. https://agronomist.pl/artykuly/brakuje-wiedzy-na-temat-rolnictwa-regeneratywnego (access: 16th December 2024).
- Brown K., Schirmer J., Upton P. (2022). Can regenerative agriculture support successful adaptation to climate change and improved landscape health through building farmer self-efficacy and wellbeing? *Current Research in Environmental Sustainability*, 4, 100170. DOI:10.1016/j.crsust.2022.100170.
- Czajkowski M., Zagórska K., Letki N., Tryjanowski P., Wąs A. (2021). Drivers of farmers' willingness to adopt extensive farming practices in a globally important bird area. *Land Use Policy*, *107*, 104223. DOI:10.1016/j.landusepol.2019.104223.
- Czapiewska G. (2024). Rolnictwo węglowe i ochrona gleb w reformowanej polityce rolnej Unii Europejskiej (WPR 2023–2027). *Rozwój Regionalny i Polityka Regionalna*, 18(69), 73–91. DOI:10.14746/rrpr.2024.69.06.
- De Olde E.M., Bokkers E.A.M., De Boer I.J.M. (2017). The choice of the sustainability assessment tool matters: Differences in thematic scope and assessment results. *Ecological Economics*, 136, 77–85. DOI:10.1016/j.ecolecon.2017.02.015.
- EASAC (European Academies' Science Advisory Council). (2022). Regenerative Agriculture in Europe: A Critical Analysis of Contributions to European Union Farm to Fork and Biodiversity Strategies. EASAC policy report 44. Halle (Saale): German National Academy of Sciences Leopoldina. https://easac.eu/fileadmin/PDF_s/reports_statements/Regenerative_Agriculture/EASAC_RegAgri_Web_290422.pdf (access: 16th September 2024).
- EASAC (European Academies' Science Advisory Council). (2018). Opportunities for Soil Sustainability in Europe. EASAC policy report 36. Halle (Saale): German National Academy of Sciences Leopoldina. https://easac.eu/fileadmin/PDF_s/reports_statements/EASAC_Soils_complete_Web-ready_210918.pdf (access: 16th December 2024).

- EC (European Commission). (2020a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, EU Biodiversity Strategy for 2030, Bringing nature back into our lives. COM(2020) 380 final. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:52020DC0380 (access: 16th September 2024).
- EC (European Commission). (2020b). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52020DC0381 (access: 16th September 2024).
- Frąc M., Matyka M., Rozbicki J., Tryjanowski P. (2022). Rolnictwo regeneracyjne koncepcja zrównoważonej produkcji żywności oraz poprawy agroekosystemów. *Nauka*, *4*, 155–164. DOI:10.24425/nauka.2022.142927.
- FWWF (Food Water Wellness Foundation). (2024). *Producer Perspectives on Barriers to Adoption of Regenerative Agriculture in the Canadian Prairies*. Nature United, Food Water Wellness Foundation. May 2, 2024 final. https://www.natureunited.ca/content/dam/tnc/nature/en/documents/Barriers-to-Adoption-Report.pdf (access: 16th December 2024).
- Gerbens-Leenes P.W., Mekonnen M.M., Hoekstra A.Y. (2013). The water footprint of poultry, pork and beef: A comparative study in different countries and production systems. *Water Resources and Industry*, 1–2, 25–36. DOI:10.1016/j.wri.2013.03.001.
- Giller K.E., Hijbeek R., Andersson J., Sumberg J. (2021). Regenerative agriculture: An agronomic perspective. *Outlook on Agriculture*, 50(1), 13–25. DOI:10.1177/0030727021998063.
- Gish S. (2022). Drivers and barriers of the transition to regenerative agriculture within the EU's Common Agricultural Policy Reform: Comparative analysis with the US Farm Bill. Independent Study Project (ISP) Collection, 3442. https://digitalcollections.sit.edu/isp_collection/3442 (access: 16th September 2024).
- Gosnell H., Gill N., Voyer M. (2019). Transformational adaptation on the farm: Processes of change and persistence in transitions to 'climate-smart' regenerative agriculture. *Global Environmental Change*, *59*, 101965. DOI:10.1016/j.gloenvcha.2019.101965.
- Gosnell H., Grimm K., Goldstein B.E. (2020). A half-century of holistic management: What does the evidence reveal? *Agriculture and Human Values*, *37*, 849–867. DOI:10.1007/s10460-020-10016-w.
- Grzegorczyk W. (2015). Studium przypadku jako metoda badawcza i dydaktyczna w naukach o zarządzaniu. In: W. Grzegorczyk (ed.). *Wybrane problemy zarządzania i finansów. Studia przypadków* (pp. 9–16). Łódź: Wydawnictwo Uniwersytetu Łódzkiego. https://dspace.uni.lodz.pl/xmlui/bitstream/handle/11089/14266/2-009_016-Grzegorczyk.pdf?sequence=1&isAllowed=y (access: 16th August 2024).
- Harwood R.R. (1985). Enough Food: Achieving Food Security Through Regenerative Agriculture. Emmaus, PA: Rodale Institute.
- Hawes C., Iannetta P.P.M., Squire G.R. (2021). Agroecological practices for whole-system sustainability. *CABI Reviews*, *16*(005). DOI:10.1079/PAVSNNR202116005.

