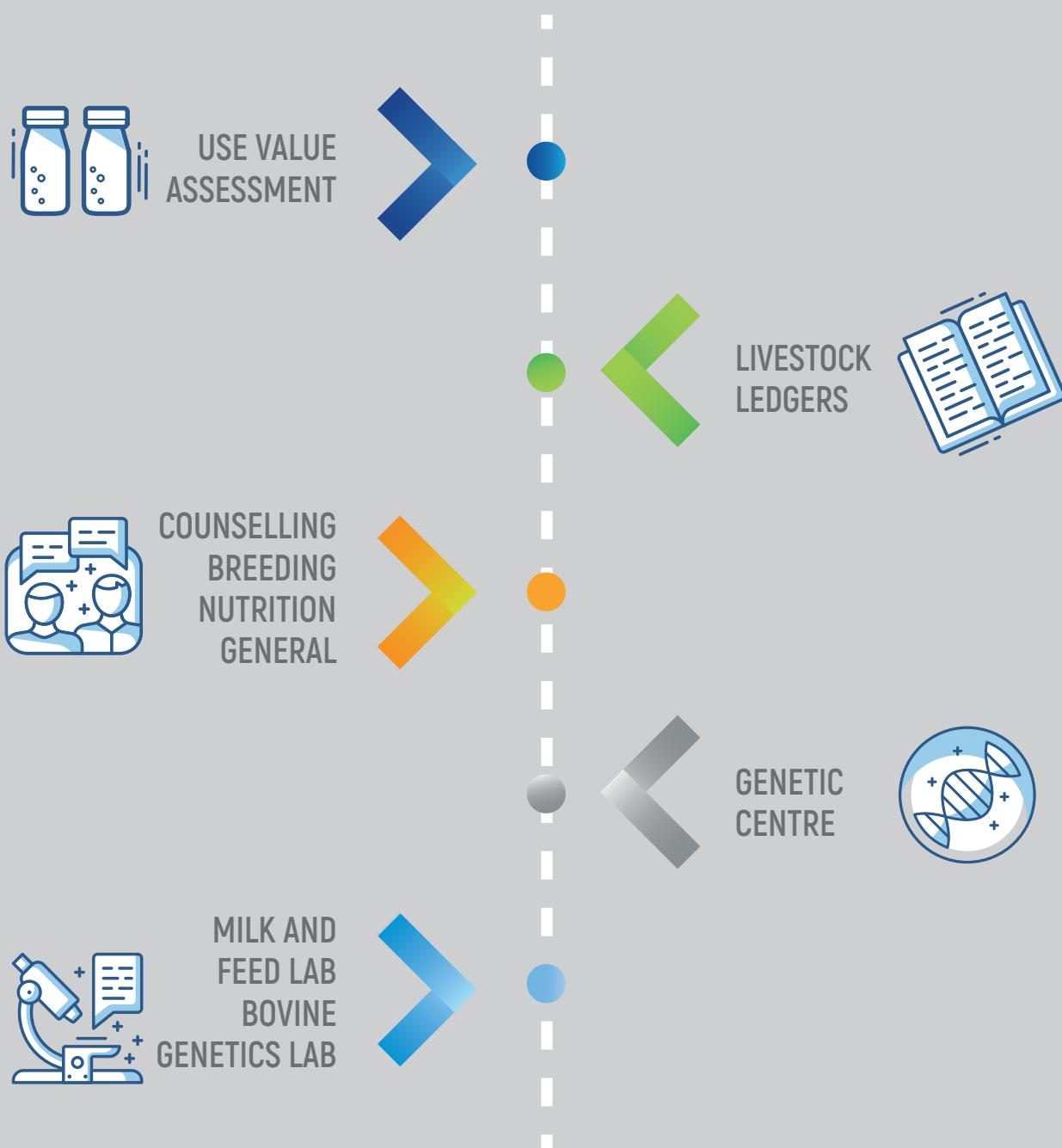


Evaluation and breeding of dairy cattle

2019
DATA



NEW DIMENSION OF POSSIBILITIES



our effort – your success

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Evaluation, breeding and bovine genetic improvement – our common goal for success

Through several decades of hard work and adaptation to market conditions in dairy production, the Polish Federation of Cattle Breeders and Dairy Farmers has achieved expected results, and become the national leader in agricultural services.

The moment the EU market became our immediate competition, we have managed to stand up to it, which was made possible not only because Polish dairy farmers and breeders have remained loyal to their local services, but most importantly due to professionalism and reliability of our solutions and products which offer professional support in these farmers' daily work.

The fact that our solutions have so far been their priority choice, has also been also determined by our focus on development which has given us the opportunity to create new, state-of-the-art tools for cattle herd management to satisfy our customers. The Federation offers comprehensive, customised services. We currently advise producers on many levels and what is most important, with huge success. Decades of hard work have resulted in us being associated with quality, technological potential, innovation, progress and reliability.

Among the modern flock management methods, the ability to read and apply the data contained in the performance reports should first be mentioned. Performance reports constitute the basic source of information about the herd and play a special role in advisory work, e.g. in the field of feeding dairy cattle. It should be remembered that feeding cows without analyzing such data cannot be effective. Many users of modern milking systems do not know how to efficiently use the extensive data these systems provide, and still heavily rely on the result reports of the Polish Federation. It is these result reports that organize the data and make it possible for the farmers to make the right decisions. Take the ketosis monitoring for example. Not only does it make identifying cows at risk possible, but also informs the breeder of the condition of the entire herd. Our Federation provides reports of unsurpassed excellence and reliability. The Polish have a tendency to belittle their home production, yet in this particular case there is no need to do so. I am proud of the work our employees provide to ensure top quality and excellence.

We have also attended to the development of the breeding program which helps not only monitor and improve the males used for insemination, but also increase the potential of females producing milk. The dairy farmers have obtained the whole range of tools they can use to increase milk production. I must admit the results we achieved were surprising both for us, and our foreign business partners. The Polish Federation has developed a selection base for females from 400,000 to over 800,000 animals. With the establishment of the PFHBiPM Genetic Center we aimed at further improvement of the dairy cattle population. The Laboratory of Bovine Genetics promotes genotyping of PHF females. The general goal for us was to accelerate the genetic progress in the Polish dairy cattle breeding, which improved the competitiveness of breeders on the European milk market. Genomic technology allowed us to significantly improve the rate of genetic progress of our cattle, and the introduction of the Economic Breeding Index into breeding practice gave milk producers the opportunity to select the animals that have high genetic merit.

Cattle breeders all over the world have been under increasing pressure. They, to say the least, often face accusations of their business having a negative environmental impact. These accusations sound largely unmerited, since animal husbandry is not the top polluter as we can read from the infamous classification lists. There are many other areas in the world economy that stand way ahead of us in terms of negative environmental impacts.

We have recently been having to deal with the accusations that are brought against us by animal rights defenders who have been granted unprecedented authority to interfere in our business, yet I do so believe that the law will be on our side and food production will regain its due luster. We cannot let others deprive us of our dreams or take away what we love. We should not let ourselves be intimidated. We invest a lot of money in breeding our herds, which we do primarily out of concern for our animals, and it should not be overlooked that our work benefits the society.

The Polish Federation of Cattle Breeders and Dairy Farmers is proud to present you with an annual summary of its activities for 2019, showing above all the results of the evaluation of the dairy cattle utility value, including those breeds that are not dominant in milk production in our country, but with which many dairy farmers work on daily basis. In your free time I would like you to analyze the production results and make use of them. Let us not forget that it is the way you acquire, manage and use information from milk production and breeding will determine your success.

President of the Polish Federation of Cattle Breeders and Dairy Farmers

Leszek Hądzlik

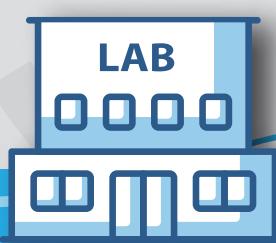




2019 DATA



ASSESSMENT DAIRY CATTLE



WITH PFHBiPM



BARN
20 644



COWS
820 653



MILK
8 530 KG

FAT
347 KG
4,07%

PROTEIN
292 KG
3,42%

NO ASSESSMENT
COW EFFICIENCY **5 318 KG MILK**

"CALCULATION BY PFHBiPM"





2019



COUNSELLING NUTRITION



CLIENTS

1 000



COUNSELLING VISITS

>3 000



120 000

COWS MONITORED



13

CATTLE FEED
SPECIALISTS

OPERATION ALL AROUND POLAND

WITH PFHBiPM

INDEPENDENT AND OBJECTIVE SOLUTIONS IN NUTRITION AND FEED SCIENCE

WE OFFER

- FEED RATIONS
- FEED SCIENCE
- FEED ESTIMATES
- PREVENTION OF METABOLIC DISEASES
- BCS
- NUTRITION REPORT
- FEED ESTIMATES
- ECONOMICS OF NUTRITION



