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### ANALYSIS OF CHANGES IN THE AREA AND NUMBER OF FARMS IN WIELKOPOLSKIE AND MALOPOLSKIE VOIVODESHIP

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ARTICLEINFO	ABSTRACT
<p><i>Article history:</i> Received: August 2015 Received in the revised form: September 2015 Accepted: December 2015</p> <p><i>Keywords:</i> agricultural farm production resources land agriculture EU</p>	<p>The objective of the paper is to analyse the changes of the agricultural land area and the number of farms in Małopolska and Wielkopolska region as two separate agricultural regions. The research period starts with the Poland's accession to EU and ends in 2013. The land use structure, number and size of agricultural farms were taken into consideration. Additionally, the paper includes analysis of changes in the agricultural land prices. It was stated that agriculture in Małopolska undergoes positive transformations, is still developing and various EU subsidies are one of its development factors. Positive changes were observed mainly in the decrease of the number of individual farms and the increase of the average area of farms. Within the analysed ten years, the agricultural land area decreased by over 186 thousand ha, that is by 25%. Agriculture in Wielkopolska region gained a lot due to the EU accession. However, in this region the changes had different nature. The land utilization remained at the same level as in 2004 and positive changes were observed mainly in the decrease of the number of small farms for the benefit of the biggest ones. The paper constitutes the first part of the developed cycle of publications concerning transformations of the technical agricultural infrastructure of Poland after its accession to the EU.</p>

### Introduction

Poland has been an agricultural country. However, a lot has changed in recent years. The period shortly before and after Poland's accession to EU was defined by considerably big investments in family agriculture (Lorenkowicz, 2008; Kowalski, 2008; Kowalski, Nowak, 2010). Membership in EU decisively increased the level of support for the Polish agriculture and rural areas and simultaneously ensured stable aid (Stankiewicz, 2010; Szeląg-Sikora, Kowalski, 2012). Within 2004-2014 farmers, entrepreneurs and other beneficiaries obtained EU funding in the amount of approx. PLN 200 billion (online 2015) through the Agency for Restructuring and Modernisation of Agriculture. Aid programmes and direct subsidies enabled modernization of inter alia agricultural equipment. With the use of EU funds, farmers have purchased approx. 388 thousand of tractors, machines and

agricultural devices, executed over 8 thousand constructional investments within the last 10 years (Agency for Restructuring and Modernisation of Agriculture online 2015). The article will be the first part of the cycle of summaries concerning transformations of production resources and technical infrastructure of Poland after its accession to EU. The scope of this paper will cover the changes in the land use structure, size and number of agricultural land. Other studies will relate to farming machines and devices and working force. Papers will concern not only the entire Poland, because there are many studies on this topic, e.g. a report of the Economic Department of the European Union (Kałużyńska et al., 2014) but also purposefully selected regions.

Resources are one of the fundamental measures which shape agriculture. Land is the basic production resource. Within the last decade, the area of agricultural land in Poland decreased from 16.3 million ha in 2004 to 14.6 million ha in 2014. The decrease is still reported (Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich 2007; Rocznik Statystyczny Rolnictwa 2014). It mainly results from resignation from agricultural land cultivation with unfavourable farming conditions and unprofitable plant and animal production on small scale (Jóźwiak, 2013). However, such pace in the loss of agricultural land is a threat not only for the balance of import and export agricultural raw materials but also results in the deficit of food self-sufficiency. Shortage of such self-sufficiency of a developing country, as a rule, acts like a brake on economic development (Michna, 2011).

According to Marks-Bielska (2013) there are many factors which shape the land market in Poland. Tradition and attachment to land is one of them and on the other hand, possibility of obtaining advantages in the form of any type of direct payments, KRUS insurance (Social Agricultural Insurance Fund), income from the purchase/sale transaction, etc. All these factors combined with the possibility of purchasing land by foreigners caused its considerable turnover (Stankiewicz, 2013). The increase of potential buyers (also among foreigners) translated into the price of agricultural land in Poland, which after the Poland's accession to EU has increased by a few times. The growth reported in each voivodeship: the highest (six times higher) took place in Lubuskie Voivodeship and the lowest one (twice higher) in Małopolskie Voivodeship (Turek [on-line] 2015).

