

## INTRODUCTION

Polish Federation of Cattle Breeders and Dairy Farmers was established in 1995 as a merger of 20 regional breeding organizations from all over the country.

By virtue of The Organization of Breeding and Livestock Reproduction Act (Breeding Act) and decisions of the Minister of Agriculture and Rural Development issued in relevant regulations PFCBDF is:

- starting the 1st of July 2004, the only organization authorized to keep herd books for dairy cattle;
- starting the 1st of July 2006 PFCBDF has taken over the realization of milk recording for dairy cattle;
- starting the 1st of July 2007 PFCBDF has taken over the realization of tasks connected with type conformation of heifers and dairy cows.

Polish Federation of Cattle Breeders and Dairy Farmers runs milk recording of dairy cattle in Poland on the basis of current animal regulations and the directives of the European Union, the guidelines of International Committee for Animal Recording (ICAR) as well as internal PFCBDF procedures of carrying out milk recording. These procedures guarantee, that our breeders get full, credible and reliable information about the results for each cow individually and also for the whole herd. Moreover, the procedures assure high level of services, being the condition of the highest quality and correctness of milk recording results in recorded herds. Above mentioned, was confirmed on the 28th of December 2010, when ICAR Board decided to grant Polish Federation of Cattle Breeders and Dairy Farmers the Certificate of Quality for following options:

- The identification system of dairy cattle;
- The recording of production of dairy cattle;
- Laboratory analysis;
- Data processing.

The right of using ICAR Certificate of Quality logo was renewed in November 2013 by the ICAR Board decision on prolongation of ICAR Certificate of Quality for PFCBDF until January 2017.

The first part of this study is a summary of the entire milk recording results in Poland in 2015. This study is addressed to national recipients, in particular cattle breeders, milk producers and representatives of scientific centres, research institutes, educational centres, and all those who are vividly interested in matters regarding Polish agriculture and breeding.

The publication has an exclusively informative character, data are presented in nationwide, regional, voivodship, breed and sector cross-sections, often in relation to previous years, too. It presents reliable and objective data, which allows for essential evaluation of the potential of the national active population of dairy cattle.

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With the present publication, we take the opportunity to congratulate warmly our Breeders on the results achieved in 2015 and to thank them for the close and satisfying co-operation aiming at the improvement of Polish dairy cattle breeding.

We wish you further successes in your work, prosperity as well as good luck in private life.