- Howarth S., Tozer K., Bromham A., Garland B. (2022). *Regenerative Agriculture Value Proposition: Prepared for Our Land and Water*. Hamilton: AgFirst. https://ourlandandwater.nz/wp-content/uploads/2022/12/Regenerative-Agriculture-Value-Proposition-FINAL.pdf (access: 16th December 2024).
- Hurley P.D., Rose D.C., Burgess P.J., Staley J.T. (2023). Barriers and Enablers to Uptake of Agroecological and Regenerative Practices, and Stakeholder Views towards 'Living Labs': Report from the "Evaluating the productivity, environmental sustainability and wider impacts of agroecological compared to conventional farming systems" Project SCF0321 for DEFRA. 20 February 2023, Cranfield University and UK Centre for Ecology and Hydrology. https://nora.nerc.ac.uk/id/eprint/536608/1/N536608CR.pdf (access: 16th December 2024).
- Investing in Regenerative Agriculture and Food (2024). YouTube. https://www.youtube.com/channel/UCc5CGmbdDid6bKoVpMeFZPQ (access: 16th December 2024).
- Kim W.C., Mauborgne R. (2015). *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Boston MA: Harvard Business Review.
- Krusinski L., Maciel I.C.F., Van Vliet S., Ahsin M., Lu G., Rowntree J.E., Fenton J.I. (2023). Measuring the phytochemical richness of meat: Effects of grass/grain finishing systems and grapeseed extract supplementation on the fatty acid and phytochemical content of beef. *Foods*, *12*(19), 3547. DOI:10.3390/foods12193547.
- Kuhne S., Roßberg D., Rohrig P., Von Mering F., Weihrauch F., Kanthak S., Kienzle J., Patzwahl W., Reiners E., Gitzel J. (2017). The use of copper pesticides in Germany and the search for minimization and replacement strategies. *Organic Farming*, *3*(1), 66–75. DOI:10.12924/of2017.03010066.
- LaCanne C.E., Lundgren J.G. (2018). Regenerative agriculture: Merging farming and natural resource conservation profitably. *PeerJ*, 26(6), e4428. DOI:10.7717/peerj.4428.
- Lane A. (2021). The regenerative revolution in food. BBC, 21 October. https://www.bbc.com/future/article/20211020-carbon-farming-a-better-use-for-half-earths-land (access: 16th August 2024).
- Lemke S., Smith N., Thiim C., Stump K. (2024). Drivers and barriers to adoption of regenerative agriculture: Cases studies on lessons learned from organic. *International Journal of Agricultural Sustainability*, 22(1), 2324216. DOI:10.1080/14735903.2024.2324216.
- Leroy F., Abraini F., Beal T., Dominguez-Salas P., Gregorini P., Manzano P., Rowntree J., Van Vliet S. (2022a). Animal board invited review: Animal source foods in healthy, sustainable, and ethical diets An argument against drastic limitation of livestock in the food system. *Animal*, *16*(3), 100457. DOI:10.1016/j.animal.2022.100457.
- Leroy F., Abraini F., Beal T., Dominguez-Salas P., Gregorini P., Manzano P., Rowntree J., Van Vliet S. (2022b). Transformation of animal agriculture should be evidence-driven and respectful of livestock's benefits and contextual aspects. *Animal*, *16*(10), 100644. DOI:10.1016/j.animal.2022.10064470.
- Levinovitz A. (2020). *Natural: How Faith in Nature's Goodness Leads to Harmful Fads, Unjust Laws, and Flawed Science*. Boston MA: Beacon Press.
- Market Research Report (2022). Regenerative Agriculture Market by Practice (Aquaculture, Agroecology, Agroforestry, Biochar & Terra Preta, Holistically Managed Grazing, No-Till &

