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THE ACTIVITY OF POZNAŃ COUNTY FARMERS IN THE FIELD OF AGRICULTURAL CONSTRUCTION AFTER THE ACCESSION TO THE EUROPEAN UNION

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Abstract. The aim of the article is to analyze the dynamics and the scale of commercial activities of farmers within Powiat Poznański. The research was based on the investments in buildings and other structures used for animal production. It covered the period after Polish accession to the European Union. The urbanization of Powiat Poznański is visible. The acreage falling has affected the agricultural production. After the accession, the farmer' interest in commercial building investments fell. The closer to Poznań, lower the number of investors.

Key words: commercial buildings, urbanization of rural areas, building investments in agriculture

INTRODUCTION

Babuchowska and Marks-Bielska [2011] studies show that in the investment plans of Polish farmers, the purchase of machinery (45%), the construction and modernization of utility rooms (27%) and finally – the purchase of agricultural lands (22%) are most strongly being stressed. A few years earlier, a similar sequence was noticed by Polna [2008]. In 2010, in Polish agricultural holdings, 4544 buildings were brought into use, with 663 buildings in Greater Poland/Wielkopolska Voivodeship. Their total cubic volume exceeds 1.48 million, which puts this region, next to Mazovian, at the domestic forefront [Rocznik Statystyczny Rolnictwa 2012].

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There are 207 municipalities in Wielkopolska Voivodeship, and Poznań County – the most populous county in Poland – has 17 municipalities (Buk, Czerwonak, Dopiewo, Kleszczewo, Komorniki, Kostrzyn, Kórnik, Luboń, Mosina, Murowana Goślina, Pobiedziska, Puszczykowo, Rokietnica, Stęszew, Suchy Las, Swarzędz, Tarnowo, Podgórne).

According to the GUS forecast, in the years 2011-2035, the population of Poznań County will increase by 47%, however, the population of the City of Poznań will decrease by about 11% [Prognoza demograficzna... 2011]. In 2010, the balance of migration in Greater Poland from cities to villages, amounted to 7180 people. It results in the increased rate of non-agricultural population living outside the cities [Rocznik Statystyczny Rolnictwa 2012]. And in the future may generate more and more problems with obtaining permits for the construction of livestock facilities that are burdensome to neighbors.

The matters of environmental conditions are currently governed by the Act of 3 October 2008 on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments [Ustawa... 2008] as well as The Regulation of the Council of Ministers of 9 November 2010 on types of projects likely to have significant effects on the environment [Rozporządzenie... 2010]. In view of these regulations, any person, at the local government office, may refer to the investment planned by the farmer and raise his/her potentially destructive comments and suggestions [Ustawa... 2008, art. 4].

The urbanization of the Poznań County may compromise the productive potential of agriculture due to declining acreage. This process occurs similarly within the whole area of Poland. According to Krasowicz et al. [2011], in a period between 1990 and 2008, Poland lost 2.5 million hectares of arable land, and by 2030, a further 0.5-0.6 million hectares will vanish, transformed to the urban areas. Kapusta [2012] claims, that the participation of rural areas in the territory of our country is systematically being reduced, while the increasing number of people living in rural areas can be observed. According to Tokajuk [2011 b], the transformation processes of rural suburban areas and their urbanization are inevitable. The only legal instrument intended to counteract that uncontrolled spread of building are the local area development plans. In accordance with Art. 4 of the Act on Spatial Planning and Development, the establishment of the land use, the distribution of public investment and the determination of the ways of land use and its development occur in the local area development plan [Ustawa... 2012].

Functional and visual chaos is currently escalating in the country, caused by: suburban sprawl, dispersed building development on agricultural and recreational areas, the destruction of cultural and natural landscape, the ugliness of building development of suburban and rural areas, and the chaotic commercial building development of roadside strips.

Tokajuk [2011 b] draws attention to the far-reaching possibility of almost unrestricted, free construction of a house in a village in Poland, as a part of so called agricultural building. A house can be built in the middle of nowhere, if only a farmer proves the disposition of acreage larger than the average in the municipality. Such actions are additionally deepening the negative trends in the areas of districts becoming urbanized.

The urbanization of rural areas is global. According to Mason [access: 18.02.2013], in California, the most important agricultural state in the U.S., where 42% of all U.S. fruit and 43% of vegetables are produced. In 1960, the urbanization there consumed

3 million acres, in 1980 – it managed to absorb one-third of the best lands, and by 2020, is expected to lose a total of more than 14 million acres of agricultural lands of the best quality. The developers in San Mateo County, California, are willing to pay more than $ 15,000 per acre of agricultural land (37,500 USD per 1 ha). The urbanization cannot be achieved without the development of road infrastructure. In the U.S., every kilometer of a road or highway takes up approximately 6.5 hectares of land [Mason, access: 18.02.2013].