NEED HELP?
NEW OPPORTUNITIES?
WE FIND THEM FOR YOU

For more information, see the nutrition advice section at www.pfhb.pl



2019



GENERAL COUNSELLING



2 670

COUNSELLING VISITS



2 100

CLIENTS IN THE PROGRAM



260

TRAININGS CONDUCTED



13

COUNSELLORS
OPERATING ALL AROUND POLAND

DEVELOPMENT AND INCREASE IN PRODUCTION **PROFITABILITY CUSTOMISED SUPPORT AND INDIVIDUAL CONSULTATIONS FOR FARMERS**

WE OFFER

- MILKING HYGIENE
- MASTITIS PREVENTION
- FARMING PLANS
- NUTRITION OF DAIRY CATTLE
- OPTIMISING ANIMAL MAINTENANCE AND WELFARE
- ASSESSING PROJECTS AND CONDITIONS IN CONSTRUCTION AND MODERNIZATION OF AGRICULTURAL FACILITIES



**WE ARE A TEAM OF EXCEPTIONALLY
EFFECTIVE AND EXPERIENCED
PRACTITIONERS**

2019



25%

ASSESSED COWS
IN SOL



570 000

REGISTERED ACTIVITIES



3 500

USERS

> 20%

OFF FOR ASSESSMENT

FEEL FREE TO CONTACT US

7:00-20:00 MONDAY – THURSDAY

7:00-15:00 FRIDAY

PHONE NUMBER: **22 290 00 92**

WITH PFHBiPM CONVENIENCE AND PROFESSIONALISM

WE PROVIDE

- RESULTS OF MILKING TRIALS
- RECORD KEEPING FOR ARIMR
- INTERACTIVE NUTRITION REPORT
- RECORDING OF CURRENT ACTIVITY
- INTRODUCTION OF INSEMINATION TREATMENTS
- ANIMAL HEALTH RECORDS
- CUSTOMISED ANALYSES AND DATA LISTS
- HERD WORK AND TREATMENT CALENDAR

**SOL A MODERN WEB-BASED
HERD MANAGEMENT
APPLICATION INCLUDED
IN THE COST OF YOUR
ASSESSMENT**



FOR MORE INFO AND PROGRAM
REGISTRATION GO TO
WWW.STADOONLINE.PL

PAG

2019



HERD PRODUCTIVITY PAG TESTING



CLIENTS

17 699



TESTS CONDUCTED

193 103

98%

ACCURACY OF PAG TESTS
IN COMPARISON WITH ULTRASOUND

WITH PFHBiPM

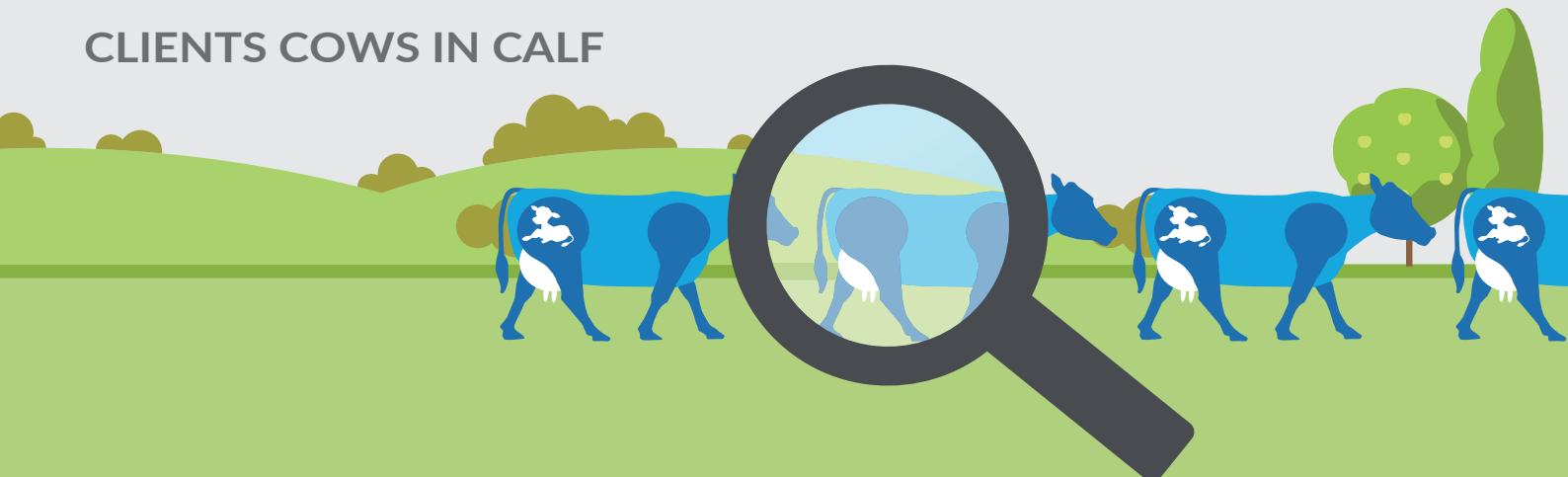
AS SOON AS **60** DAYS
FROM THE LAST CALVING

28 DAYS AFTER INSEMINATION
OR MATING



130 248

CLIENTS COWS IN CALF



**CONTROL THE REPRODUCTION
OF YOUR HERD QUICKLY,
EASILY AND EFFECTIVELY**

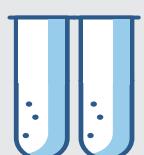
For more info see the lab section at www.pfhb.pl



2019



LABORATORIES
MILK AND FEED



7 750 772

MILK CONTENT ANALYSES



7 770

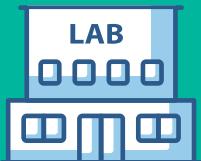
FEED SAMPLES TESTS



193 103

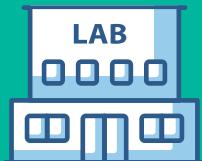
PAG TESTS

4



ACCREDITED
MILK LABS

2



MODERN
FEED LABS

WITH PFHBiPM QUALITY AND ACCURACY

WE GUARANTEE

- RELIABILITY OF RESULTS
- UNBIASED RESULTS
- INDEPENDENCE
- MEASUREMENT CONSISTENCY
- ACCURACY OF MEASURING INSTRUMENTS
- HIGHLY QUALIFIED PERSONNEL

WE WORK UNDER

QUALITY MANAGEMENT SYSTEM IN TESTING
LABORATORIES ACCORDING TO THE
PN-EN ISO/IEC 17025:2018-02 STANDARD



WE HAVE

- PCA ACCREDITATION FOR MILK LABORATORIES
FOR THE TESTING OF RAW MILK – PN-EN ISO/IEC 17025:2005
STANDARD
- INTERNATIONAL COMMITTEE CERTIFICATE
FOR ANIMAL PERFORMANCE EVALUATION (ICAR).

