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THE COURSE OF RECESSIVE PROCESSES IN ANIMAL PRODUCTION IN VARIOUS FUNCTIONAL TYPES OF MUNICIPALITIES OF THE KRAKÓW-CZĘSTOCHOWA UPLAND

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Abstract

The aim of the research carried out in 2025 was to determine the state of animal production in relation to the course of recessive processes in selected municipalities differing in functional type and located within landscape parks in various parts of the Kraków-Częstochowa Upland. Large disparities in the area of the municipalities determine differences in the total area of agricultural land. In the largest municipality, Wolbrom, this area amounts to 9,023.14 ha, whereas in the smallest, Libiąż, it is 163.05 ha. All analysed municipalities show considerable agrarian fragmentation, with farms of 1–5 ha predominating; in the Babice municipality they account for as much as 88.3%. The results indicate that the highest share of developing farms (A) was found in Pilica (40%) and Babice (20%). The municipalities at the greatest risk of disagrarisation, i.e. those in which 50% of agricultural entities were classified as category D, were Klucze and Włodowice. With regard to animal production, Pilica had the highest share of farms keeping cattle (30%). In Libiąż, classified as a municipality with a predominance of industrial functions, only 1% of farms kept cattle, including both dairy cows and beef cattle. In Klucze, also classified as an industrial-type municipality, a slight upward trend in sheep farming was observed (5% of farms). All other municipalities showed downward trends, although the highest share of farms keeping these small ruminants was found in Wolbrom (15%). Moreover, the small-scale agriculture prevailing in this area, where average farm size ranges from 2 ha in Libiąż to 10.5 ha in Pilica, fits well with the location of the municipalities within landscape parks, whose proximity was assessed as neutral or positive.

Keywords: animal production, deanimalisation, disagrarisation, functional types of municipalities, landscape parks

Introduction

As rural development paths become increasingly differentiated, the view that rural municipalities are predominantly agricultural is becoming less and less valid. Contemporary rural settlements have, as a rule, become essentially multifunctional (Sikorski et al., 2020). This is clearly visible in the Kraków-Częstochowa Upland, which covers parts of the Małopolskie and Śląskie voivodeships and lies close to highly urbanised areas. Following Komornicki and Śleszyński

(2008), when analysing functional typologies of rural areas it should be remembered that most classifications available in the scientific literature are based on the so-called structural approach. This consists in identifying the leading economic function on the basis of appropriately selected socio-economic characteristics (Bański, 2014). According to Sikorski et al. (2021), the most important processes shaping the socio-economic development of rural areas after 1989 have been closely interrelated processes of deruralisation, i.e. the decline of agricultural functions. Therefore, the challenges facing such areas include the need for a new perspective on the relationship between agriculture and the countryside, particularly an assessment of the course of rural disagrarisation and of its component process, deanimalisation.

Over the last 35 years, the transformation of the rural economy has mainly involved the creation of new jobs and new sources of income outside agriculture. In recent years, this phenomenon has driven a gradual transition from an agrarian economy towards one characterised by a growing share of various service activities (Sikorski et al., 2021). Local conditions have strongly influenced the course of these changes, which is why considerable variation in the supply of jobs can be observed at both national and regional scales. These changes are also linked to demographic and socio-economic transformations. According to Flaga and Wesołowska (2018), one of the currently dominant trends in rural areas, especially in so-called problem areas, is depopulation. It also has a major effect on employment levels and the income structure of the rural population (Halamska, 2016). In addition, the functioning and development of farms themselves are influenced by a broad range of factors in their surroundings. These determine both access to development resources and the general natural conditions. Agricultural production is, after all, the type of economic activity that most clearly reflects the close relationship between people and broadly understood nature (Klepacki, 1998).

For understandable reasons, this situation is most clearly visible in areas of high natural value. It can therefore be related to the Kraków-Częstochowa Upland, which contains numerous forms of area-based nature protection. At the same time, problems associated with agrarian and social change are evident there. In physiographic and geological terms, the area is formed by a plateau of Upper Jurassic limestone, rising to about 300 m above sea level in the north and reaching elevations of up to about 500 m above sea level in the south (Kondracki, 2009). This geological structure, which determines the presence of Jurassic formations, has contributed to the diversity of the landscape and natural environment. The largest protected area is the Eagles' Nests Landscape Park, established in 1980 and currently covering 600 km². It is additionally surrounded by a buffer zone of 483 km². The park owes its name to the medieval castles located there, whose positions on inaccessible limestone hills were compared to eagles' nests. Other landscape parks in the area include the Tenczyński and Rudniański Landscape Parks (Raszka et al., 2017). The aim of the study was to determine the state of animal production in relation to the course of recessive processes in selected municipalities differing in functional type and located within landscape parks in different parts of the Kraków-Częstochowa Upland.