- Pasture Cropping, Silvopasture), Application and Region Global Forecast to 2027. Report AGI 8521. MarketsandMarkets™ Research Private Ltd. https://www.marketsandmarkets.com/Market-Reports/regenerative-agriculture-market-52420159.html (access: 16th December 2024).
- Marshall C.J., Garrett K., Van Vliet S., Beck M.R., Gregorini P. (2022). Dietary and animal strategies to reduce the environmental impact of pastoral dairy systems result in altered nutraceutical profiles in milk. *Animals*, *12*(21), 2994. DOI:10.3390/ani12212994.
- McAuliffe G.A., Takahashi T., Beal T., Huppertz T., Leroy F., Buttriss J., Collins A.L., Drewnowski A., McLaren S.J., Ortenzi F., Van der Pols J.C., Van Vliet S., Lee M.R.F. (2023). Protein quality as a complementary functional unit in life cycle assessment (LCA). *The International Journal of Life Cycle Assessment*, 28, 146–155. DOI:10.1007/s11367-022-02123-z.
- McDonald H., Frelih-Larsen A., Lóránt A., Duin L., Pyndt Andersen S., Costa G., Bradley H. (2021). *Carbon Farming: Making Agriculture Fit for 2030*. Study for the Committee on Environment, Public Health and Food Safety (ENVI). Policy Department for Economic, Scientific and Quality of Life Policies. Luxembourg: European Parliament. DOI:10.2861/099822.
- Mielcarek P. (2014). Metoda case study w rozwoju teorii naukowych. *Organizacja i Kierowanie*, *1*(161), 105–117. https://bibliotekanauki.pl/articles/704621 (access: 16th August 2024).
- Möller K. (2024). Regenerative Landwirtschaft. Das sagt die Wissenschaft. *DLG-Mitteilungen. Zukunft Landwirtschaft.* https://www.dlg-mitteilungen.de/artikel/ansicht/regenerative-landwirtschaft-das-sagt-die-wissenschaft (access: 1st September 2024).
- Montgomery D.R., Biklé A., Archuleta R., Brown P., Jordan J. (2022). Soil health and nutrient density: Preliminary comparison of regenerative and conventional farming. *PeerJ*, *10*, e12848. DOI:10.7717/peerj.12848.
- Moon S.J., Costello J.P., Koo D.M. (2017). The impact of consumer confusion from eco-labels on negative WOM, distrust, and dissatisfaction. *International Journal of Advertising*, 36(2), 246–271. DOI:10.1080/02650487.2016.1158223.
- MRiRW (Ministerstwo Rolnictwa i Rozwoju Wsi). (2023). Plan Strategiczny dla Wspólnej Polityki Rolnej na lata 2023–2027 (PS WPR 2023–2027). Warszawa: Ministerstwo Rolnictwa i Rozwoju Wsi. https://www.gov.pl/web/rolnictwo/plan-strategiczny-dla-wspolnej-polityki-rolnej-na-lata-2023-27 (access: 16th August 2024).
- Newton P., Civita N., Frankel-Goldwater L., Bartel K., Johns C. (2020). What is regenerative agriculture? A review of scholar and practitioner definitions based on processes and outcomes. *Frontiers in Sustainable Food Systems*, 4, 577723. DOI:10.3389/fsufs.2020.577723.
- Northen G. (2011). Greenwashing the organic label: Abusive green marketing in an increasingly eco-friendly marketplace. *Journal of Food Law & Policy*, 7(1), 101–134. DOI:10.54119/jflp.zhlo6804. https://scholarworks.uark.edu/jflp/vol7/iss1/6 (access: 16th September 2024).
- Olsson L., Barbosa H., Bhadwal S., Cowie A., Delusca K., Flores-Renteria D., Hermans K., Jobbagy E., Kurz W., Li D., Sonwa D.J., Stringer L. (2022). Land degradation. In: P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D.C. Roberts,