AB 472
AB 822
AB 470
AB 473

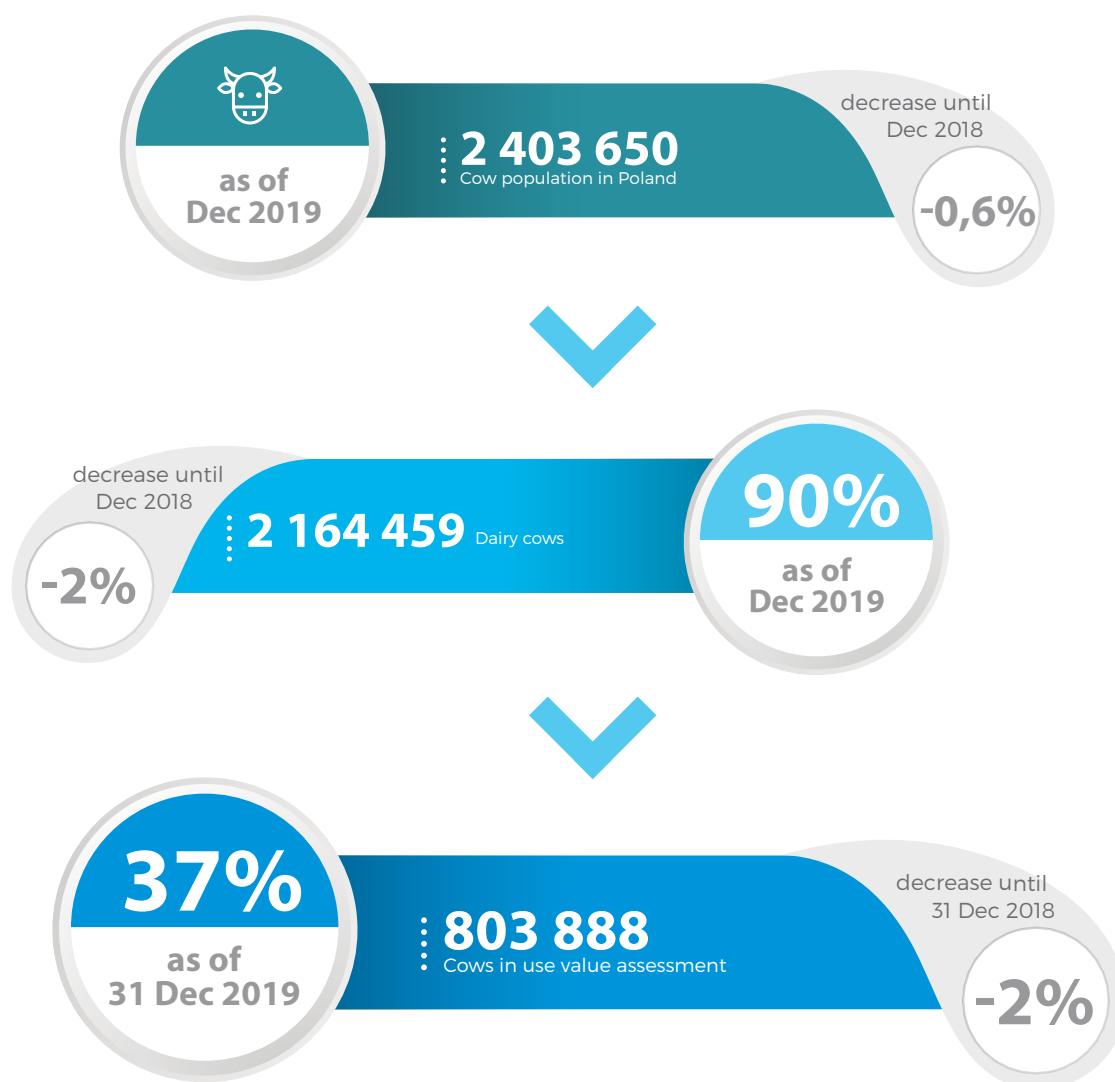


FOR MORE INFORMATION
VISIT THE LAB SECTION
AT WWW.PFHB.PL

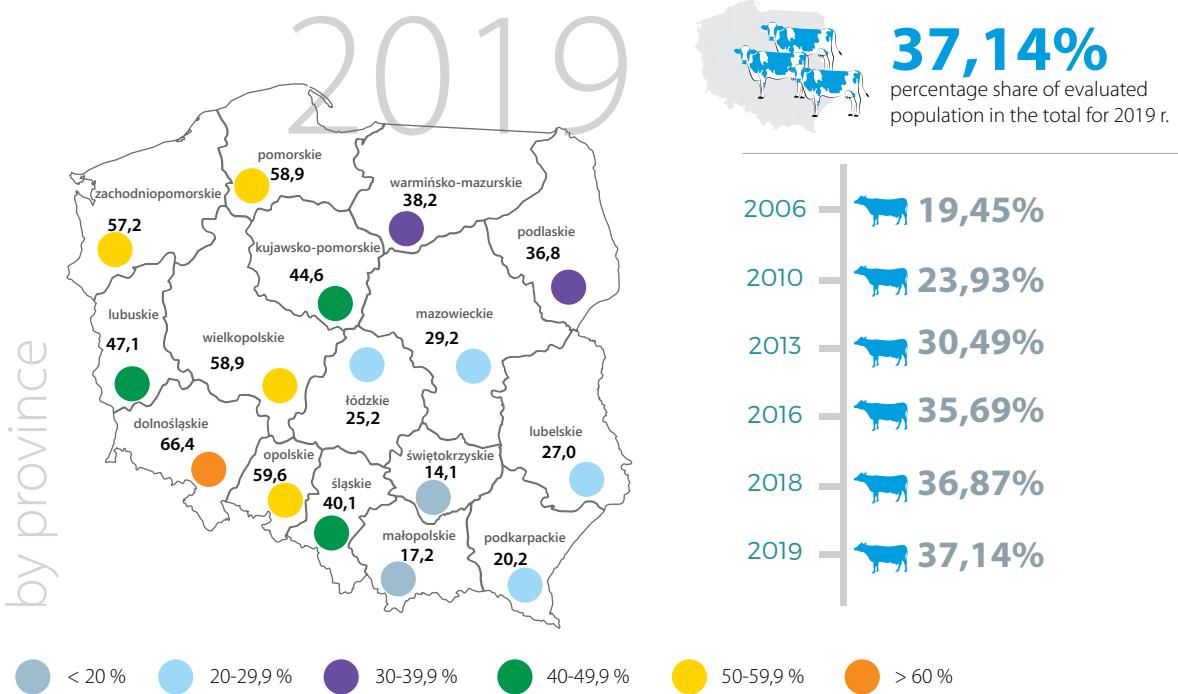
Utility value of dairy cows – assessment results analysis

The Institute of Agricultural and Food Economics - PIB reports that in 2019 and most likely in the first half of 2020 a downward trend in the number of dairy cows will be observed. The reduction of the stock is a result of progressive restructuring and modernisation processes in farms and difficult production conditions. In 2019, agroclimatic conditions were unfavourable, and a small amount of precipitation negatively affected the supply and quality of roughage. In the dairy sector, the restructuring processes of the raw material base will continue. The dairy industry will strive to reduce transaction costs when purchasing milk, but at the same time it will generate high demand for the raw material. The concentration of the raw material base will reduce the number of suppliers and at the same time increase the average volume of deliveries from the farm.

Population of cows in Poland

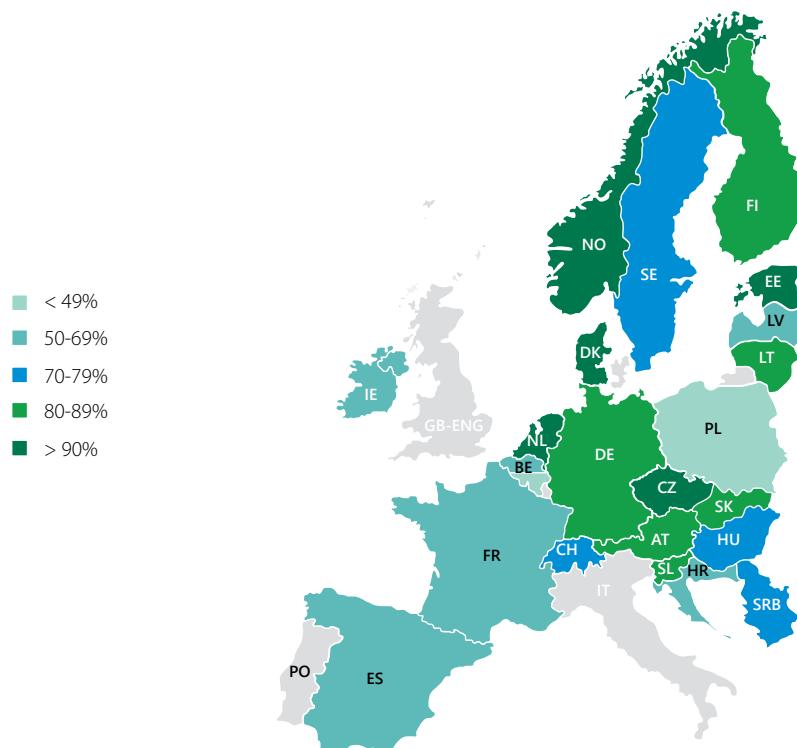


**Percentage share of the evaluated population in the total number of dairy cows,
as of 31 December**



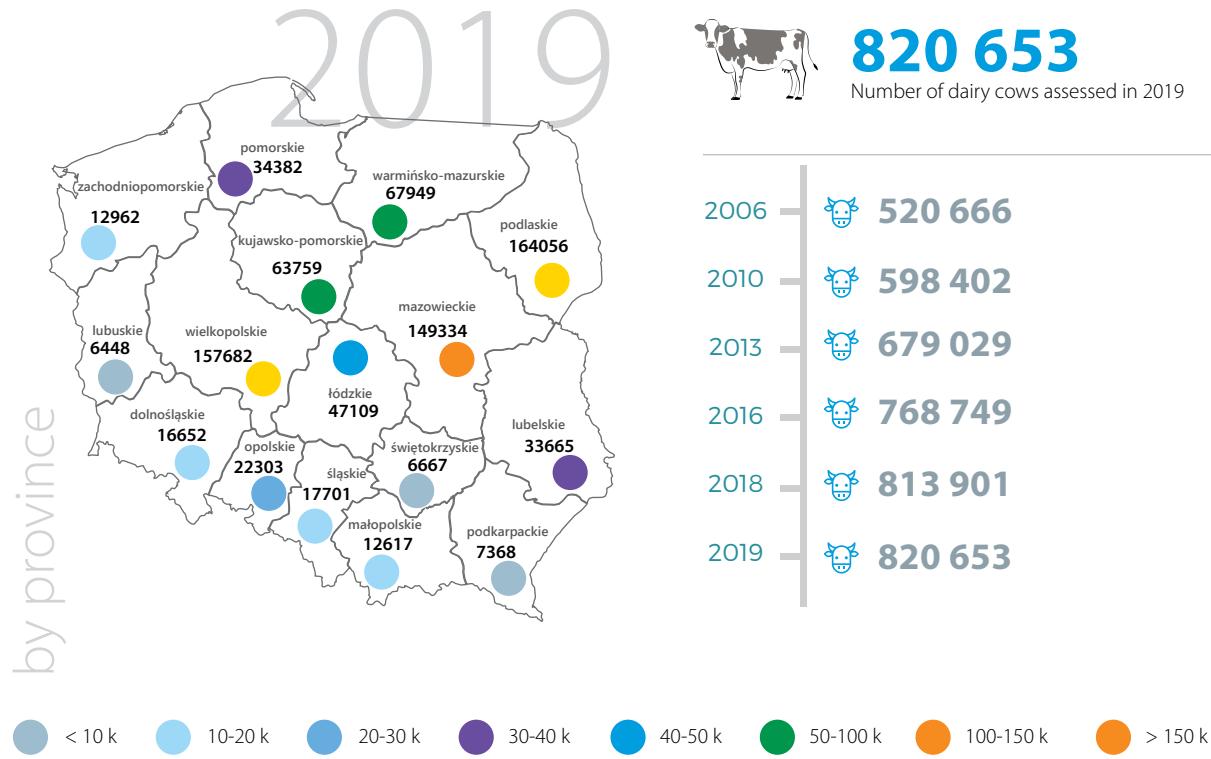
Share of cows evaluated in total population in selected European countries