Material and methods

The study was conducted in seven selected municipalities of the Kraków-Częstochowa Upland that differed in functional terms, and the effect of this factor on the actual agricultural use of each municipality was analysed. In 2025, five expert surveys were carried out in each municipality. All respondents were farm owners who declared both crop and animal production. The municipalities are located in different parts of the study area, within the Małopolskie and Śląskie voivodeships. The experts conducting the surveys among farmers classified the municipalities into three basic functional types: agricultural-tourism municipalities, municipalities with a predominance of service and commercial functions, and municipalities with a predominance of industrial functions (Fig. 1). The agricultural-tourism type was represented by Babice, Olsztyn

and Pilica. The service-commercial type included Włodowice and Wolbrom, whereas Klucze and Libiąż represented municipalities with a predominance of industrial functions.

The analyses were based on expert surveys addressed to farmers and concerning the state of agriculture, particularly animal production conducted within selected landscape parks. Current data were obtained through field studies carried out at municipality level. The surveys were conducted mainly, though not exclusively, by agricultural extension staff, i.e. people closely connected with the countryside and agriculture of the region. The questionnaire covered selected issues concerning the development status of the municipalities in relation to their functional type and its actual impact on agriculture and farms, including livestock keeping and changes in livestock numbers. The expert survey consisted of the following sections: a general description of the municipality, including determination of its functional type and assessment of migration and possible depopulation; characteristics of the respondent (age, education, type and area of farm owned, etc.); assessment of animal production; and estimation of the degree of production disagrarisation and its component, the process of deanimalisation in the municipality. Respondents were also asked about the impact of proximity to protected areas as a factor affecting the freedom to conduct agricultural activity.

All analysed municipalities are located within landscape parks. Only Libiąż, situated outside the park proper, lies in the buffer zone of the Tenczyński Landscape Park. Four municipalities are located within the Eagles' Nests Landscape Park, while the territory of Babice overlaps protected areas belonging to two parks – the Tenczyński and Rudniański Landscape Parks (Fig. 2).

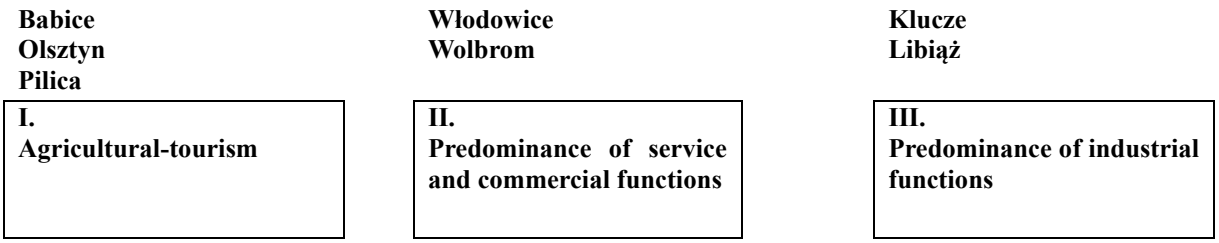


Figure 1. Functional type of the municipality
Source: own study, 2025

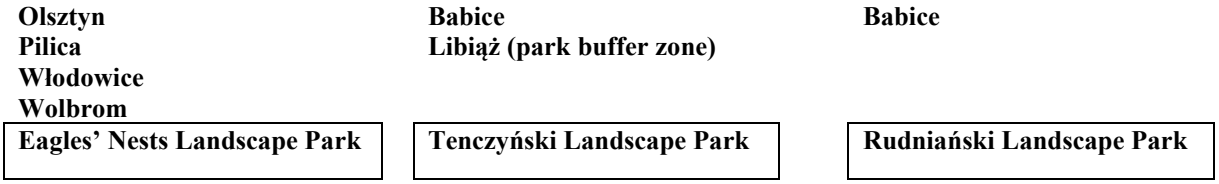


Figure 2. Location of municipalities within protected areas
Source: own study, 2025