All urbanized areas are characterized by the diversified agricultural suitability. Developed in Poland by IUNG (The Institute of Soil Science and Plant Cultivation), the so-called synthetic indicator of the quality and suitability of agricultural lands, is the indicator of valorization of the agricultural productive areas (Polish abbreviation: WWRPP indicator). Scoring is the evaluation method. Theoretically, it is possible to reach a maximum of 123 points. According to Krasowicz et al. [2011], this indicator for Greater Poland is 64.8. For Opole Voivodeship, the indicator is estimated as the highest in the country (81.6), while for Podlaskie Voivodeship, as the lowest (55.0). In Poznań County, the best conditions for agricultural activities are in Kleszczewo and Komorniki municipalities. Indicators of the quality and suitability of agricultural lands there, were estimated to be 81.2 and 75.9 points, respectively. The lowest ratings were received in the areas of Puszczykowo – 44.5 and Mosina – 49.6 municipalities [Charakterystyka i diagnoza..., access: 20.02.2013].

The aim of this study was to analyze the dynamics and scale of the economic activity of Poznań County farmers in a field of investment in buildings and other structures used for livestock production, covering the period from May 2004 i.e. the accession of Poland to the European Union, to the end of 2011. The intention of the research was also to verify the hypothesis that the intensity of starting up the construction projects is higher in the municipalities with more outstanding qualities and agricultural suitability of lands.

METHOD AND MATERIALS

The source of data on building investment activity of Poznań County farmers were the materials provided by state government authorities. In accordance with the undertaking, no information relating to agricultural producers has been disclosed. Only the issued permits of construction, attested to the building investment activity. There was no interest in the construction completion dates. Such information is in the possession of regional tax offices that calculate property tax. The detailed figures were obtained from the permits to construct agricultural buildings, grouped according to their purpose, ie: poultry houses (broiler houses, laying hen houses), pigsties, barns, stables and other agricultural buildings such as fish ponds, storage buildings and garages, etc. The data was collected from all municipalities of Poznań County and covered a period of just over seven and a half years. Its analysis was supported with the statistical materials prepared by Poznań County's administrative office and the GUS (Central Statistical Office of Poland).

The dynamics of issuing the permits for the construction of agricultural buildings were presented graphically in terms of time. The number of permits obtained for

(in terms of topography) the particular municipalities were also transformed graphically, using the contour map of Poznań County municipalities, taking into account the valorization of the agricultural productive areas for this area of Wielkopolska. The base map comes from Kowalczak et al. [2004] publication. In addition, the regression equation was determined by estimating the relationship between synthetic indicators of the quality and suitability of agricultural lands of Poznań County municipalities and the number of permits issued for the construction of agricultural buildings. The calculations were performed according to the algorithm specified by Ruszczyc [1978]. Moreover, the correlation coefficient between these traits was calculated.

RESULTS

Changes in the dynamics of issuing the permits for construction of agricultural buildings in Poznań County is shown in Figure 1. A noticeable downward trend can be observed. Most permits for the construction of agricultural buildings were issued in 2005 (22), and the least in 2011 (7). During the entire period of the analysis, 107 farmers received the appropriate building permits. 29 farmers decided to construct pigsties, 14 were interested in building new poultry houses, 13 – in building barns, and as many as 19 – in building stables, which can be explained by the emerging opportunity to reap revenue from equestrian services related to the recreation of the population of the urbanizing Poznań County. Only 13 farmers found building new barns reasonable. The other building structures: ponds, rabbit houses, garages, storage buildings, paddocks and maneges etc. constitute a total of 28 construction permits.

Recently a falling number of issued construction permits, may result from the decreasing farmers' needs as far as building stock is concerned, being an effect of the small increase in density of large animal units in SD (stocking density) per 100 hectares of agricultural land. Therefore, there is no pressure on increasing the number of standings for animals. Comparing the years 2000 and 2011 in the Voivodeship:

- stocking density SD/100 ha differ by: + 3%,
- production of animals for slaughter on 1 hectare differ by: + 23%, and milk: + 20%,
- 2.47 times more buildings were brought into use on farms [Rocznik Statystyczny Województwa... 2013].

Some other investments were also involved in the construction activity of Poznań County farmers after the accession to the European Union, which were not included in Figure 1, due to the fact that the building permits for their construction were not required, and listed in Art. 29 Section 1 of the Act of July 7, 1994, the Building Law [Ustawa... 2010]. These are the constructions that the competent authorities shall only be notified on. Amongst them are: slabs for manure storage, single-storey farm buildings of building area up to 35 square metres and the design span not exceeding 4.80 metres, tight tanks for liquid manure or dung of capacity up to 25 cubic metres and other facilities, nearly 30 altogether.