*Milk Recording Department*

*Polish Federation of Cattle Breeders and Dairy Farmers*

# The results of milk recording in Poland

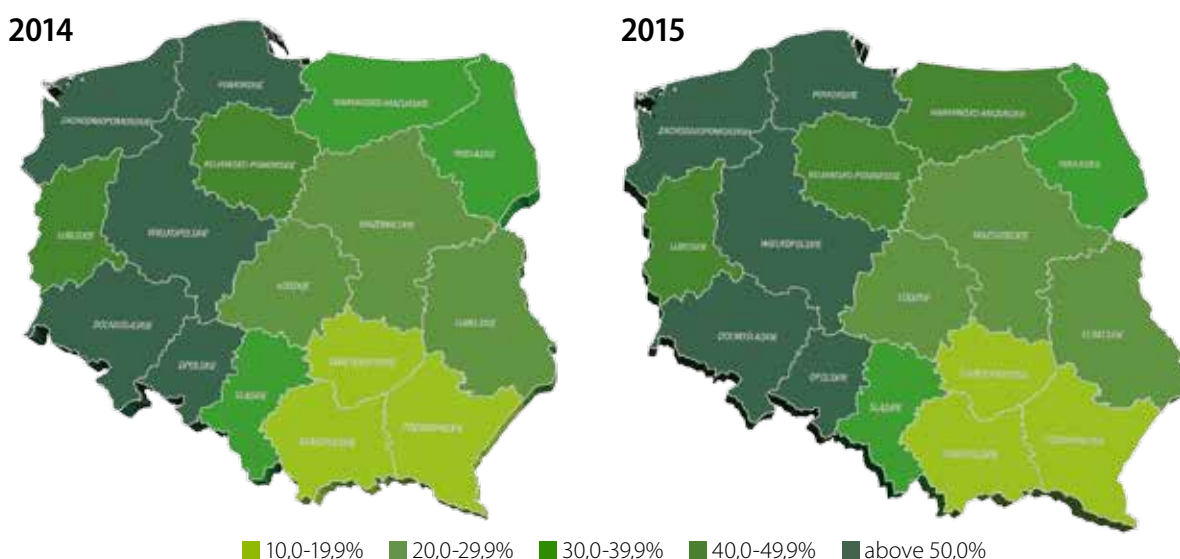
## 2015

The population of dairy cattle in milk recording in December 2015 reached **759.651** heads. In relation to figures dated at 31st December 2014 it shows an increase in the number of dairy cows by 20.013 animals (2,7 %)

In December 2015 the total population of dairy cows reached **2.134.091** heads which makes up 93% of cows in general livestock in Poland. Similarly like in previous years there is a tendency of decrease of the total number of dairy cattle. In comparison to the same period in 2014, reported decrease is about 113,7 thousand heads (5,1%). In comparison to the previous years the decreasing tendency has speeded up, which was triggered by the difficult situation on the milk market caused by milk prices dropping down (the average prize in 2015 was 113,09zł/100l merely). Additionally, the height of inevitable penalties for overproduction in the last milk quota campaign was really painful. Moreover during 2015 farmers struggled with really severe weather conditions and a drought period which has fallen in summer and resulted in scarce forage stocks. We can also still observe a natural drift of milk production concentration and an increase of farms' size in regions favourable for milk production i.e.: Podlaskie, Warmińsko-mazurskie, Mazowieckie, Wielkopolskie and Kujawsko-pomorskie voivodships. However the recorded population of dairy cows is still growing. According to information dated at 31st of December 2015, it represents **35,6 %** of national dairy cows population in total, which in relation to analogous period in 2014 makes up for the growth by about **2,7 %**. Despite continuous tendency of recorded population to grow in our country, in relation to figures from other European countries we have still a lot to do.

The highest participation of recorded dairy cows in relation to the total national dairy cows number was observed in north-western part of Poland and the lowest in south-eastern part of the country.

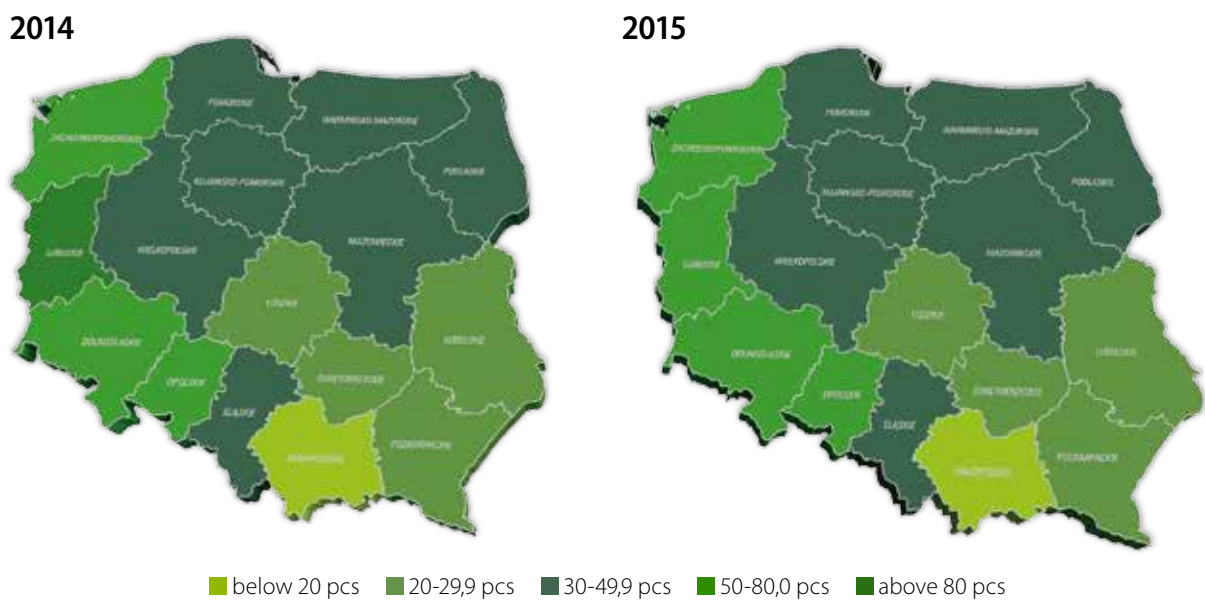
**Illustration No. 1 represents graphic comparison of recorded population size dated at the 31st of December 2014 and 2015 in relation to dairy cows livestock in total, according to voivodships.**