In Michna's opinion (2011) the transformation process, namely land usage, size and number of agricultural farms should be considered separately depending on the size of farms. In his paper concerning the entire Poland, the author considers four groups of agricultural land, depending on the economic size expressed in ESU. He notices that there is a group of farms with a dispersed agrarian structure, from among which those developmental should be selected and provided with aid. It concerns, inter alia, farms in Małopolskie Voivodeship. What is important, there are no other farms in this area, which would undertake formation of a tenant structure. The situation is different in case of big-area farms, which have a developmental potential; they may implement various modern IT systems (Peszek et al., 2014). Therefore, a separate consideration of big and small farms seems to be justified. The mentioned paper by Michna (2011) was written under the Agricultural Census of 2010. Continuance of observations concerning changes in production resources in farms from regions with varied agrarian structure.

**Table 1**  
*Increase of agricultural land price in Poland in 2004-2014 and their average value in 2014 in particular voivodeships*

Voivodeship	Price increase in agricultural land from the end of 2004 to the end of 2014 (%)	Average value of a hectare (estimations based on the quality of soil in the voivodeship) (PLN)
Dolnośląskie Voivodeship	528	34,474
Kujawsko-pomorskie Voivodeship	464	45,835
Lubelskie	394	25,239
Lubuskie	629	22,566
Łódzkie	420	29,173
Małopolskie	235	25,695
Mazowieckie	344	30,740
Opolskie	529	42,660
Podkarpackie	313	20,768
Podlaskie	443	30,476
Pomorskie	400	35,647
Śląskie	259	31,608
Świętokrzyskie	309	21,514
Warmińsko-Mazurskie	530	32,226
Wielkopolskie	434	42,334
Zachodniopomorskie	453	24,322

*Source: Study by Lion's Bank based on data obtained from ARIMR and GUS*

## **Objective, scope and material for research**

The objective of the research was to identify the changes trend of the selected factors of production of small and big farms in 2004-2013. Two areas, which are geographically and agriculturally separate, have been selected for analysis: Małopolskie and Wielkopolskie Voivodeship. Małopolskie Voivodeship – due to dispersion of agricultural land and small, average area of farms. Wielkopolskie Voivodeship - due to a considerable percentage of big farms (in 2010 – 62% of farms had more than 5 ha of AL (calculated based on the table 2) and the average area of agricultural land, which is higher than the national average. The issue of the terrain layout is not without the significance. Wielkopolska region is lowland, and Małopolska has a decisively mountainous and upland character. The paper uses data available on the webpages of the Main Statistical Office [Polish: GUS] and Agency for Restructuring and Modernisation of Agriculture [Polish: ARiMR]. In the article, which constitutes the first part of the cycle of papers which are being written, mainly the agricultural land area and the size and number of agricultural land is taken into consideration. Moreover, an attempt to explain the reasons for the decrease of the area of agricultural land will be made.

## Research results

In 2010 the Main Statistical Office introduced a new definition of the agricultural land. The change consisted mainly in exclusion of agricultural farms which do not run agricultural business activity and owners below 1 ha of agricultural land, who run business activity to a small scale (below defined thresholds) (GUS, 2014). Data included in the paper comprise the introduced changes and since 2010 are presented therewith.

### The land use

Analysing the size of agricultural land for Wielkopolskie Voivodeship in 2004-2013 one may state that after small fluctuations the state from 2004 returned in 2013 (table 2). What is more, introduction of a new definition of a farm did not cause for Wielkopolska significant differences in the land use structure. In 2010, the area of agricultural land according to the old definition was 1,798.8 thousand ha, and in the same year according to the new definition it was 1,773.4 thousand ha (table 2). A difference between the values before and after the changes is only 16.4 thousand ha, which is less than 1%. It is probably because Wielkopolska is one of the Poland's regions, where agriculture is strongly developed and constitutes one of the main factors of the region development. The area of AL is 60% of the total area of the voivodeship.