The categorisation of farms in terms of their organisation and potential durability concerned the possible course of disagrarisation in a given municipality. Farms were divided into developing (A), potentially developing (B), non-developing (C) and declining (D) categories. This assessment was carried out using methodological assumptions analogous to those applied by Musiał (2024, 2025). In this approach, developing farms (A) are characterised by considerable production potential and scale. They invest in land or other fixed assets, use structural funds, are expansive and are usually local leaders. Category B comprises potentially developing

farms, i.e. farms showing features of development but having low or medium production potential. Their production is market-oriented, although they generally no longer invest in purchasing land. Category C includes non-developing farms that still maintain agricultural production but no longer invest in buildings or agricultural machinery, produce only partly for the market, use low inputs, and cultivate all or almost all of their land. Declining farms (D), in turn, are entities at various stages of production and economic decline, conducting extensive agricultural production on all or only part of their land, leasing land out or leaving larger areas fallow. These are therefore entities in which the process of disagrarisation is already under way to a certain extent.

The phenomenon of deanimalisation was also analysed. It consists in abandoning animal production or reducing the population of livestock kept on farms (Musiał and Musiał, 2019). In this context, statistics from the 2020 Agricultural Census of Statistics Poland were compared with the results of field studies obtained directly from farms in 2025.

Results

The respondents had a mean age of 45.2 years and declared good knowledge of agricultural problems in their municipality. Men slightly predominated in the sample, accounting for 55.5% of respondents. Higher education was reported by 45.5% of respondents, while secondary and basic vocational education were reported by 32% and 22.5%, respectively (Table 1). In addition, 32% of respondents declared additional employment outside their own farm. With regard to farm size, farms of 5–20 ha predominated, accounting for 42.85% of all farms surveyed. Their average size in the study sample was 8.51 ha. Larger farms, i.e. those exceeding 20 ha, accounted for 35.7%, with an average size of 48.57 ha.

Table 1. Identification of respondents – survey details

Number of respondents	Average age	Share of men (%)	Respondents' level of education (%)			Share of respondents with additional employment (%)
			higher	secondary	basic vocational	
35	45,2	55,5	45,5	32	22,5	32,0
Share of respondents in individual area groups (%)						
< 5 ha		5–20 ha		> 20 ha		
21,45%		42,85%		35,70%		
Average farm area in the respective area groups						
< 5 ha		5–20 ha		> 20 ha		
3,56		8,51		48,57		

Source: own study, 2025

The issue of migration in the analysed municipalities concerned virtually the entire study area. These migrations had different origins and patterns. As in other rural regions, the problem mainly concerned young people, including graduates of secondary schools and universities, who did not decide to return to their home areas after completing their education. This problem affected Babice, Olsztyn, Pilica, Włodowice and Wolbrom (Fig. 3). In Wolbrom and Pilica, migration also concerned, to some extent, groups representing various craft occupations and people seeking work in the care sector, mainly as carers for older people.

Babice **Olsztyn** **Pilica** **Włodowice** **Wolbrom**	**Wolbrom** **Pilica**	**Klucze** **Libiąż**
Young people – school/university graduates	**Various craftspeople, carers for older people**	**Other occupations**

Figure 3. Dominant groups among migrants, by municipality
Source: own study, 2025

The problem of depopulation is directly linked to external migration, which clearly predominated in all analysed municipalities, although its course and direction varied. Internal migration within Poland was by far the most common, with larger cities in the region or elsewhere in the country being the main destinations. It mainly concerned residents of agricultural-tourism municipalities such as Babice, Olsztyn and Pilica (Fig. 4), but also occurred in the other functional types. Foreign migration appears to have become a less serious problem in recent years, as confirmed by the analyses for the study area. It was not strongly emphasised and concerned mainly Klucze and Libiąż, classified as municipalities with a predominance of industrial functions.