More detailed data relating to the recorded population of dairy cows in Poland are presented in the table No.12. (tabular part of study).

In 2015, the average size of recorded herd reached nearly **36 heads**. Invariably for years, the largest herds are observed in Lubuskie, Dolnośląskie, Opolskie and Zachodniopomorskie, and the smallest herds: in Małopolskie. However the second smallest, average herd size in Podkarpackie and Świętokrzyskie is still slightly growing.

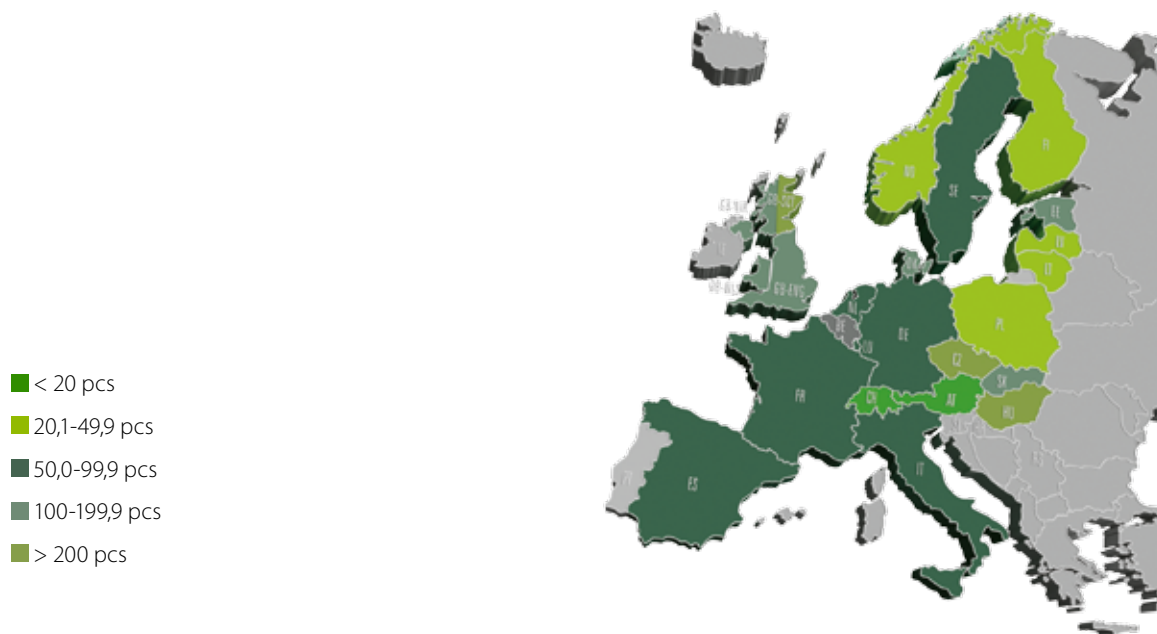
**Illustration No. 2. The average herd size in milk recording population in comparison between voivodships, according to data at 31st of December 2014 and 2015**



In order to compare Polish conditions and results of herds in milk recorded population we present a graph containing average data from different European countries below.