Table 2  
*Land use structure and agricultural farms in Wielkopolska in 2004-2013*

Years	Agricultural land	Arable land	Agricultural farm		Average area of an individual farm with the area exceeding 1 ha of agricultural land
			total	individual farms	
	(ha)	(ha)	(item)	(item)	(ha)
2004	1,762,568	1,496,700	132,691	132,043	11.3
2005	1,713,002	1,443,968	129,851	129,211	11.2
2006	1,768,699	1,509,617	136,608	136,009	10.8
2007	1,818,153	1,516,653	135,829	135,228	11.2
2008	1,810,499	1,537,816	136,807	136,220	11.1
2009	1,807,258	1,517,376	137,289	136,755	11.1
2010	1,789,875	-	123,893	123,284	-
2010*	1,773,477	1,491,368	122,681	122,081	12.1
2011*	1,780,956	1,498,269	-	-	-
2012*	1,800,084	1,500,074	121,700	121,179	12.8
2013*	1,748,180	1,456,564	119,043	118,522	12.7

\*new definition of a farm

*Author's own study based on the data from GUS*

The change in the size of agricultural land takes a different course in Małopolskie Voivodeship. The data presented in table 3 shows that throughout 2004-2013 the area of agricultural land showed a decreasing trend and dropped by over 186 thousand ha namely

by 25%. The reasons for such a great decrease of the AL area may be searched for in the general development of the region, preferences of its ordinary citizens and the participation of forest land to the detriment of agricultural land (Flag et al., 2012).

Table 3  
*Land use structure and agricultural farms in Małopolska region in 2004-2013*

Years	Agricultural land (ha)	Arable land (ha)	Agricultural farm		Average area of an individual farm with the area exceeding 1 ha of agricultural land (ha)
			total (item)	individual farms (item)	
2004	744,566	485,370	372,556	372,352	3.2
2005	711,371	439,719	354,378	354,169	3.2
2006	694,491	448,304	322,164	321,982	3.2
2007	715,480	405,072	321,479	321,304	3.3
2008	722,157	439,534	310,984	310,820	3.4
2009	690,663	421,100	310,653	310,498	3.3
2010	663,516	329,599	283,513	283,335	3.7
2010*	603,534	-	153,771	153,605	3.9
2011*	630,528	354,735	153,771	153,605	-
2012*	573,822	308,307	152,176	152,057	3.7
2013*	558,366	303,457	142,874	142,757	3.9

\*new definition of a farm

*Author's own study based on the data from GUS*

On one hand, expansion of roads and motorways and thus the technical infrastructure, on the other hand, migration of urban population to the country visible particularly on the borders of big cities, where the increase of the number of new apartments was reported particularly in 2006-2009 (Rynek mieszkaniowy... [on-line] 2015). One should add that this voivodeship is densely populated, 221 people per km<sup>2</sup> (GUS, 2012). On the areas which have been cultivated not so long ago one and multi-family houses are constructed. Migration of people from big cities to rural areas caused the decrease of the area of agricultural land for the benefit of mainly housing estate areas, which is showed in table 4.

In Wielkopolska region, agricultural land is also reducing, but in comparison to the total agricultural land, these proportions are different than in Małopolska (table 3). For example in 2013, 230 ha of land dropped in total, which constitutes over 0.01% of agricultural land while in Małopolskie Voivodeship, 155 ha dropped which is 0.03% of agricultural land.

Table 4  
*Arable land excluded for non-farming purposes in Małopolskie and Wielkopolskie Voivodeship in 2008-2013 (total for the voivodeship and selected types of excluded land)*

Years	Wielkopolskie Voivodeship				Małopolskie Voivodeship		
	Total	Exclusion trend			Total	Exclusion trend	
		land:				land:	
		communication	housing estate	surface mining land		communication	housing estate
				(ha)			
2008	431	3	221	82	392	9	290
2009	433	9	165	173	186	4	143
2010	559	11	172	289	173	3	129
2011	375	35	123	144	165	2	122
2012	328	4	74	214	180	6	113
2013	230	3	57	98	155	3	114

*Author's own study based on the data from GUS*

### Size and number of agricultural land

In both voivodeships individual farms prevail. However, their average size is in Małopolska considerably below the national average (3.9 ha AL) which was 11.54 ha according to GUS data for 2013 and according to data obtained from Agency for Restructuring and Modernisation of Agriculture – 10.42 ha; and in Wielkopolska above this average, namely 12.7 ha (table 2 and 3). Analysis of the trend of changes in the size and number of agricultural farms in 2004-2013 proves that in both voivodeships average size of farms increased and their number decreased – it concerns both individual farms and all farms (table 2 and 3). A thorough analysis allows recognition of these differences in the transformation processes. A decreasing trend in the number of farms is visible in Małopolska, and in Wielkopolska region such a tendency cannot be explicitly proved because within 2006-2009 some fluctuation occurred. In the percentage perspective within 2004-2013 the number of farms decreased by almost 230 thousand that is by approx. 62% in Małopolska and in Wielkopolska by 13.6 thousand that is by approx. 10%. 2010 was groundbreaking, when a sudden decrease of the number of farms in both voivodeships was dictated mainly by other factors.