Klucze **Libiąż**	**Babice** **Pilica** **Olsztyn** **Włodowice** **Wolbrom** **Klucze** **Libiąż**	**Libiąż** **Wolbrom** **Pilica**
Foreign migration	**Migration to larger cities in the region or country**	**Seasonal labour migration**

Figure 4. Nature of depopulation in the municipality
Source: own study, 2025

The analysed municipalities are highly and multidimensionally differentiated in terms of measures and indicators describing the agricultural economy. This concerns, among other things, the total area of agricultural land. In the largest municipality, Wolbrom, this area amounts to 9,023.14 ha, whereas in the smallest, Libiąż, it is only slightly more than 163.05 ha (Table 2). In the land-use structure, permanent grasslands account for between 9.7% in Wolbrom and 70.8% in Libiąż. High shares of permanent grassland are also found in Klucze and Babice, at 51.0% and 43.1%, respectively. The largest area and share of fallow land were recorded in Olsztyn, at 345.96 ha and 13.8% of total agricultural land, respectively. At the opposite end of this indicator are Pilica, Libiąż and Wolbrom, where fallow land accounts for 0.9%, 1.4% and 1.8%, respectively. The highest average area of an individual farm was recorded in Pilica (10.52 ha) and Olsztyn (7.61 ha), and the lowest in Libiąż (2.03 ha), which was classified as industrial. All analysed municipalities show considerable agrarian fragmentation. Farms of 1–5 ha predominate, accounting for as much as 88.3% in Babice and 82.1% in Klucze. In the remaining municipalities, apart from Pilica (48.6%), this indicator ranges from 72.0% in Wolbrom to 79.7% in Libiąż.

In four of the analysed municipalities, a profound collapse in animal production was observed in 2025. In Libiąż, no cattle or pigs were kept at all, while 45.7% of farms kept poultry in small flocks (Table 2). Very low shares of farms keeping cattle were also recorded in Babice

(4.3%), Klucze (2.7%) and Włodowice (4.6%). No pig farming was recorded in these municipalities either. In the 2020 Agricultural Census statistics, Pilica and Wolbrom stood out positively. Farms in these municipalities kept relatively large populations of both cattle and pigs, considering the specificity of the region. The share of farms keeping cattle was 27.7% in Pilica and 8.5% in Wolbrom, compared with 2.7% in Klucze. For pig farming, the highest shares were recorded in Wolbrom (2.9%) and Pilica (2.5%), although these values were still very low. In the analysed municipalities poultry was kept on almost every second farm; the highest shares were recorded in Babice (57.4%) and Włodowice (53.7%). The corresponding figure was 34.6% in Pilica and only 20.2% in Wolbrom. The 2020 Agricultural Census data for these municipalities did not include the shares of farms keeping sheep or goats.

Table 2. Selected characteristics of individual farming in the municipalities of the study area

Item	Name of municipality						
	Babice	Klucze	Libiąż	Olsztyn	Pilica	Włodowice	Wolbrom
	Area of utilised land (ha)						
Total land	838,23	1509	190,91	2890,1	9544,94	1256,75	10 014,72
Total agricultural land	754,14	1093,05	163,05	2502,89	8538,88	957,97	9 023,14
Agricultural land in good condition	729,43	966,49	150,37	2451,05	8438,6	848,14	8942,45
Fallow land	32,62	90,8	2,18	345,96	85,46	101,63	164,97
Fallow land (%)	4,3	8,3	1,4	13,8	0,9	8,0	1,8
Permanent crops	31,77	14,72	7,47	18,09	37,4	6,3	88,94
Permanent grasslands	325,12	557,8	115,45	333,31	917,87	393,16	874,66
Permanent grasslands (%)	43,1	51,0	70,8	13,3	10,7	41,0	9,7
Forests and wooded land	24,01	345,76	7,8	185,4	185,4	217,71	375,75
Share of farms in area groups (%)							
Total number of farms	188	335	94	380	907	216	1900
up to 1 ha inclusive	0	3,3	16,0	0,8	0,8	2,3	1,7
1–5 ha	88,3	82,1	79,7	73,9	48,6	77,3	72,0
5–10 ha	11,7	11,0	4,3	13,2	24,5	15,3	18,5
10–15 ha	0	2,1	0	3,2	11,0	2,3	4,4
15 ha and above	0	1,5	0	8,9	15,1	2,8	3,4
Average farm size (ha)	4,46	4,5	2,03	7,61	10,52	5,82	5,27
Livestock population (animals)							
Total cattle	59	25	0	206	4936	31	1502
Cattle – cows	0	0	0	85	1757	13	561
Total pigs	0	0	0	75	1158	0	5415
Sows	0	0	0	0	156	0	457
Total poultry	3842	3794	16797	6988	33886	3082	64852
Share of farms keeping animals (%)							
Total cattle	4,3	2,7	0	7,4	27,7	4,6	8,5
Cattle – cows	0	0	0	5,0	13	3,7	4,1
Total pigs	0	0	0	0,8	2,5	0	2,9
Sows	0	0	0	0	2,1	0	2,2
Poultry	57,4	37,9	45,7	42,6	34,6	53,7	20,2
Total animals	61,7	40,6	45,7	55,8	79.9	62,0	37,9