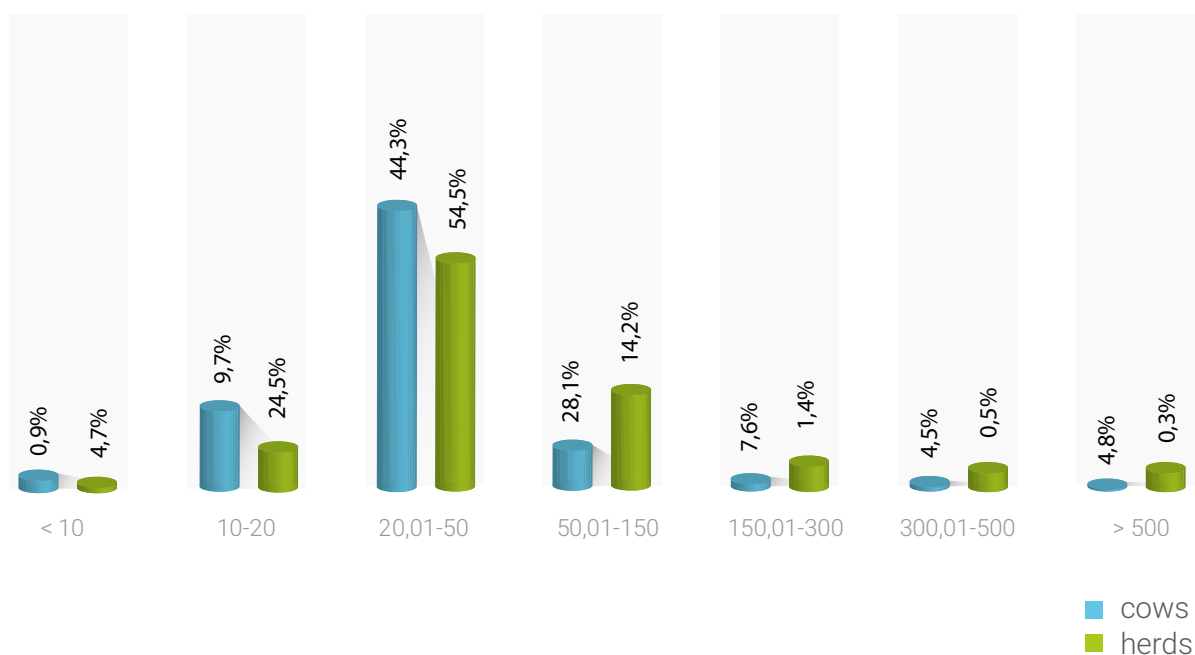


**Illustration No. 3. The average herd size in milk recording population in European countries, according to data on the ICAR website (February 2016)**



In comparison to the previous year we still observe a slight growth tendency in herd size. In 2015, 95% of recorded farms kept more than 10 cows. Most of the recorded herds, around 79%, were situated in the interval 10 – 49 heads per farm. According to information from 31st of December 2015, there were 16,3% of recorded herds consisting of more than 50 heads on average, which confirms that increasing tendency in the number of heads builds the increase of performance of a farm.