Tables 5 and 6 present the number of farms divided into area groups in Wielkopolska and Małopolska. In 2002 the total number of farms in Wielkopolska was over 202 thousand, out of which 99.66% were individual. In 2010 their drop was reported to over 122 thousand. However, the percentage participation of individual farms practically has not changed, because it was 99.51%. The constant decrease of the number of farms was caused mainly by two factors. The first seems to be a consequence of the Poland's accession to the EU and some changes in Poland. The number of small farms decreased for the benefit of bigger ones, which is an appropriate shift trend, particularly in this area. The second reason is the mentioned change in the definition of a farm. It excludes those, where cultivation of land was ceased. The number of small farms decreases and the number of big farms increases, therefore they undergo a natural selection. Bigger ones, more developmental eat up

Analysis of changes in the area...

the smaller ones. The biggest decrease of this number was reported in the group of 1-2 ha and the increase was reported in three biggest area groups, but in the last group (50 ha and more) the increase was the highest and over 400 farms in 2013 in comparison to 2010 (table 5).

Table 5  
Number of farms according to area groups in 2002, 2010, 2013 in Wielkopolska

Year	Total	Farms with the agricultural land area							50 ha and more
		1-2 ha	2-3	3-5	5-10	10-15	15-20	20-50	
					Total				
2002	202,073	27,290	13,483	16,855	33,004	22,153	11,220	13,011	2,599
2010	122,681	18,164	12,035	16,313	30,171	19,331	9,737	13,381	3,549
2013	119,043	16,620	13,174	14,674	29,384	17,694	9,659	13,874	3,962
					Including individual farms				
2002	201,376	27,258	13,469	16,832	32,948	22,130	11,206	12,962	2,157
2010	122,081	18,150	12,012	16,299	30,132	19,308	9,714	13,340	3,126
2013	1185,21	16,612	13,164	14,657	29,356	17,672	9,649	13,830	3,580

Source: Author's own study based on GUS 2013, GUS 2014

Table 6  
Number of farms according to area groups in 2002, 2010, 2013 in Małopolska

Year	Total	Farms with the agricultural land area						
		1-2 ha	2-3	3-5	5-10	10-15	15-20	20 ha and more
					Total			
2002	373,726	88,397	97,179	25,986	4,426	903		
2010	153,771	55,512	69,807	19,568	3,302	1,010	1,456	
2013	142,874	46,788	65,123	18,065	3,606	1,484	1,766	
					Including individual farms			
2002*								
2010	153,605	55,488	69,790	19,550	3,294	1,000	1,365	
2013	142,757	46,785	65,109	18,054	3,596	1,478	1,694	

\* here the authors did not manage to obtain relative data, however, on account of the fact that in Małopolska individual farms constitute almost 100% of the total number of farms, it should not affect the results of analyses included in this paper.

Source: Author's own study based on PSR (Agricultural Census, 2002), US (Statistical Office, 2013)

Production to a small scale or for the so-called own use is no longer profitable. A wide-spread availability of food products and affordable prices, comfort and independence caused that some number of farms stopped to cultivate the land. There is a common conviction that "it is not profitable". Therefore, and additionally because of some part of land is not used or is purchased for an investment, a great drop in the number of farms took place in Małopolska throughout 2010-2011. According to the old definition their number in 2010 was over 283 thousand, and according to the new one it was only 153 thousand (table 3). It means that almost 130 thousand did not meet the requirements of the new definition, which means that 130 thousand of farms had not run agricultural activity for a long time or had

run it to a small scale. Moreover, data included in table 6 show that the number of farms above 10 ha of agricultural land slightly increased for 2010 and 2013, however, it still is 4-5% in comparison to the total number. To sum up, in both voivodeships, we deal with the decrease in the number of farms in particular the smaller ones, which use land mainly for their own needs. We also deal with a phenomenon of the "last" generation, where, according to Michna, each year 2-3% of farms melt through lease, sale and other form of inheritance (Michna, 2011). However, the problem consists in the fact that in Wielkopolska, there are farms of entrepreneurship nature, which are able to absorb unprofitable farms but in Małopolska, the number of such farms is decisively lower. The State's help is indispensable here to select dozens of thousands of family farms, which will be able to accumulate land and maintain the market. However, the lease alone or taking up a small farm by a developing one will not increase its production. The increase of expenses will guarantee production (Michna, 2011). Moreover, a common state policy concerning the protection of purchasing lands by foreigners seems to be necessary on areas with big farms (Act on protection of Polish land online 2015).