Lorencowicz and Wlodarczyk [2009] were engaged in the changing trends in the Polish livestock building. They were interested in the years up to 2006. Lorencowicz

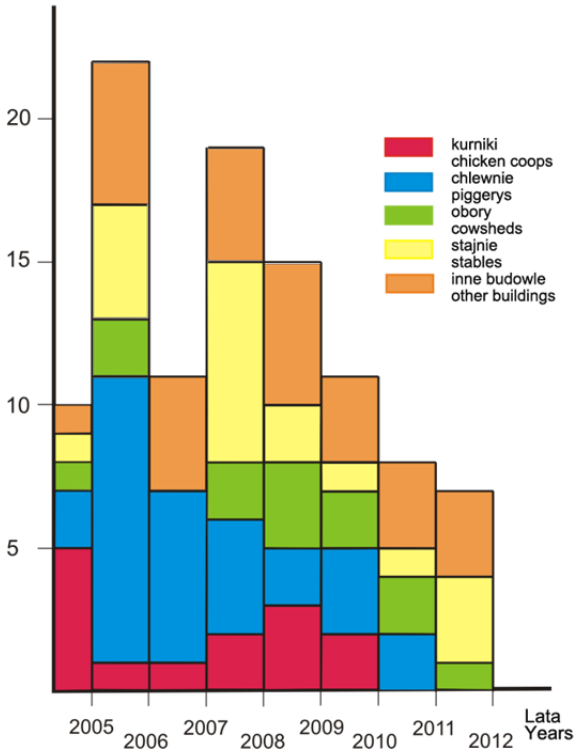

Fig. 1. The number of issued planning permissions for some agricultural commercial buildings
Source: own research.
Rys. 1. Liczba pozwoleń wydanych na budowę różnych rolniczych obiektów gospodarczych
Źródło: opracowanie własne.

and Wlodarczyk [2009] found that the support from national[1] and EU[2] funds is the essential pro-investment factor for farmers, so that in the period from 2007 to 2013 they predicted the increase in construction investments in the country. These authors, rightly so, signaled the possibility of breakdown, resulting from the slowdown in the global and Polish economy, related to the crisis that has already been predicted.

Figure 2 shows the scale of building investment plans in Poznań County municipalities, indexed against the valorization of their agricultural productive areas. The numbers of permits obtained in the analyzed period are presented in the form of pictograms symbolizing the buildings. Their area is directly proportional to the number of construction

[1] The support offered by the Agency for Restructuring and Modernization of Agriculture in the form of subsidies to preferential loans.
[2] Aid in this regard relates to the participation of farmers under "Modernization of agricultural holdings" measure of the Rural Development Programme 2007-2013.