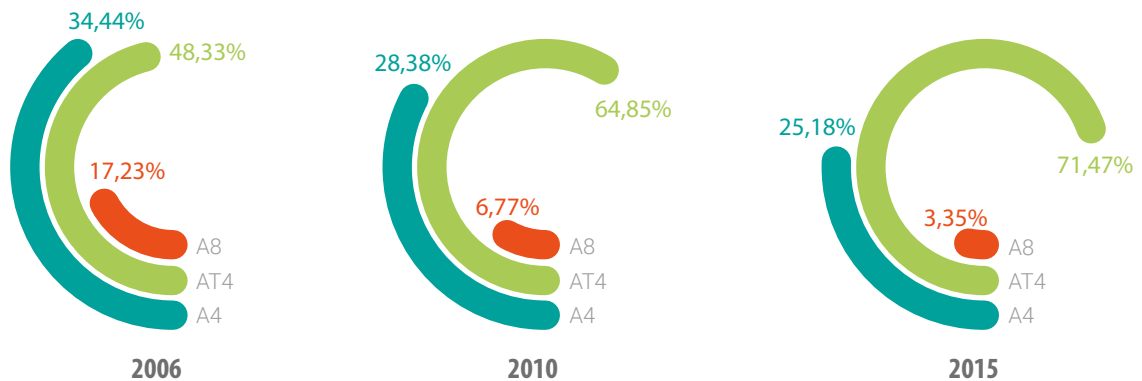
**Illustration No. 4 shows the breakdown of herds and cows number by herd size.**



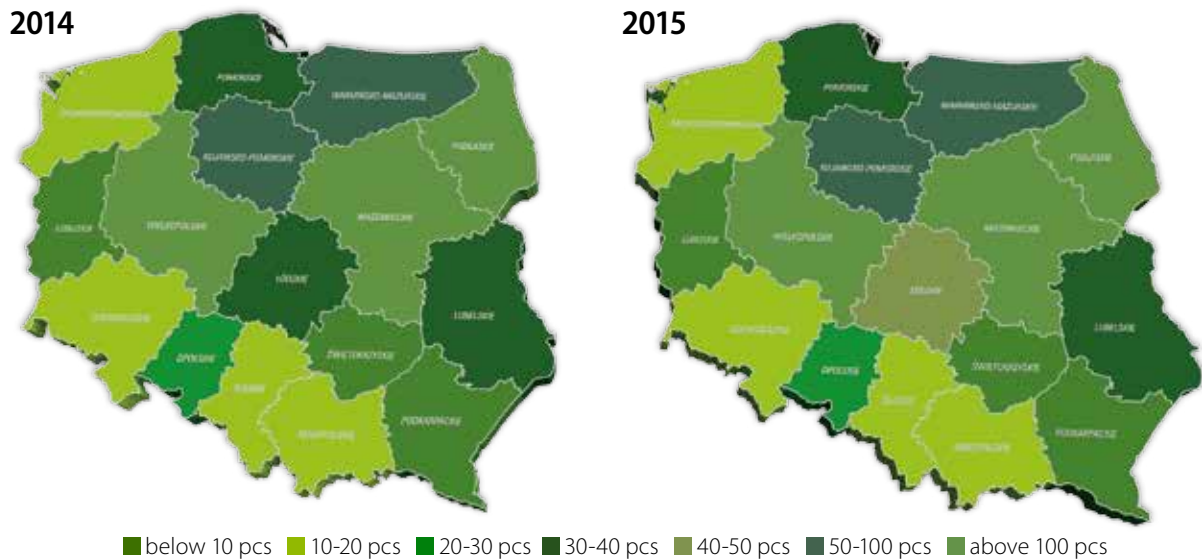
The current data from 2015 show, that the proportional participation of recording performance methods in Poland, are as follows:

A4	191 247 heads	25,2 %
AT4	542 935 heads	71,5%
A8	25 469 heads	3,3 %.

**Illustration No. 5** represents graphic drift of changes in the number of dairy cows recorded in different methods, on the basis of data from 2006, 2010 and 2015.



**Illustration No. 6** The average number of recorded cows in Poland in 2014 and 2015. According to voivodships



According to the current data **on average**, in 2015 there were **753.613 dairy cows** recorded in 20.969 herds, which in comparison to 2014 makes up an average increase in the active population by **20.372** animals, that means (+3 %).