- P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley (eds.). Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems (pp. 345–436). Cambridge: Cambridge University Press. DOI:10.1017/9781009157988.006.
- Perkins R. (2020). Regenerative Agriculture: A Practical Whole Systems Guide to Making Small Farms Work. Ridgedale Farm AB: Richard Perkins.
- Piwowar A. (2019). Low-carbon agriculture in Poland: Theoretical and practical challenges. *Polish Journal of Environmental Studies*, 28(4), 2785–2792. DOI:10.15244/pjoes/92211.
- Radkowska I., Radkowski A. (2023). Wypas regeneratywny jako element kształtujący usługi ekosystemów i użytków zielonych. *Roczniki Naukowe Zootechniki*, 50(2), 167–178. DOI:10.58146/008h-qp61.
- Rahman M.S., Wu O.Y., Battaglia K., Blackstone N.T., Economos C.D., Mozaffarian D. (2024). Integrating food is medicine and regenerative agriculture for planetary health. *Frontiers in Nutrition*, *11*, 1508530. DOI:10.3389/fnut.2024.1508530.
- Ramkumar D., Marty A., Ramkumar J., Rosencranz H., Vedantham R., Goldman M., Meyer E., Steinmetz J., Weckle A., Bloedorn K., Rosier C. (2024). Food for thought: Making the case for food produced via regenerative agriculture in the battle against non-communicable chronic diseases (NCDs). *One Health*, *18*, 100734. DOI:10.1016/j. onehlt.2024.100734.
- Rhodes C.J. (2017). The imperative for regenerative agriculture. *Science Progress*, 100(1), 80–129. DOI:10.3184/003685017X14876775256165.
- Roberts M., Hawes C., Young M. (2023). Environmental management on agricultural land: Cost benefit analysis of an integrated cropping system for provision of environmental public goods. *Journal of Environmental Management*, *331*, 117306. DOI:10.1016/j. jenvman.2023.117306.
- Rodale R. (1983). Breaking new ground: The search for a sustainable agriculture. *Futurist*, *17*(1), 15–20.
- Salatin J.F. (2017). *Your Successful Farm Business: Production, Profit, Pleasure*. Swoope, VA: Polyface.
- Salatin J.F. (1998). You Can Farm: The Entrepreneur's Guide to Start & Succeed in a Farming Enterprise. Swoope, VA: Polyface.
- Salomon K. (2020). Dobrostan zwierząt jako element Europejskiego Zielonego Ładu. https://mieso.com.pl/aktualnosci/dobrostan-zwierzat-jako-element-europejskiego-zielonego-ladu/ (access: 16th August 2024).
- Savory A., Butterfield J. (2016). *Holistic Management: A Commonsense Revolution to Restore Our Environment*. Washington DC: Island Press.
- Schreefel L., Creamer R.E., Van Zanten H.H.E., De Olde E.M., Koppelmäki K., Debernardini M., De Boer I.J.M., Schulte R.P.O. (2024). How to monitor the 'success' of agricultural sustainability: A perspective. *Global Food Security*, *43*, 100810. DOI:10.1016/j. gfs.2024.100810.

- Schreefel L., Schulte R.P.O., De Boer I.J.M., Pas Schrijver A., Van Zanten H.H.E. (2020). Regenerative agriculture the soil is the base. *Global Food Security*, *26*, 100404. DOI:10.1016/j.gfs.2020.100404.
- Seufert V., Ramankutty N. (2017). Many shades of grey: The context-dependent performance of organic agriculture. *Science Advances*, *3*(3), e1602638. DOI:10.1126/sciadv.1602638.
- Sharma A., Bryant L., Lee E., O'Connor C. (2021). *Regenerative Agriculture Part 4: The Benefits*. NRDC, Expert Blog, February 14. https://www.nrdc.org/bio/arohi-sharma/regenerative-agriculture-part-4-benefits (access: 16th August 2024).
- Shenhar A.J., Levy O., Dvir D. (1997). Mapping the dimensions of project success. *Project Management Journal*, 28(2), 5–13. https://www.wcu.edu/pmi/1998/J97JUN05.PDF (access: 16th August 2024).
- Soloviev E.R., Landua G. (2016). *Levels of Regenerative Agriculture*. Terra Genesis International. https://ethansoloviev.com/wp-content/uploads/2019/02/Levels-of-Regenerative-Agriculture.pdf (access: 16th August 2024).
- Teague R., Kreuter U. (2020). Managing grazing to restore soil health, ecosystem function, and ecosystem services. *Frontiers in Sustainable Food Systems*, *4*, 534187. DOI:10.3389/fsufs.2020.534187.
- The Van Vliet Lab (2024). https://stephanvanvliet.com/publications/ (access: 16th December 2024).
- Tittonell P., El Mujtar V., Felix G., Kebede Y., Laborda L., Luján Soto R., De Vente J. (2022). Regenerative agriculture agroecology without politics? *Frontiers in Sustainable Food Systems*, 6, 844261. DOI:10.3389/fsufs.2022.844261.
- TOP AGRAR (2022). KPS: dobrostan zwierząt priorytetem jak ma wyglądać walka z antybiotykami? https://www.topagrar.pl/articles/aktualnosci/kps-dobrostan-zwierzat-priorytetem-jak-ma-wygladac-walka-z-antybiotykami-2456468 (access: 16th August 2024).
- Totaro A.I. (2021). *Soil Regeneration: The Four Keys to Restoring Healthy Soil* [podcast]. Investing in Regenerative Agriculture and Food by RegenEarth B.V., 26th October. https://investinginregenerativeagriculture.com/2021/10/26/soil-regeneration/ (access: 16th December 2024).
- USDA AMS (United States Department of Agriculture, Agricultural Marketing Service). (2015). *Copper Sulfate Livestock*. https://www.ams.usda.gov/sites/default/files/media/Copper%20Sulfate%203%20TR%202015.pdf (access: 16th December 2024).
- Ustawa (2004). Ustawa z dnia 29 stycznia 2004 r. o Inspekcji Weterynaryjnej (Dz.U. 2004 nr 33 poz. 287).
- Ustawa (1997). Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz.U. 1997 nr 111 poz. 724).
- Van Seijen K., Van Vliet S. (2023). Stephan van Vliet: The First Randomised Clinical Trial Comparing Agro-Ecological Grown and Supermarket Food [podcast]. Investing in Regenerative Agriculture and Food by RegenEarth B.V., 24th February. https://investinginregenerativeagriculture.com/2023/02/24/stephan-van-vliet/ (access: 16th December 2024).
- Van Vliet S., Blair A.D., Hite L.M., Cloward J., Ward R.E., Kruse C., Van Wietmarchsen H.A., Van Eekeren N., Kronberg S.L., Provenza F.D. (2023). Pasture-finishing of bison