by the available ICAR data

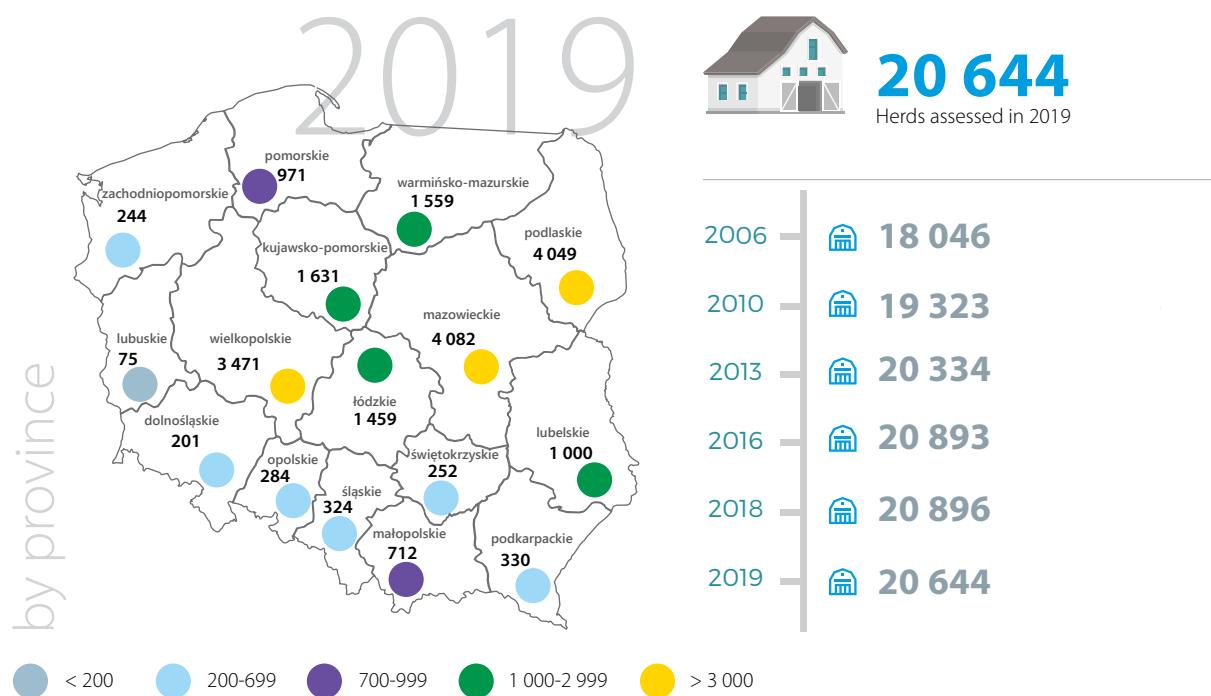


The active population of dairy cows is constantly growing. This process is most rapid in the regions where the commodity production is greatest and the conditions for milk production, both natural and economic, are most favourable. More information in the tabular part.

Dairy cows

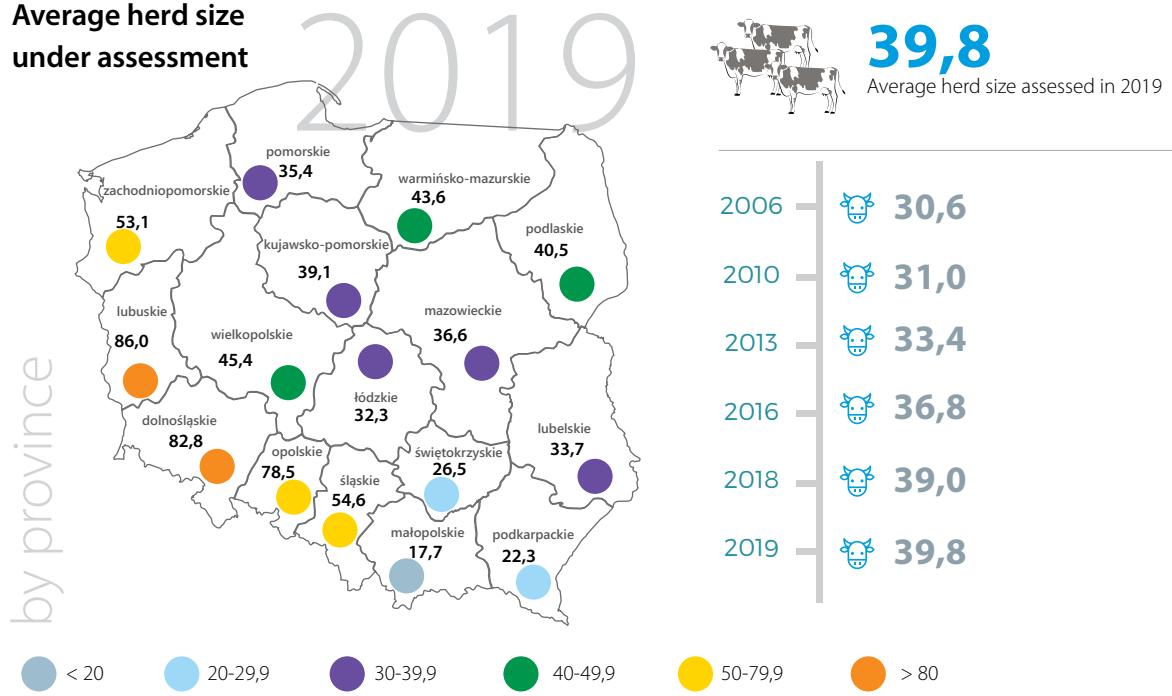


Herds under assessment

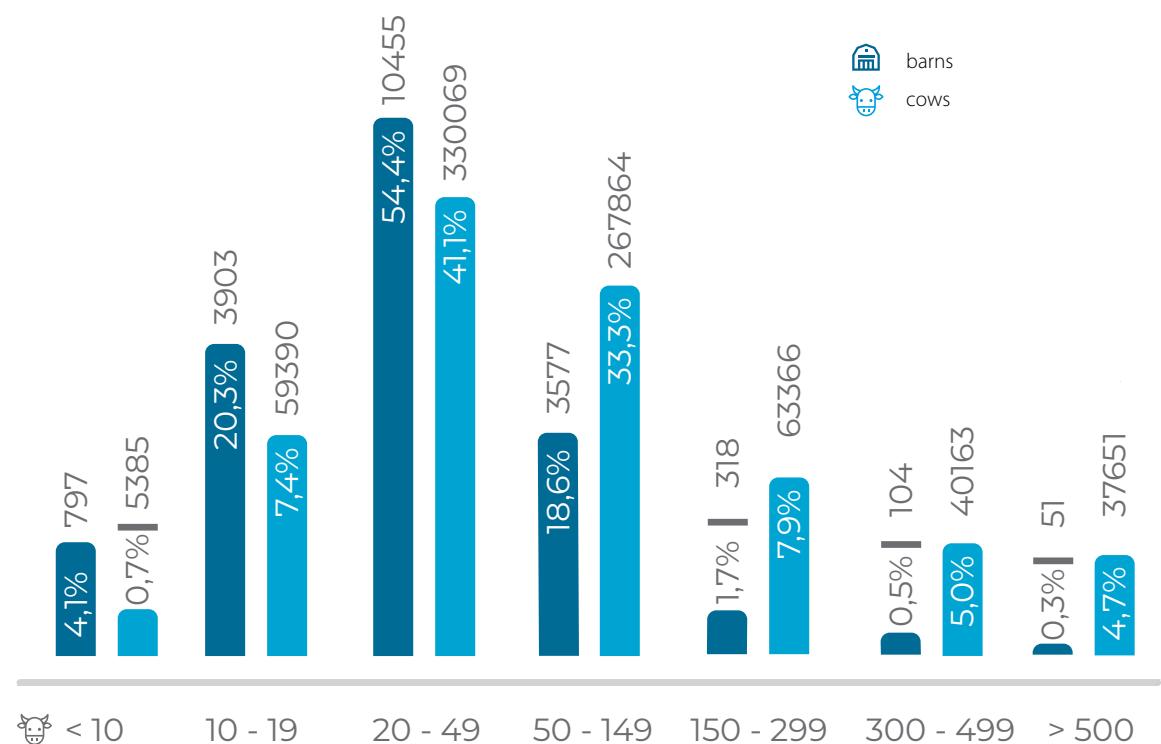


The progressive process of concentration of dairy cow husbandry clearly influences the changes in the size structure of herds assessed in Poland. Specialisation of dairy farms is associated with an increase in stocking density in the barn, as it is one of the key elements leading to a reduction in unit production costs, increased profitability and competitiveness of milk production.