Source: own study based on the 2020 Agricultural Census, Statistics Poland
Explanation to the table: no 2020 Agricultural Census data were available for sheep and goats in the analysed municipalities

The study showed that all municipalities contained farms classified into the four categories describing farming status or the course of recessive processes. Farms with considerable production potential and scale (category A) had the highest shares in Pilica (40%) and Babice (20%). The municipalities with the highest degree of disagrarisation were Klucze and Włodowice. In both municipalities, as many as 50% of agricultural entities were classified as category D, indicating a substantial level of production and economic decline (Table 3). The highest share of category B farms, i.e. entities showing signs of development but having low or medium production potential, was found in Pilica (40%) and Libiąż (25%). Category C, comprising non-developing farms that nevertheless still maintained agricultural production, predominated in Włodowice, where it included 37% of all agricultural entities.

Analysis of animal production in the studied municipalities in 2025 indicates that Pilica had the highest share of farms keeping cattle (30%). At the same time, only three farms kept larger herds (more than 30 animals) of dairy cows and two farms kept comparable herds of beef cattle. There were no farms keeping sheep or goats, and the overall trend in ruminant numbers was downward. A similar situation occurred in Olsztyn, although fewer farms kept cattle there and no agricultural entities had larger ruminant herds. In Libiąż, classified as a municipality with a predominance of industrial functions, only 1% of farms kept cattle, i.e. dairy cows and beef cattle combined; nevertheless, despite this very low level, a slight upward trend was observed. There were no larger ruminant herds there, i.e. herds exceeding 30 animals of a given species (Table 3). In Włodowice, classified as a municipality with a predominance of service and commercial functions, the results indicated no farms keeping ruminants. Pig farming was reported by 3% of farms.

The results for Klucze are noteworthy because, although the municipality was not classified as agricultural, it showed an upward trend in sheep farming. Sheep were kept by 5% of agricultural entities, and three farms had flocks exceeding 30 ewes. No other ruminants or pigs were recorded there. The study nevertheless showed that in 2025 cattle keeping as a whole displayed a downward trend compared with 2020, when it was reported by 2.7% of farms. With respect to sheep, all analysed municipalities except Klucze also showed downward trends. Despite this, the highest share of farms keeping these small ruminants was reported in Wolbrom (15%), although there were only two larger flocks. In Babice, 3% of farms were reported to keep sheep, including one farm with a larger sheep flock and one larger goat herd.

Table 3. State of animal production and the course of recessive processes

Item	Name and functional type of municipality						
	I.			II.		III.	
	Babice	Olsztyn	Pilica	Włodowice	Wolbrom	Klucze	Libiąż
Estimated share of farm categories in the municipality (%)							
A	20	5	40	5	10	5	12
B	15	15	40	8	20	5	25
C	30	35	10	37	30	40	33
D	35	45	10	50	40	50	30
Share of farms keeping particular livestock species (%)							
Cattle	5	5	30	0	25	2	1
Pigs	1	1	2	3	15	2	0
Sheep	3	1	0	0	15	5	0
Number of farms in the municipality keeping ruminant herds exceeding 30 animals							
Dairy cows	0	0	3	0	15	0	0
Beef cattle	0	0	2	0	4	0	0
Sheep	1	0	0	0	2	3	0
Goats	1	0	0	0	0	0	0
Trends in ruminant farming							
Cattle	↓	↓	↓	↓	↓	↓	↑
Sheep	↓	↓	↓	-	↓	↑	-