### **Summary and conclusion**

Poland is a country varied on account of agriculture. Analysis of changes in total production resources for the entire country results in the loss of significant trends for particular regions. Thus, a selection of two voivodeships, where in case of one, a 10-year period of EU membership stabilized and modernized agriculture (Wielkopolska) and in the second one- carried out a selection of individual farms (Małopolska), is purposeful. Małopolska goes through a deep transformation with regard to agriculture. Small farms with a dispersed agrarian structure and unfavourable field layout prevail on this area. Farms, which cannot bear competition, become unprofitable or farms where production was ceased, stop to be agricultural farms and their land often is developed or they become an investment for owners due to a high increase of land prices from the moment of Poland's accession to the EU. Decrease of the number of individual farms is particularly visible in 2010, when GUS suggested a different, more natural definition of an agricultural farm, which did not include those farms, which do not run agricultural activity (regardless the farm size) and those for which land is an investment, not a production factor. Therefore, data published on the GUS pages and concerning the number of individual farms more correspond to reality. On the turn of the analysed period, in Małopolska, the total number of farms reduced by 230 thousand, that is by approx. 62%. The area of agricultural land decreased by 186 thousand ha that is by 25% at the expense of the total development of the region (investments, development of infrastructure), preferences of its usual citizens and the increase in the forest lands. Average size of agricultural farm increased and in 2013 it was 3.9 ha of AL. However, it still is considerably below the national average, which in a given year was 11.54 (GUS, 2013). In Wielkopolska, the total number of farms decreased by 13.6 thousand that is by approx. 10% but at the turn of the analysed period the number of big farms, which prevail in this area increased. Moreover, the average area of a farm increased and in 2013 it was 12.7 ha that is more than the national average. In this area, a small (below 1%) decrease in the agricultural area surface was reported. After Poland's accession to the EU, agriculture in



this area strengthened and modernized – however, this subject will be more extensively described in the following part of the publication.