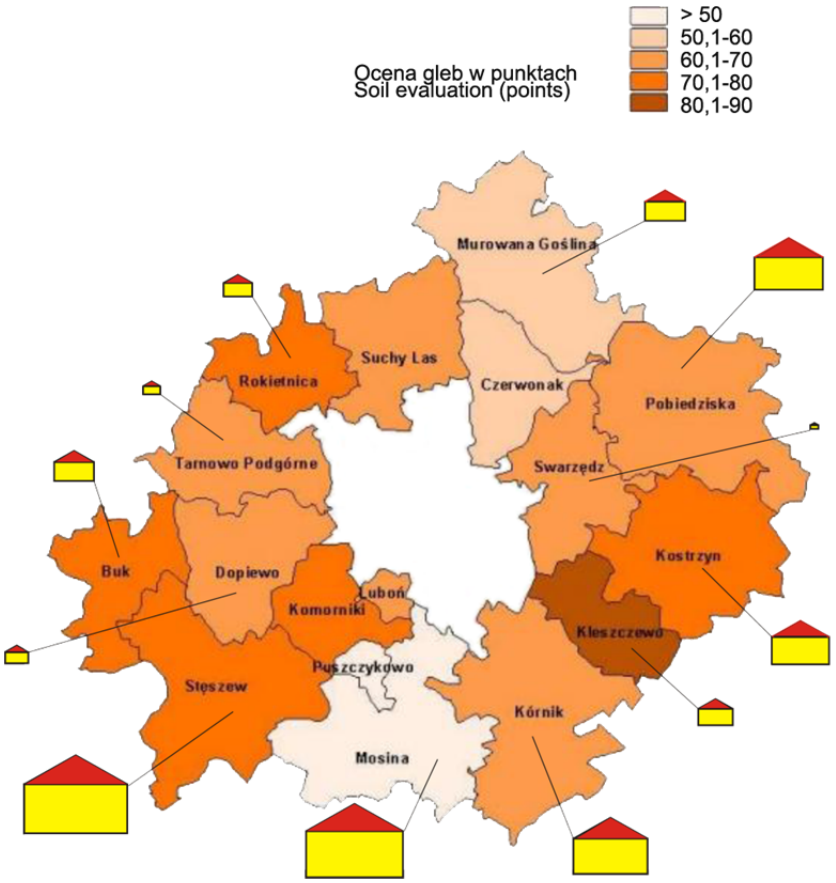

Fig. 2. The territorial structure and farmers' building investments plans, versus soil indexation index IUNG
Source: own research.
Rys. 2. Struktura terytorialna oraz budowalne plany inwestycyjne rolników a wskaźniki waloryzacji gleb IUNG
Źródło: opracowanie własne.

permits obtained. Building plans were not evenly spread in the space of the area. The farmers from the South of Poznań County, were, clearly, more strongly involved. The greatest number of applications for building permits came from the farmers from Steszew, Mosina and Kornik municipalities, 47% altogether. Noticeable are the effects of urbanization in the immediate vicinity of the City of Poznań, which are manifested in the lack of interest in investments at the borders of the capital of Greater Poland. None of the farmers from: Suchy Las, Czerwonak, Puszczykowo, Luboń as well as Komorniki (with its distinctive high rate of valorization of the agricultural productive area) municipalities, took any agricultural building investment up during the analyzed period.

This indicates the occurrence of the processes similar to those in the U.S., where at the expense of agriculture, the arable lands are being lost for housing [Mason, access: 18.02.2013]. Tokajuk [2011 a] drew attention to the fact, that in order to prevent this trend, well-conceived local area development plans should be used. The author proposed the thesis that reconciling the farm buildings and agricultural activities with the residential development is often impossible and that the liquidation of the functions of the farm building and agricultural activity is only a matter of time. The peaceful coexistence of farms with residential buildings whose occupants are not associated with agriculture can rarely be noticed [Tokajuk 2011 b].

At present, only 30% of municipalities in Poland has local area development plans. The majority of them, is establishing the individual land development conditions for every investment. In 2014, the Building Code might come into force, that bases the concept of the law on the alleged building agreement – see: paragraphs 5 and 6 of the Construction Law [Założenia..., access: 2.07.2012].

The Building Code draft also provides for the radicalization of the consequences for errors and omissions of construction site managers, designers and inspectors. Instead of issuing decisions concerning land development conditions, National Building Regulations as well as local ones (local regulations passed by city councils serving the purpose of the density development only) will be implemented. [murator.pl >Prawo...].

There was no evidence, that in the municipalities of agriculturally valuable soils, the farmers were more willing to invest. The following relation occurs between the number of permits obtained X, and the indicator of soil valorization IUNG Y:

$$Y = 0.001\,X + 5.995$$

The regression coefficient (straight line slope) is of a very small value and is not statistically significant. The consequence is the low value of the correlation coefficient of only $r = 0.014$.

CONCLUSIONS

After the accession of Poland to the European Union, in the urbanizing Poznań County, the interest of farmers in investing in the construction business is dropping off. The closer to the city of Poznań, the less they are willing to invest.

The natural qualities of agricultural lands are not the factors stimulating the development of productive building stock of the farms. The agricultural functions of rural areas are not determinated by climatic or soil indicators. The most important seems to be the location in the neighborhood of Poznań agglomeration.

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AKTYWNOŚĆ ROLNIKÓW POWIATU POZNAŃSKIEGO W ZAKRESIE BUDOWNICTWA GOSPODARCZEGO PO AKCESJI DO UNII EUROPEJSKIEJ

Streszczenie. Przedmiotem artykułu była analiza dynamiki i skali aktywności gospodarczej rolników powiatu poznańskiego na niwie inwestowania w budynki i inne budowle służące do produkcji zwierzęcej, po akcesji Polski do Unii Europejskiej. Urbanizacja powiatu poznańskiego może stanowić zagrożenie potencjału produkcyjnego rolnictwa ze względu na ubywający areał. Po akcesji naszego kraju do Unii Europejskiej spada zain-

teresowanie rolników inwestowaniem w budownictwo gospodarcze. Im bliżej miasta Poznania, tym mniej chętnych do inwestowania.

Słowa kluczowe: budownictwo gospodarcze, urbanizacja terenów wiejskich, inwestycje budowlane w rolnictwie

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