Explanation to the table: functional types of municipalities: I – predominance of agricultural-tourism functions; II – predominance of service and commercial functions; III – predominance of industrial functions

Trends in ruminant farming:

upward ↑ downward ↓ stagnant -

Source: own study, 2025

Although the studied municipalities are located in different parts of the Kraków-Częstochowa Upland, they share a location within landscape parks. Therefore, farmers' assessments of crop and animal production in such areas are also of interest. Field survey results show that respondents in Babice and Klucze assessed the impact of proximity to protected areas on agricultural activity as positive, whereas respondents in the remaining municipalities assessed it as neutral. Importantly, there were no indications of a negative effect of legal restrictions resulting

from the presence of a landscape park on agriculture in any municipality (Fig. 5). These declarations can be explained by the small-scale agriculture that predominates in the municipalities, reflected in farm sizes ranging from 2 ha in Libiąż to 10.5 ha in Pilica, which does not exert a strongly degrading effect on the natural environment.



Figure 5. Respondents' assessment of the impact of protected areas on agriculture in the municipality
Source: own study, 2025

Discussion

According to Krupiński (2009) and Krasowicz and Kuś (2010), forecasts of changes in animal production in Poland for 2010–2020 assumed concentration of livestock herds on individual farms without an increase in total livestock numbers. For cattle as a whole, forecasts for 2020 suggested a population of 5,750 thousand animals; in fact, these figures proved underestimated and the actual population exceeded 6,343 thousand. The number of dairy cows did decline, which according to Sowula-Skrzyńska et al. (2017) can be explained by an increasing share of young cattle intended for beef production in the herd structure, mainly due to improved profitability of this type of farming. The national sheep population in 2020 was expected to reach about 330 thousand animals, whereas data from the 2020 Agricultural Census showed fewer than 280 thousand. The latest agricultural census also reported that, nationally, just under 21% of farms kept cattle, 6.4% kept pigs and only about 0.7% kept sheep. In the analysed municipalities, however, these proportions were much lower for cattle (9.7% of farms) and pigs (3.4%). In contrast, the share of farms keeping sheep in the study area was several times higher than the national average, at 3.4%.

A closer examination of individual municipalities shows considerable variation in these shares. For example, Włodowice, where service and commercial functions predominate, had no farms keeping ruminants. Comparison with the 2020 Agricultural Census data for this municipality shows a clear decline in livestock numbers in this respect. The trend for pig farming was the opposite: the 2025 study found that 3% of farms kept pigs, whereas the 2020 census reported no pig farming at all in the municipality. In Libiąż, despite the absence of larger ruminant herds, i.e. herds exceeding 30 animals of a given species, a slight upward trend in total cattle keeping has been observed in recent years. This is confirmed by comparing field data collected in 2025 with the results of the 2020 Agricultural Census. The latter reported no cattle or pig farming in the municipality, which indicates complete deanimalisation as a component of recessive processes in agriculture (Musiał and Musiał, 2019). The situation observed in 2025 indicates that the process of abandoning animal production is becoming established.

The state of animal production in selected municipalities of the Kraków-Częstochowa Upland may also have been influenced to some extent by changes in the structure of the local population, contributing to processes such as social gentrification and disagrarisation (Halamska, 2016). In this context, abandonment of agricultural production, including animal production as an important and particularly time-consuming component, is also associated with external migration of the local population. In recent years this problem has concerned mainly domestic migration, which has nevertheless contributed to increasing depopulation rates in the municipalities. Foreign migration was emphasised more strongly only in Klucze and Libiąż,

which are dominated by industrial functions and are less important agriculturally. However, even in municipalities where agricultural functions were declared to predominate, changes are visible, mainly through further movement away from agriculture towards increased non-agricultural employment, especially in the service sector. In the study area, this is increasingly associated with the further development of tourism functions in individual municipalities. As a result, traditionally understood agricultural production, once dominant throughout the region, is becoming less important, and analogous trends have been observed for decades in other regions of Poland (Kutkowska, 2012; Sikorski et al., 2021).