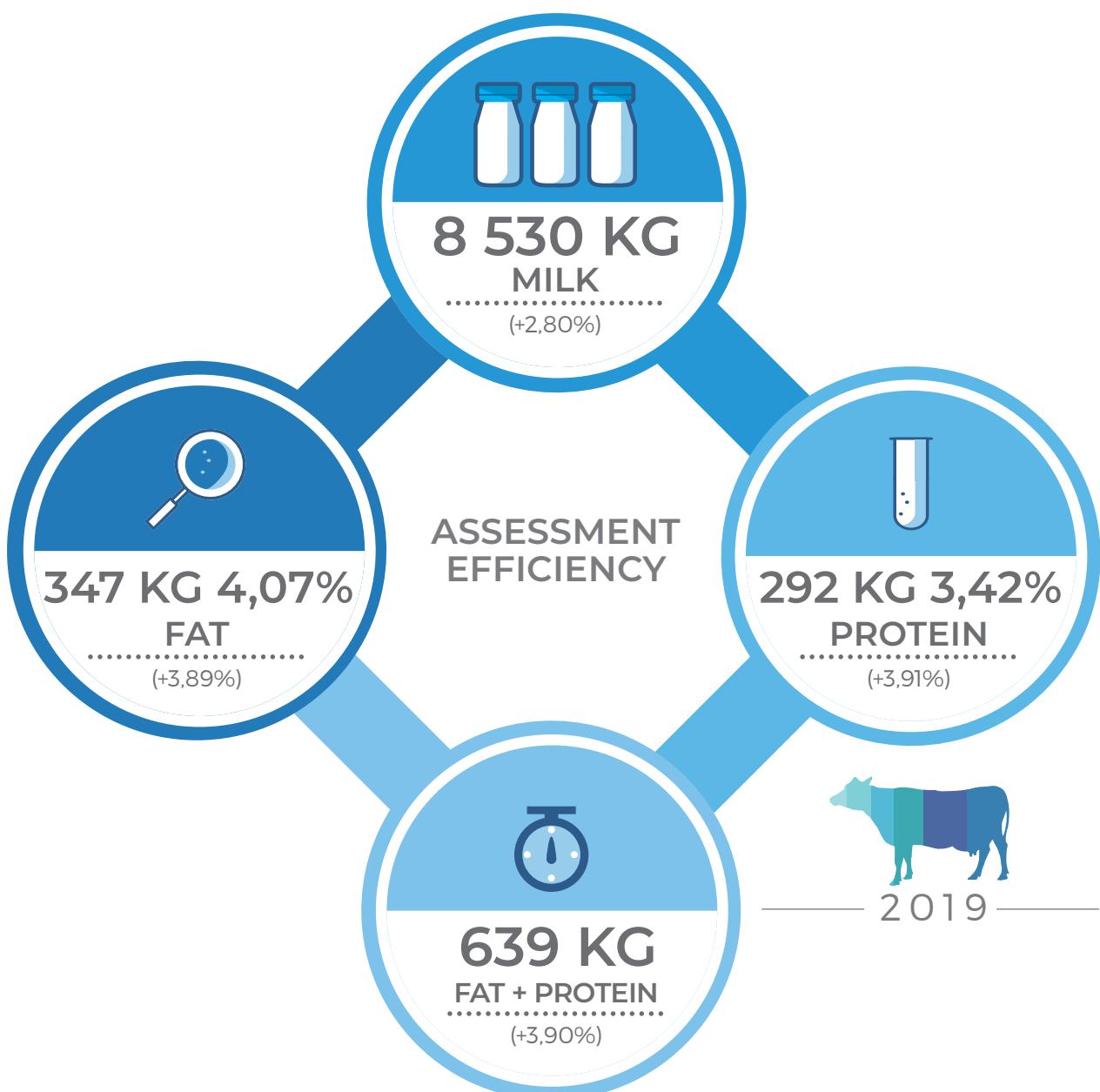
Average herd size under assessment



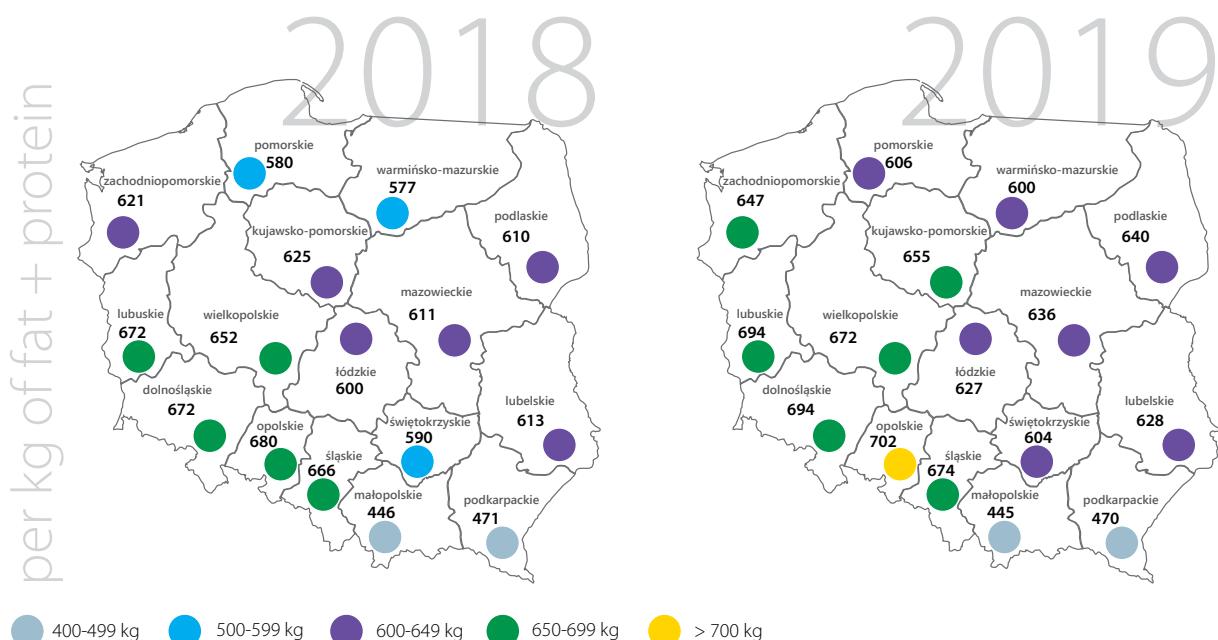
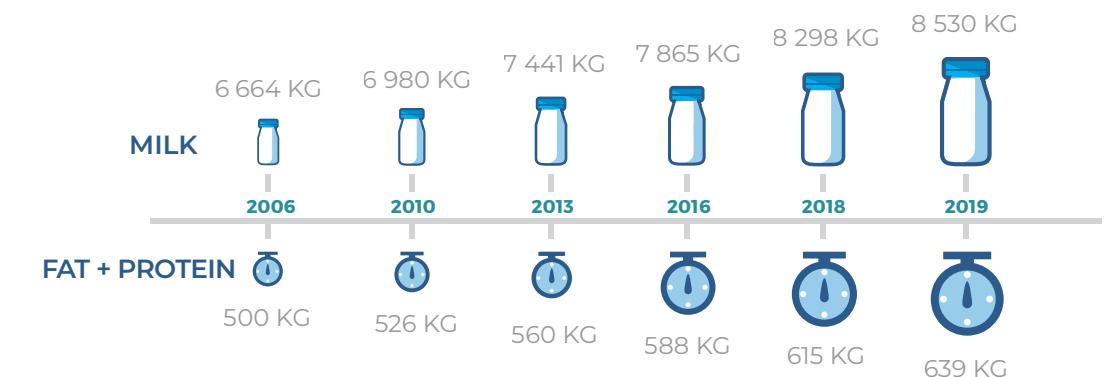
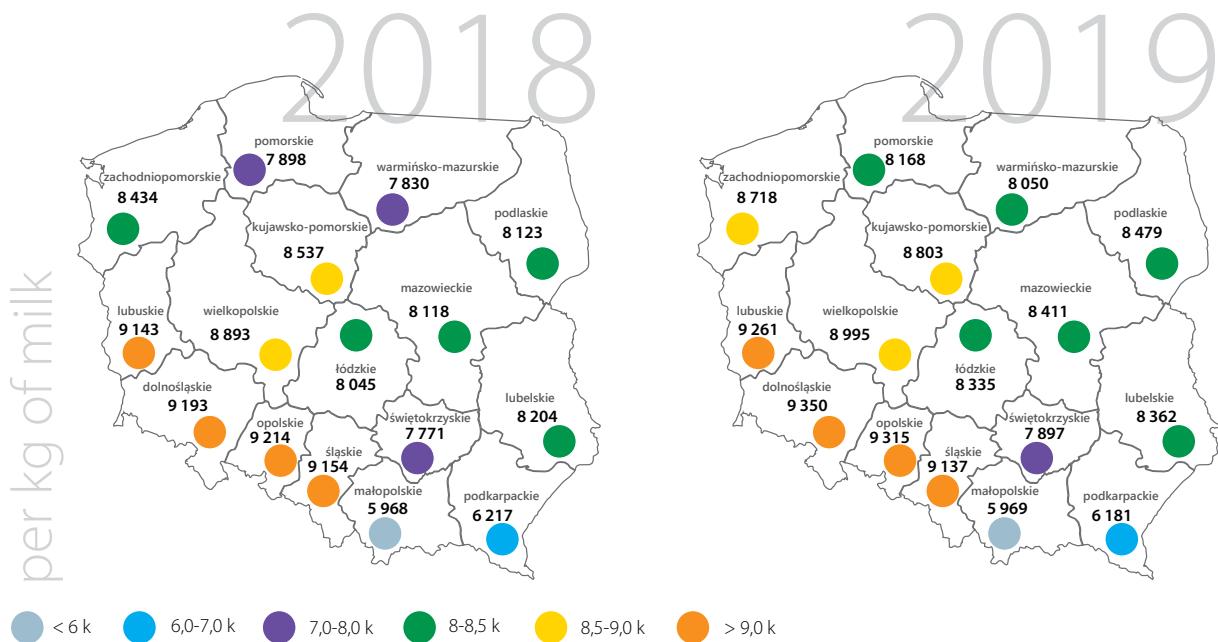
Structure of herds evaluated as of the end of December 2019