## References

- Agency for Restructuring and Modernization of Agriculture. *Efekty 10 lat Wspólnej Polityki Rolnej*. Obtained from: <http://www.arimr.gov.pl/aktualnosci/artykuly/efekty-10-lat-wspolnej-polityki-rolnej-ue-w-polsce.html>
- Flaga, S. i in. (2012). *Gospodarcze aspekty rolnictwa w Małopolsce. Urząd Marszałkowski Województwa Małopolskiego*, 9-15, 56-58. Obtained from: <http://www.malopolska.pl/Obywatel/Rolnictwo/Documents/rolnictwo/Gospodarcze%20aspekty%20rolnictwa%20w%20Ma%20C5%82opolsce.pdf>
- GUS. *Roczniki Rolnictwa*. Obtained from: [http://stat.gov.pl/cps/rde/xbcr/gus/rs\\_rocznik\\_rolnictwa\\_2012.pdf](http://stat.gov.pl/cps/rde/xbcr/gus/rs_rocznik_rolnictwa_2012.pdf)
- Józwiak, W. (2013). *Warunki gospodarowania oraz zmiany zachodzące w rolnictwie w latach 2004-2010*. [W]: W. Józwiak, W. Ziętara (red.). *Zmiany zachodzące w gospodarstwach rolnych w latach 2002-2010. Powszechny spis rolny ( 19-23)*. Warszawa, Główny Urząd Statystyczny. Obtained from: [http://stat.gov.pl/cps/rde/xbcr/gus/PSR\\_Zmiany\\_w\\_gospodarstwach.pdf](http://stat.gov.pl/cps/rde/xbcr/gus/PSR_Zmiany_w_gospodarstwach.pdf)
- Kałużyńska, M. i in.(red.)(2014). *PL-UE Polskie 10 lat w Unii. Raport*. Warszawa, Ministerstwo Spraw Zagranicznych, Departament Ekonomiczny Unii Europejskiej. ISBN 978-83-63743-80-2. Obtained from: [http://ec.europa.eu/polska/news/documents/10lat\\_plwue.pdf](http://ec.europa.eu/polska/news/documents/10lat_plwue.pdf)
- Kowalski, S. (2008). Wykorzystanie środków pomocowych UE do modernizacji gospodarstw rolnych. *Inżynieria Rolnicza*, 5(103), 15-20.
- Kowalski, J., Nowak, M. (2010). Wartość odtworzeniowa parku maszynowego a wielkość dofinansowania unijnego. *Inżynieria Rolnicza*, 7(125),93-98.
- Lorencowicz, E. (2008). Zmiany w wyposażeniu technicznym w gospodarstwach rolnych po przystąpieniu Polski do Unii Europejskiej. *Inżynieria Rolnicza*, 5(103), 73-79.
- Marks-Bielska R. (2013). Factors shaping the agricultural land market in Poland. *Land Use Policy*, 30 791-799. Obtained from: [http://ac.els-cdn.com/S0264837712001081/1-s2.0-S0264837712001081-main.pdf?\\_tid=35143c50-5868-11e5-9712-00000aacb362&acdnat=14419642099d3e54a852e5188a968c2a5af63007e6](http://ac.els-cdn.com/S0264837712001081/1-s2.0-S0264837712001081-main.pdf?_tid=35143c50-5868-11e5-9712-00000aacb362&acdnat=14419642099d3e54a852e5188a968c2a5af63007e6)
- Michna, W. (2011). *Aktualizacja prognoz w zakresie struktury i liczby gospodarstw rolnych oraz pogłowia zwierząt gospodarskich w Polsce w perspektywie 2020 r w świetle wstępnych wyników Spisu Rolnego 2010*. IERiGŻ-PIB Warszawa. Obtained from: <https://www.minrol.gov.pl/content/download/39854/221082/version/1/file/Ekspertyza%20dot.%20prognoz%20w%20zakresie%20struktur%20i%20liczby%20gospodarstw%20rolnych%20oraz%20po%20C5%82owia%20zwierz%20C4%85t%20gospodarskich%20w%20Polsce%20w%20perspektywie%202020r.pdf>
- Peszek, A., Fitowski, M., Roczowska-Chmaj, S. (2014). Implementacja modelu produkcji rolniczej z zastosowaniem systemu klasy APS. *Stowarzyszenie Ekonomistów Rolnictwa i Agrobiznesu*, XVI(6),387-392.
- Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich* (2007). GUS. Obtained from: [http://stat.gov.pl/cps/rde/xbcr/gus/rls\\_rocznik\\_rolnictwa\\_2007.pdf.pdf](http://stat.gov.pl/cps/rde/xbcr/gus/rls_rocznik_rolnictwa_2007.pdf.pdf)
- Rocznik Statystyczny Rolnictwa* (2014). GUS. Obtained from: [http://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5515/6/8/1/rocznik\\_statystyczny\\_rolnictwa\\_2014.pdf](http://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5515/6/8/1/rocznik_statystyczny_rolnictwa_2014.pdf)
- Powszechny Spis Rolny 2002*. Raport z wyników. Województwo Małopolskie. Obtained from: [https://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCAQFjAAahUKEwiJq6OeocXIAhXB2ywkHTA5B7g&url=http%3A%2F%2Fkrakow.stat.gov.pl%2Fdownload%2Fgfx%2Fkrakow%2Fpl%2Fdefaultaktualnosci%2F753%2F22%2F1%2F1%2F2002\\_nsp\\_psr\\_raport\\_2003.pdf&usq=AFQjCNGHKrEmlgaLL-1OnKFogSWEXthosQ&sig2=MUnzscUqS0sSSSSCA3oO4g](https://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCAQFjAAahUKEwiJq6OeocXIAhXB2ywkHTA5B7g&url=http%3A%2F%2Fkrakow.stat.gov.pl%2Fdownload%2Fgfx%2Fkrakow%2Fpl%2Fdefaultaktualnosci%2F753%2F22%2F1%2F1%2F2002_nsp_psr_raport_2003.pdf&usq=AFQjCNGHKrEmlgaLL-1OnKFogSWEXthosQ&sig2=MUnzscUqS0sSSSSCA3oO4g)