According to Krasowicz and Kuś (2010), although Poland has considerable production potential resulting from a relatively large area of agricultural land compared with other EU Member States, a substantial part of this area nevertheless has unfavourable conditions for agricultural production. This limits production intensification and, in turn, reduces the overall competitiveness of agriculture (Harasim, 2013). Among the analysed municipalities, this problem can be illustrated by Olsztyn, where 13.8% of land is fallow. This is associated with low soil quality and agricultural suitability, which according to Witek (1981) results in unsatisfactory crop yields. The specific nature of agricultural activity in landscape parks is also important for the area and contributes significantly to the discussion on sustainable agricultural development and environmental protection in Poland (Chmielewski and Harabin, 1993). According to these authors, protected areas should be regarded as an opportunity for harmonious functioning at many levels of development rather than as an obstacle. Despite the passage of decades, this approach remains fully relevant and has even gained importance. It is also appropriate for the study area because the characteristic small-scale agriculture has a positive effect on maintaining biodiversity in the existing cultural landscape (Bignal and McCracken, 1996; Zieliński and Jadczyszyn, 2022).

Conclusions

The studied municipalities, located within three different landscape parks, show considerable functional and structural diversity, including agrarian diversity. Their dominant agricultural feature is very strong farm fragmentation, which is almost extreme in Libiąż, where the average farm area only slightly exceeds 2 ha. In Pilica, an agricultural-tourism municipality with the relatively most favourable agrarian structure, the average farm area slightly exceeds 10 ha. Municipalities with a predominance of industrial functions, namely Klucze and Libiąż, as well as Babice (agricultural-tourism type), are the most strongly affected by the recessive process of deanimalisation, which consists in reducing the number of livestock kept on farms. In the extreme case of Libiąż, the 2020 Agricultural Census did not report any cattle or pig farming. Field studies in 2025 indicate that 1% of agricultural entities keep cattle. In Olsztyn and Włodowice, the share of farms keeping cattle and pigs combined in 2020 was 8.2% and 8.3%, respectively. Comparable field results from 2025 indicate values of 6% for Olsztyn and only 3% for Włodowice, where no cattle farming was recorded at all. These results may be regarded as extremely low. In Olsztyn, cattle were kept by 7.4% of farms in 2020, whereas the 2025 data indicate only 5%, confirming a downward trend. Even poultry, until recently kept on almost every farm, is now maintained by fewer than half of active agricultural entities. Babice and Włodowice are exceptions, with shares of just over 57% and just under 54%, respectively. In Wolbrom, a municipality strong in animal production, poultry is kept by only one in five farms. Overall, processes of disagrarisation show an upward trend, which may threaten the maintenance of sustainable rural development in the municipalities studied.

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THE COURSE OF RECESSIVE PROCESSES IN ANIMAL PRODUCTION IN VARIOUS FUNCTIONAL TYPES OF MUNICIPALITIES OF THE KRAKÓW-CZĘSTOCHOWA UPLAND

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SUMMARY

The aim of the research carried out in 2025 was to determine the state of animal production in relation to the course of recessive processes in selected communes, differing in functional type and located within landscape parks in various parts of the Kraków-Częstochowa Upland. Large disparities in the area of municipalities determine the variation in the total area of agricultural land. In the largest municipality, Wolbrom, this area is 9023.14 ha, while in the smallest, Libiąż, it is only 163.05 ha. All analysed municipalities demonstrate significant agrarian fragmentation, with farms ranging from 1 to 5 ha dominating, accounting for as much as 88.3% in the Babice municipality. The study results indicate that the highest share of developing farms (A) was found in the municipalities of Pilica (40%) and Babice (20%). In turn, the municipalities characterized by the highest risk of disagrarisation, i.e., those in which 50% of agricultural entities were classified as (D), are Klucze and Włodowice. In terms of animal production, the study results indicate that Pilica is the municipality with the highest share of farms raising cattle (30%). In Libiąż, a predominantly industrial municipality, only 1% of farms raise cattle, both dairy and beef cattle. In Klucze, which also is an industrial municipality, a slight upward trend was observed for sheep farming (5%). All other municipalities showed a downward trend, but the highest share of farms raising these small ruminants was found in Wolbrom (15%). Furthermore, the small-scale agriculture that dominates this area, where average farm sizes range from 2 ha in Libiąż to 10.5 ha in Pilica, is well-suited to the municipalities' location within landscape parks, whose proximity was assessed as neutral or positive.

Keywords: animal production, deanimalisation, disagrarisation, functional types of municipalities, landscape parks