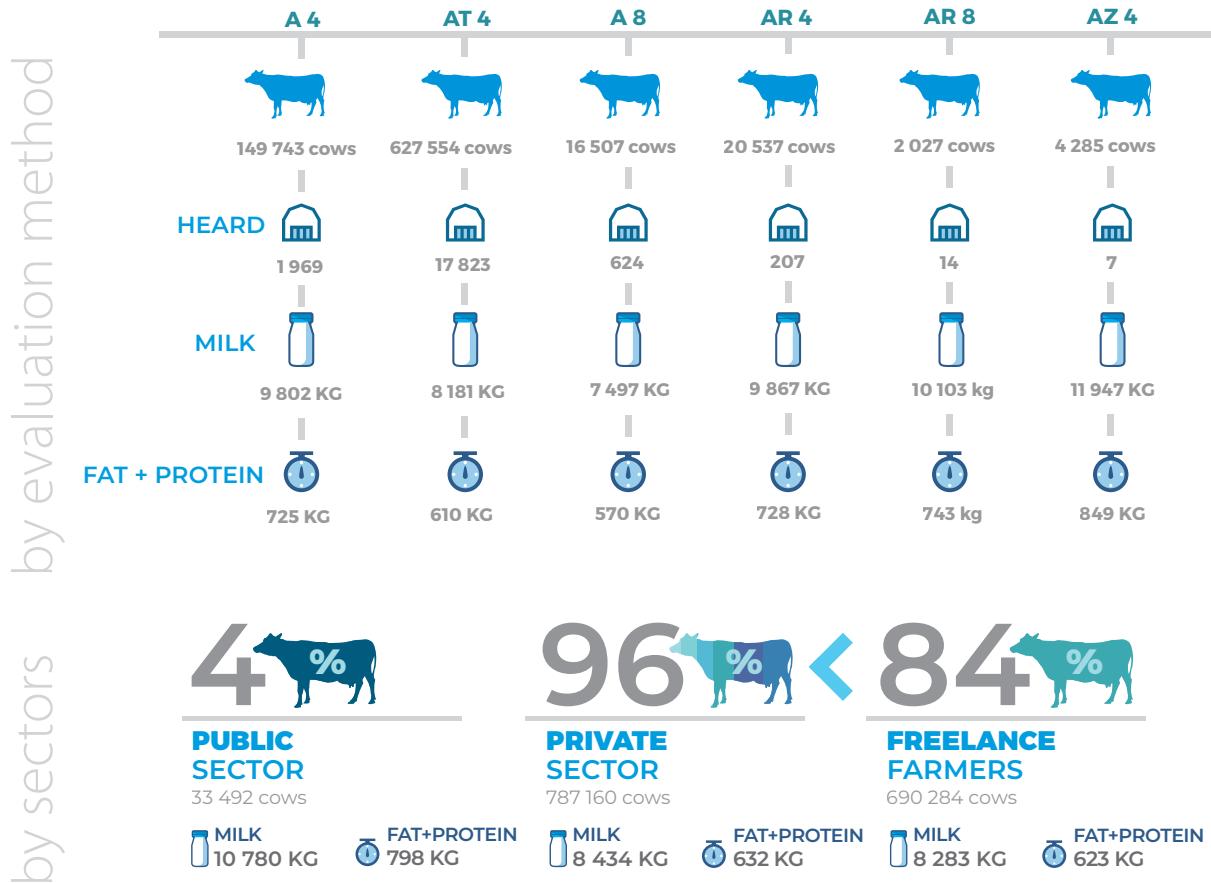
The reduction of herds and the decrease in the number of dairy cows in Poland is compensated by a systematic increase in their milk yield. IERiGŻ-PIB states that the average productivity of dairy cows depends on the progress of modernisation and restructuring of the dairy raw material base, weather conditions during the growing season and profitability of milk production. Therefore, the Institute verifies that the number of dairy cows in the herd of dairy cows will increase under the control of their utility, which are characterized by high productivity. **The productivity of the evaluated population is largely influenced by the combined activities of both breeders and PFHBiPM. Only consistent and joint breeding work will lead to the achievement of the goal. The improvement of herd economics, progress in milk production and rational herd management is based on the knowledge provided by the evaluation of the use value.**



Cows evaluated – average yield per kg of milk and total kg of fat + protein

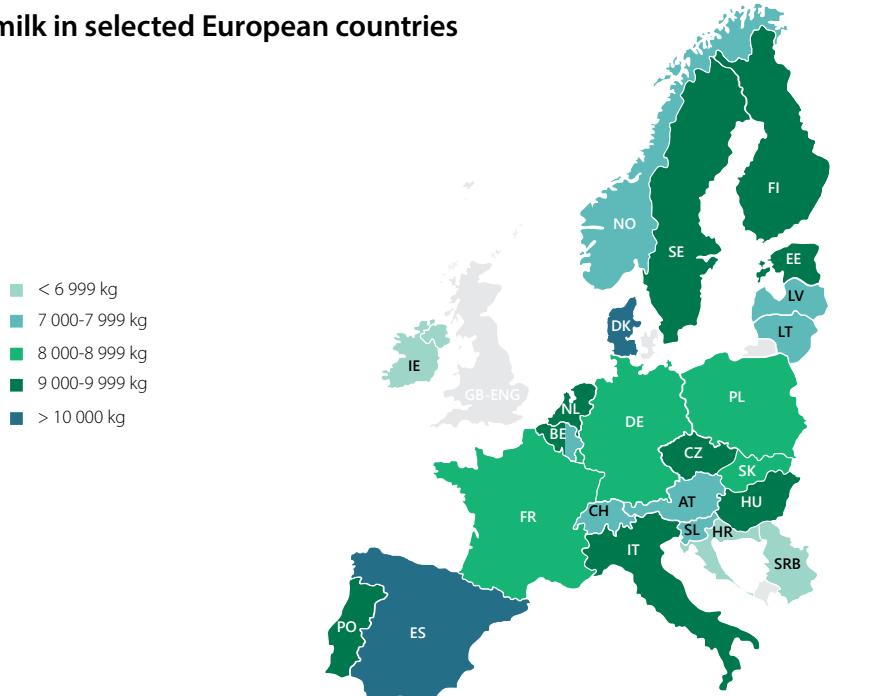


Cows evaluated – average yield per kg of milk and total kg of fat + protein



Average yield per kg of milk in selected European countries

according to icar



ASSESSMENT OF USE VALUE

precise and useful tool optimising operations responsible for effective management of breeding and milk production.