- Rynek mieszkaniowy w Polsce-prognozy dla województw*. Obtained from: <http://www.prognostic.pl/-/rynek-mieszkaniowy-w-polsce-prognozy-dla-województw>
- Stankiewicz, D. (2010). Wpływ akcesji do UE na modernizację polskiego rolnictwa. *Biuro Analiz Sejmowych*, 4(24), 217-246. Obtained from: [http://orka.sejm.gov.pl/WydBAS.nsf/0/243F4ED0C603A2C6C1257A48002C1F15/\\$file/BAS\\_24-10.pdf](http://orka.sejm.gov.pl/WydBAS.nsf/0/243F4ED0C603A2C6C1257A48002C1F15/$file/BAS_24-10.pdf)
- Stankiewicz, D. (2013). Nabywanie gruntów rolnych przez cudzoziemców. *Biuro Analiz Sejmowych*, 3(92). Obtained from: [http://orka.sejm.gov.pl/WydBAS.nsf/0/2F6C9BED783DACDC1257B47002FBE5D/\\$file/Analiza\\_BAS\\_2012\\_92.pdf](http://orka.sejm.gov.pl/WydBAS.nsf/0/2F6C9BED783DACDC1257B47002FBE5D/$file/Analiza_BAS_2012_92.pdf)
- Szeląg-Sikora, A., Kowalski, J. (2012). Efektywność rolniczej produkcji ekologicznej w zależności od kierunku produkcji gospodarstwa rolnego. *Inżynieria Rolnicza*, 4(139), 421-429.
- Turek, B. (2015). Ceny ziemi rolnej w polskich województwach. Zobacz, jakie grunty drożej najszybciej. *Biznes Gospodarka Świat*. Obtained from: <http://forsal.pl/artykuly/861893,ceny-ziemi-rolnej-w-polskich-województwach-zobacz-jakie-grunty-drozeja-najszybciej.html>.
- Urząd Statystyczny w Krakowie. (2014). *Charakterystyka gospodarstw rolnych w województwie małopolskim w 2013 r.* Obtained from: <http://krakow.stat.gov.pl/publikacje-i-foldery/rolnictwo-lesnictwo/charakterystyka-gospodarstw-rolnych-w-województwie-malopolskim-w-2013-2,1.html>
- Ustawa o ochronie polskiej ziemi* (online 2015). Obtained from: [http://psl.pl/nawosci/spoleczne/sejm\\_uchwalil\\_ustawe\\_o\\_ochronie\\_polskiej\\_ziemi](http://psl.pl/nawosci/spoleczne/sejm_uchwalil_ustawe_o_ochronie_polskiej_ziemi).

## **ANALIZA ZMIAN W POWIERZCHNI I LICZBIE GOSPODARSTW ROLNYCH W WOJEWÓDZTWIE WIELKOPOLSKIM I MAŁOPOLSKIM**

**Streszczenie.** Celem pracy jest analiza zmian powierzchni użytków rolnych i liczby gospodarstw Małopolski i Wielkopolski jako dwóch odmiennych rolniczo regionów. Okres badań obejmuje moment wejścia Polski do UE po rok 2013. Pod uwagę brano głównie strukturę użytkowania ziemi, liczbę i wielkość gospodarstw rolnych. Dodatkowo pracę wzbogacono o analizę zmian cen wartości ziemi rolniczej. Stwierdzono, że rolnictwo Małopolski przechodzi pozytywne przemiany, wciąż się rozwija a jednym z czynników jego rozwoju są różnego rodzaju dopłaty unijne. Korzystne zmiany zaobserwowano tu głównie w spadku liczby gospodarstw indywidualnych i wzroście średniej powierzchni gospodarstwa. Na przestrzeni analizowanych dziesięciu lat powierzchnia użytków rolnych zmalała o ponad 186 tys. ha, czyli o 25%. Rolnictwo Wielkopolski również wiele zyskało na wejściu do UE, jednak w tym regionie zmiany szły w innym kierunku. Użytkowanie ziemi w zasadzie pozostało na tym samym poziomie co w 2004 roku a korzystne zmiany zaobserwowano głównie w spadku liczby małych gospodarstw na rzecz tych największych. Praca stanowi pierwszą część powstającego cyklu publikacji dotyczących przemian w zakresie technicznego uzbrojenia rolnictwa Polski po wejściu do UE.

**Słowa kluczowe:** gospodarstwo rolne, zasoby produkcyjne, ziemia, rolnictwo, UE