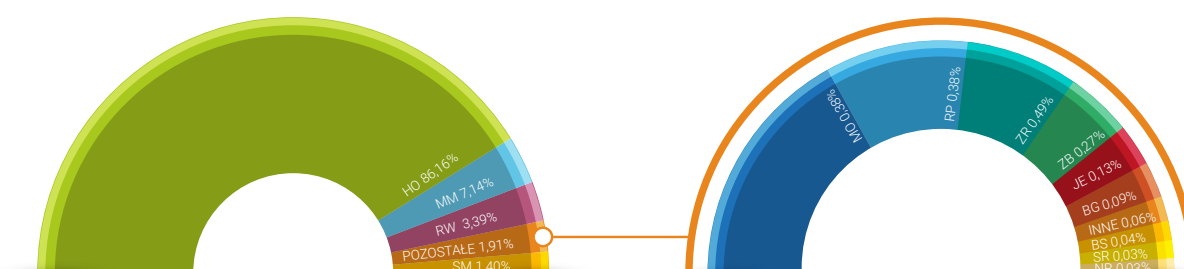
The predominant dairy breed recorded in 2015 in Poland invariably is the Holstein - Friesian (HO) - 86,16 % of the active population, however its % participation slightly decreased in comparison to 86,76% in 2014 and it seems to be a steady tendency upon last several years. On the other hand, there is still a growing trend to be interested in breeding coloured breeds such as: Simmental, Montbeliarde and indigenous robust breeds like Red Polish (RP) – typical for the mountains,

Polish Black-White (ZB), Polish Red-White (ZR) or White-back (BG) which, together with cross-breeds (MM) and other breeds make more than 10% of active cattle population.

The above mentioned direction shows that breeders are interested in cattle characterized with high resistance, longevity and also tolerance of poorer nutritional conditions and more difficult environment.

**Illustration No. 7 shows the breed structure in recorded population of dairy cattle in 2015.**

1,91% remaining breeds makes up:



The main aim of the milk recording is data collection and processing, in order to provide as many as possible accurate and credible data for farmers, which will be useful for the right decision making process in herd management.

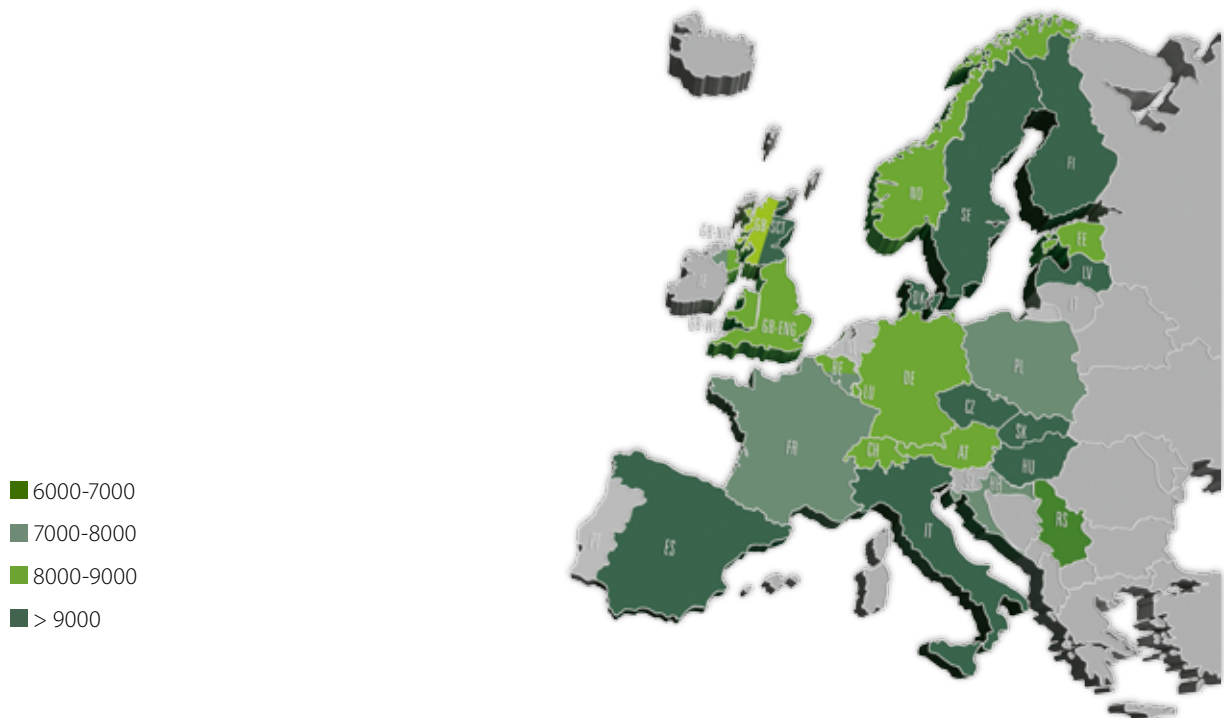
The comparison of milk yield during several last years in recorded population presents as follows:

Year	Average number of cows	Milk	Fat		Protein	
			kg	%	kg	%
2006	520 666	6 664	279	4,18	221	3,32
2007	526 888	6 688	282	4,22	223	3,33
2008	567 477	6 817	282	4,14	228	3,34
2009	579 910	6 935	289	4,17	231	3,33
2010	598 402	6 980	292	4,18	234	3,35
2011	625 015	7 135	295	4,13	236	3,30
2012	653 249	7 396	307	4,15	249	3,36
2013	679 029	7 441	310	4,16	250	3,36
2014	733 241	7 582	309	4,08	255	3,36
<b>2015</b>	<b>753 613</b>	<b>7 771</b>	<b>318</b>	<b>4,09</b>	<b>261</b>	<b>3,36</b>
+ / -	+ 20 372	+ 189	+ 9	+ 0,01	+ 6	+ 0,00

In 2015, in ranking of voivodships, where breeders achieved the best average results of kg milk performance, the best was Dolnośląskie with the **average milk yield of 8.684 kg of milk, 346 kg of fat and 292 kg of protein** and Lubuskie with the **average milk yield of 8.632 kg of milk, 338 kg of fat and 289 kg of protein**.

Next illustration shows again where Polish recorded herds are placed if we compare the average milk yield.

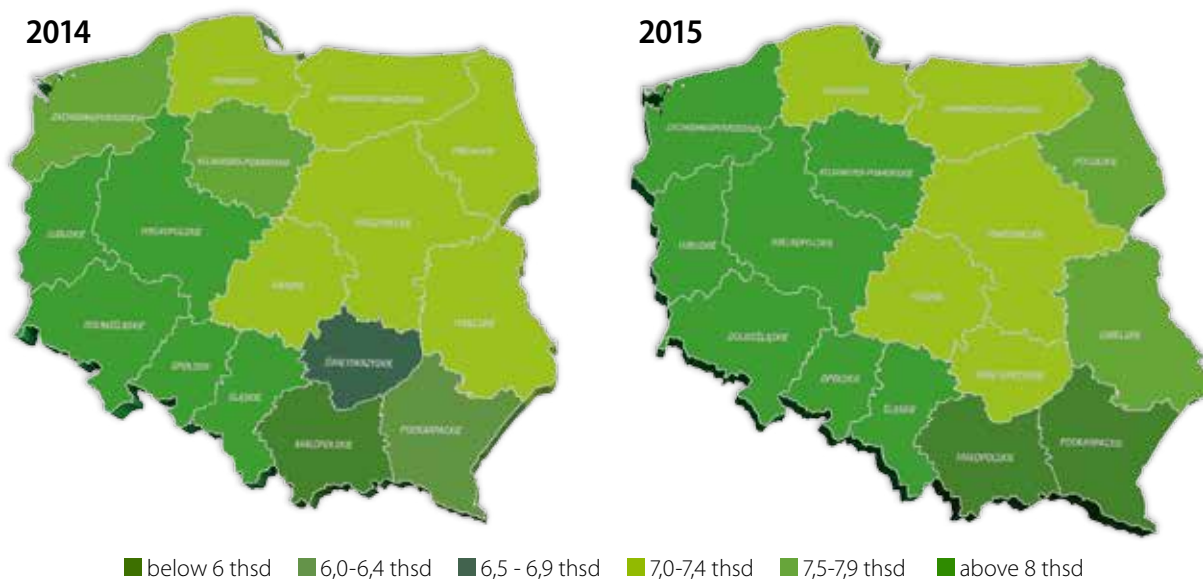
**Illustration No. 8 Average milk yield of recorded cows in different European countries, based on data on the ICAR website (February 2016).**