PFHBiPM – new dimension of possibilities



820 653 cows assessed

37% of dairy cow population in Poland

with average performance
8 530 kg of milk from 1 cow



2019 produced
> 7 mln ton of milk
which means:



54%

Raw material purchased
by the dairy industry

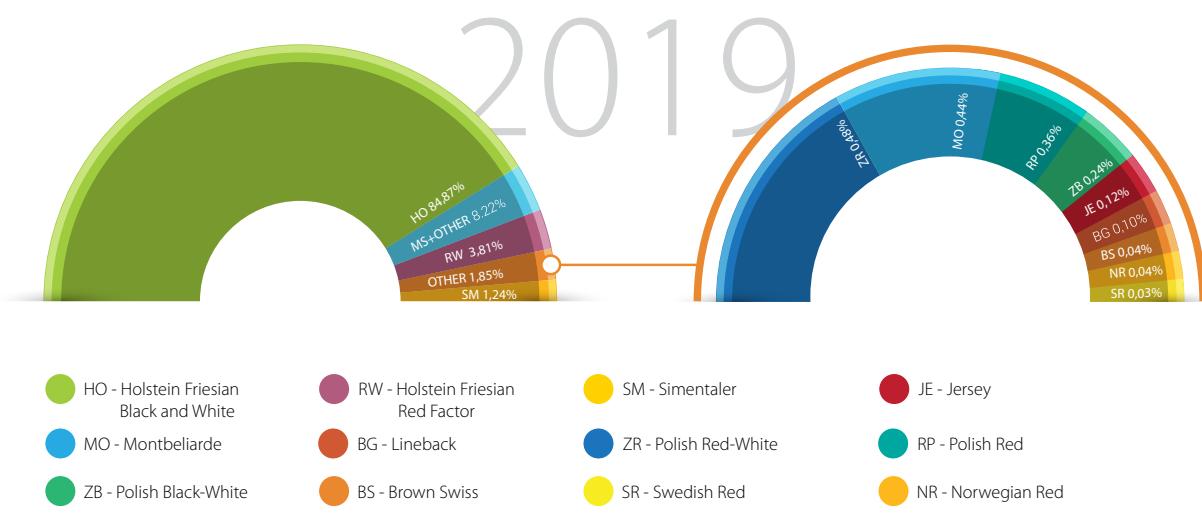


45%

Domestic raw milk
production

The efficiency of milk production is determined by biological and technological progress. There is a growing interest in animals of high genetic value, with individual **types and breeds of dairy cattle giving a number of opportunities to choose and improve the traits that the breeder places on in his breeding**. The PFHBiPM, by giving breeders innovative tools and knowledge to conduct breeding work and selection in the herd, indirectly improves the performance of animals in the active population.

Breed structure of dairy cows under evaluation

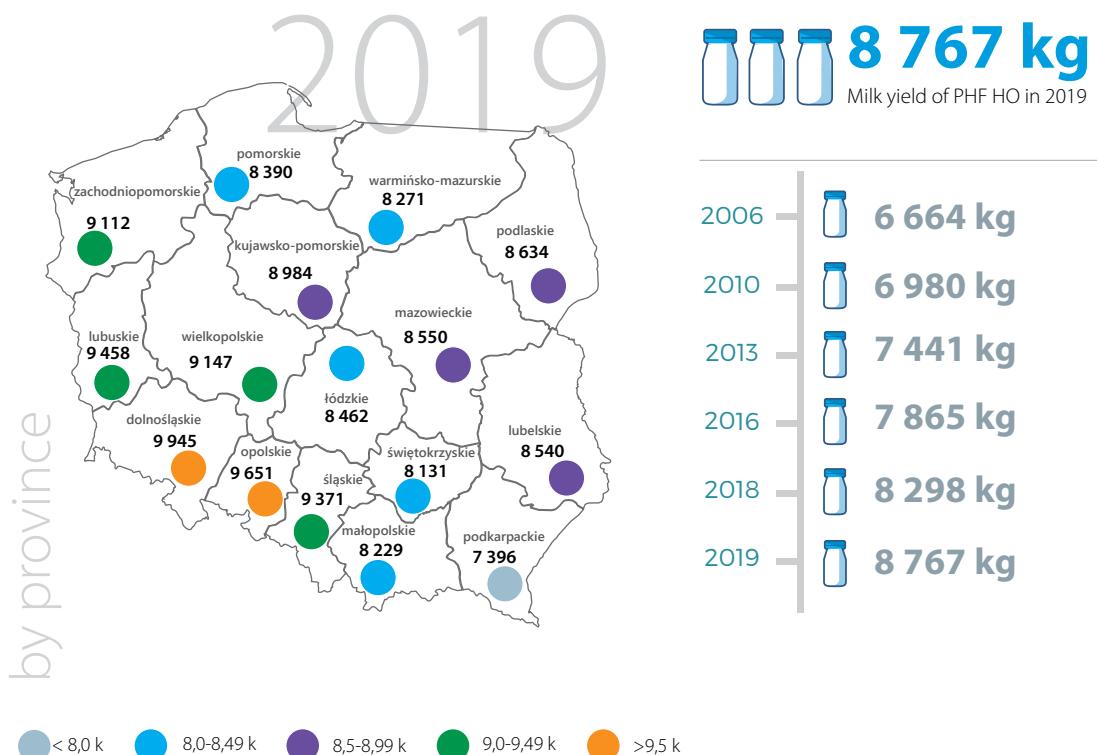


Cows assessed – breed tendencies

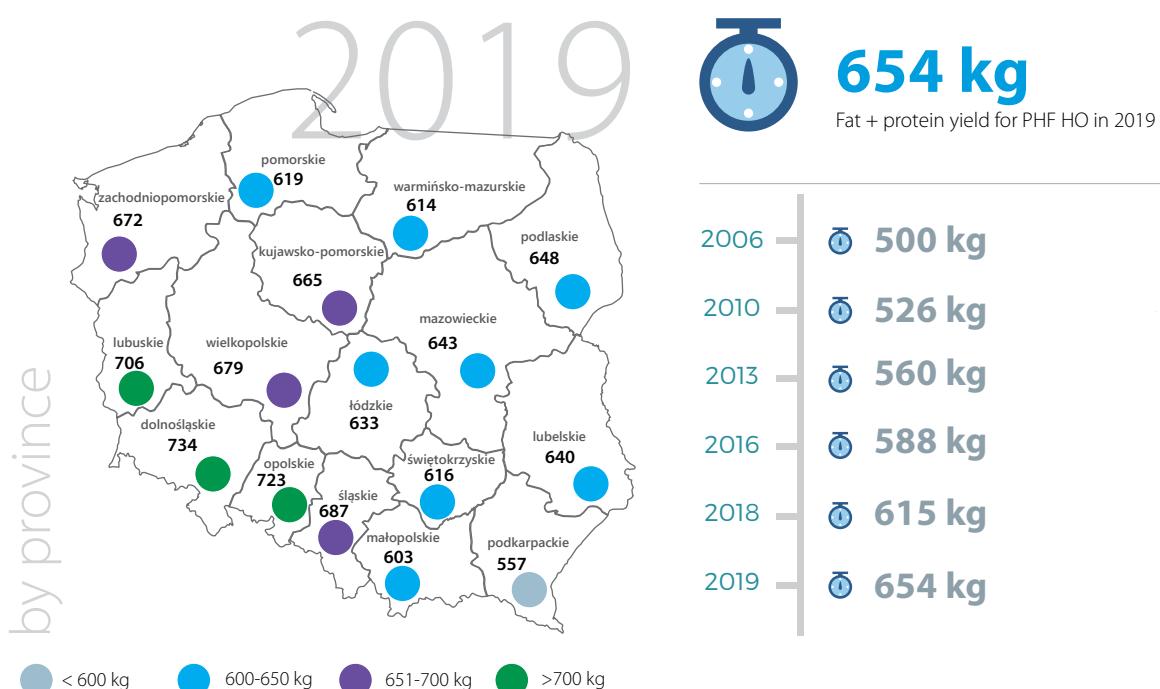
breeds assessed	number of cows	milk kg	fat kg	fat %	protein kg	protein %	fat + protein kg
Holstein	696 953,6	8 767	355	4,05	299	3,41	654
Red Holstein	31 678,2	7 879	329	4,17	273	3,46	602
Simmental	10 382,7	6 352	266	4,19	221	3,48	487
Red Polish	2 909,1	3 559	153	4,29	121	3,39	274
Jersey	1 009,2	6 497	333	5,12	251	3,86	584
Montbeliarde	3 528,2	8 101	328	4,05	287	3,54	615
Whiteback	783,4	3 968	162	4,07	132	3,33	294
Polish Red and White	3 943,0	4 398	182	4,14	145	3,29	327
Polish Black and White	1 999,3	4 559	188	4,13	152	3,33	340
Brown Swiss	317,1	6 450	277	4,30	231	3,58	508
Swedish Red	277,5	7 647	339	4,43	279	3,65	618
Norwegian Red	339,2	7 534	329	4,29	265	3,52	588

The Holstein-Friesian Black-and-White breed is very common in Poland and worldwide. It is a breed with a typically milky direction with a genetically programmed, exceptionally high production potential. Genetic predispositions ensure a theoretically high production, however, it is worthwhile to provide the animals with an equally high level of welfare.