improves animal metabolic health and potential health-promoting compounds in meat. *Journal of Animal Science and Biotechnology*, *14*, 49. DOI:10.1186/s40104-023-00843-2.

Wilson K.R., Myers R.L., Hendrickson M., Heaton E.A. (2022). Different stakeholders' conceptualizations and perspectives of regenerative agriculture reveals more consensus than discord. *Sustainability*, *14*(22), 15261. DOI:10.3390/su142215261.

Yin R.K. (2009). Case Study Research: Design and Methods. Thousand Oaks: Sage.

Rolnictwo regeneratywne w praktyce. Studium przypadku Lubuskie Angusowo i jego rola w produkcji żywności w Polsce

Streszczenie: W niniejszym artykule zaprezentowano wybrane wyniki badań oceny motywacji do wdrażania praktyk regeneracyjnych oraz poziomu sukcesu z perspektywy właściciela pierwszego w Polsce gospodarstwa regeneracyjnego. Wyniki badań oparte na kwestionariuszu wywiadu wskazały, iż głównym motywem wdrażania praktyk rolnictwa regeneracyjnego jest - według właściciela - redukcja kosztów utrzymania. Efektywność kosztowa wynika z faktu, że metody regeneracyjne nie wymagają kosztownego nawożenia ani stosowania środków ochrony roślin. Właściciel podkreślał również znaczenie jakości gleby, kładąc nacisk na takie techniki, jak: kontrolowany wypas, siew roślin jednorocznych i bale grazing, które wpływają na poprawę odżywienia gleby i bezpośrednio poprawiają jakość żywności. Analiza szans i wyzwań oparta na literaturze przedmiotu ujawnia różnorodne argumenty środowiskowe, ekonomiczne i społeczne przemawiające zarówno za, jak i przeciw praktykom rolnictwa regeneracyjnego w produkcji żywności. Biorąc pod uwagę doświadczenie właściciela Lubuskie Angusowo, widać, że wdrożenie metod regeneracyjnych wymaga znacznego wysiłku osobistego w zakresie edukacji, zrozumienia zasad systemu i wytrwałości w ich stosowaniu. Dla przejścia na rolnictwo regeneratywne konieczna jest również zmiana sposobu myślenia polegająca na wzmocnieniu świadomości potrzeby produkcji zdrowej żywności, przy jednoczesnym wzięciu odpowiedzialności za wszystkie etapy tego procesu – od produkcji, przez sprzedaż, aż do docelowego konsumenta.

Słowa kluczowe: rolnictwo regeneratywne, aspekty ekonomiczne, aspekty środowiskowe i społeczne, produkcja żywności, Lubuskie Angusowo, Polska.