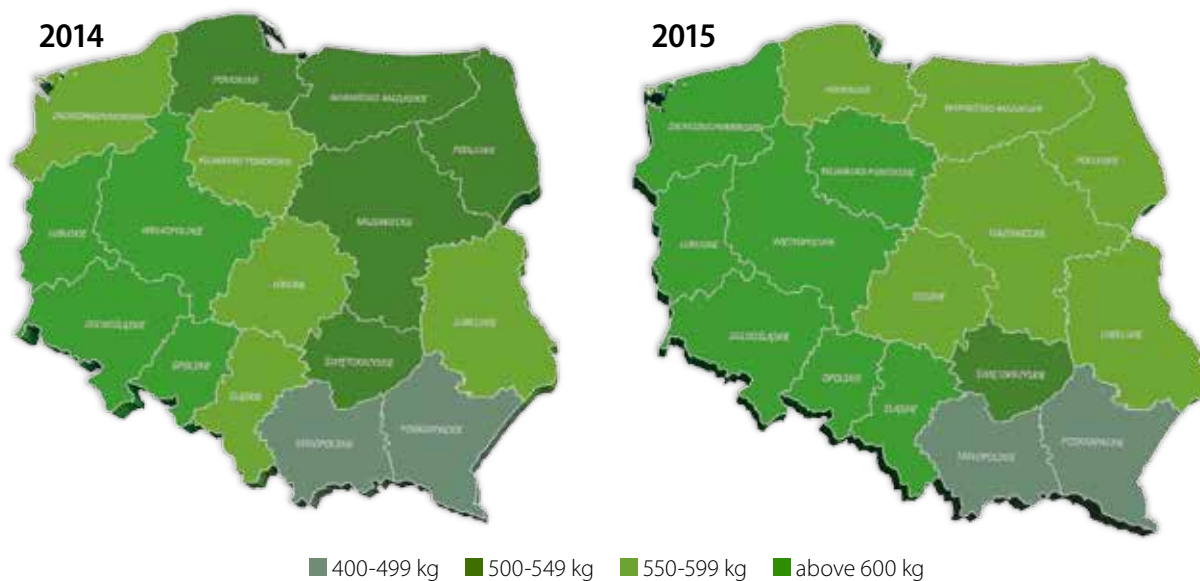
In order to sum up the introduction to tabular part of our publication, it is necessary to underline, that 35,6% of recorded cows in Poland produce 54% of milk bought by dairy industry.



**Illustration No. 8. Comparison of average milk yield in recorded population in 2014 and 2015 according to voivodships.**



**Illustration No. 9. The average of yield of fat and protein sum in recorded population in 2014 and 2015, according to voivodships.**



In order to guarantee the highest quality of provided services, last year our supervision inspectors carried out 1 391 controls of correctness and compliance of test milking carried out by the technicians with the existing procedures and 2 540 other checks of work quality of the technicians, including the correctness of breeding documentation. Besides the above mentioned, 710 repeat recordings were performed.