Rated cows – average yield per kg of milk from the PHF black-and-white breed

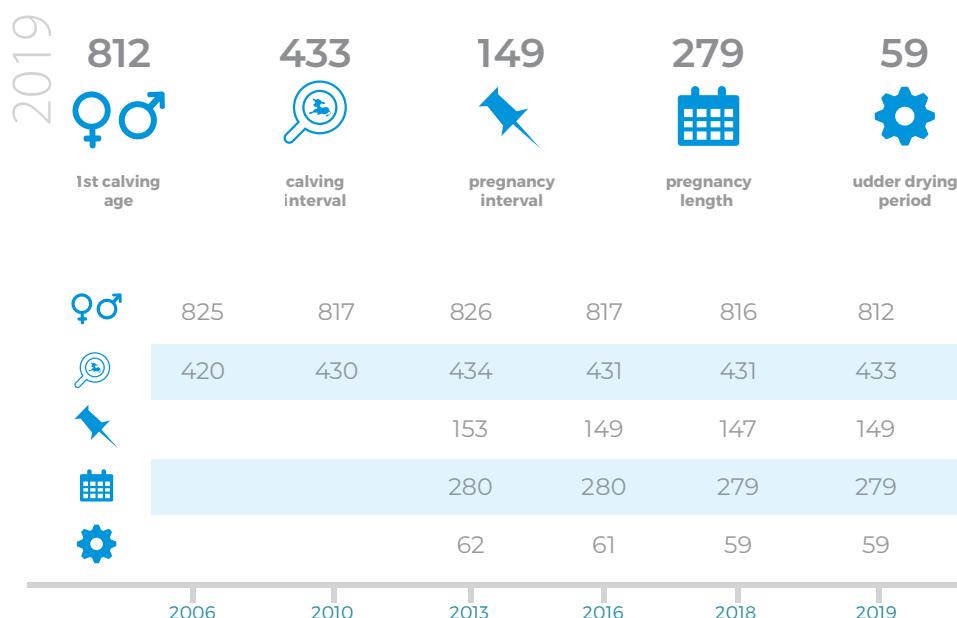


Rated cows - average yield for the sum of kg fat + protein of the PHF black and white breed



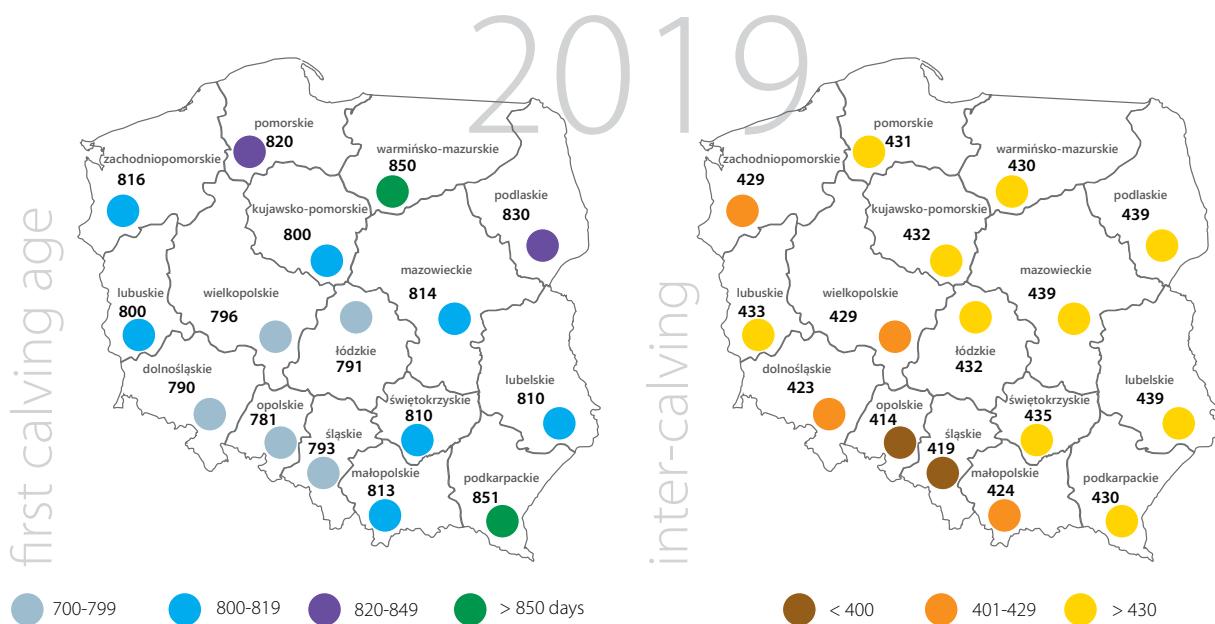
Reproduction is the key factor in the profitability of milk production and therefore forms the basis of cattle breeding and rearing. Taking care of the individual elements of the processes that make up the breeding performance translates directly into the farmer's satisfaction.

Cows assessed – fertility parametres



assessed breeds	1st calving age	calving interval	pregnancy interval	pregnancy length	udder drying period
Holstein	809	435	151	279	58
Red Holstein	815	426	143	280	61
Simmental	867	415	126	284	64
Red Polish	857	424	128	284	88
Jersey	804	418	134	281	65
Montbeliarde	858	413	129	282	62
Whiteback	847	414	125	281	102
Polish Red and White	837	421	127	282	72
Polish Black and White	933	435	145	279	80
Brown Swiss	884	463	179	285	65
Swedish Red	862	430	154	278	64
Norwegian Red	830	405	120	279	58

Cows evaluated – selected fertility parameters

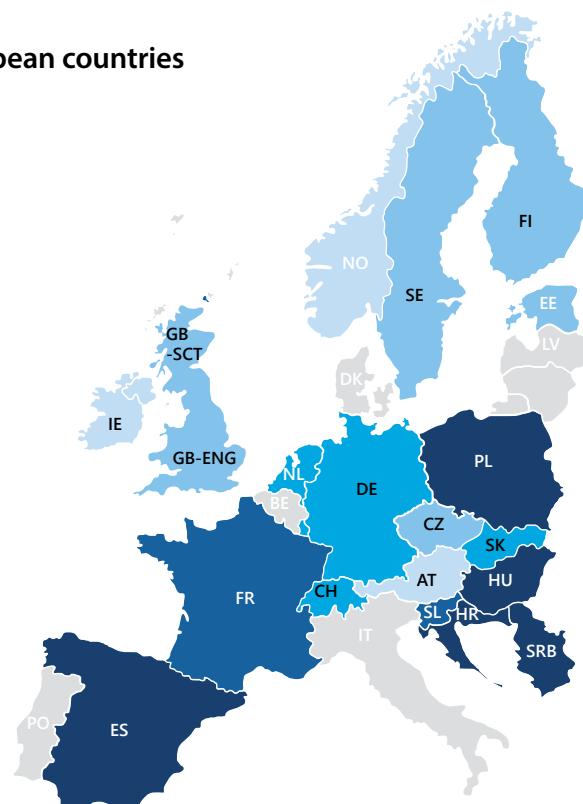


The milk yield of cows is growing dynamically, but so do the health and fertility problems that determine the length of their lives. The interval between calving, which means the time that elapses from one calving to the next, is one of the indicators that particularly determines the state of reproduction. Previously, the recommendations indicated that the ratio should below <400 days, reducing the distance between successive lactation peaks and thus increasing the calf birth rate. However, nowadays the extension of the inter-calf period is accepted and is increasingly used in cows with the highest milk yields, but also in animals requiring regeneration.

Inter-calf period in selected European countries

according to available ICAR data

- < 399 days
- 400-409 days
- 410-419 days
- 420-429 days
- > 430 days



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Table no 1. Average milk yield in recorded population during 1912-2019

Year	Average						Individual farmers			
	Cows	Milk kg	Fat kg	Fat %	Protein kg	Protein %	Cows	Milk kg	Fat %	Protein %
1912	2 000	2 162	-	-	-	-	-	-	-	-
1950	**62 151	3 023	102	3,39	-	-	5 473	3 045	3,73	-
2000	387 645	5 379	*** 222	4,12	175	3,26	223 345	5 245	4,08	3,25
2015	753 613	7 771	318	4,09	261	3,36	612 165	7 460	4,14	3,36
2018	813 901	8 298	334	4,03	281	3,39	682 013	8 040	4,08	3,39
2019	820 653	8 530	347	4,07	292	3,42	690 285	8 283	4,10	3,42

** - data 1949; *** - from 1980, average lactation yield 305 days milking

Table No 2. Average milk yield in recorded population, according to province

Province	Number			Average yield						Calving interval	1st calving age		
	Herds	Average herd size	Average cows no.	Milk kg	Fat		Protein		Fat + Protein				
					kg	%	kg	%					
Dolnośląskie	201	82,8	16 651,9	9 350	373	3,99	321	3,43	694	423	790		
Opolskie	284	78,5	22 303,4	9 315	381	4,09	321	3,45	702	414	781		
Lubuskie	75	86,0	6 447,5	9 261	378	4,08	316	3,41	694	433	800		
Śląskie	324	54,6	17 701,1	9 137	363	3,97	311	3,40	674	419	793		
Wielkopolskie	3 471	45,4	157 681,9	8 995	363	4,03	309	3,43	672	429	796		
Kujawsko-Pomorskie	1 631	39,1	63 759,3	8 803	355	4,03	300	3,41	655	432	800		
Zachodniopomorskie	244	53,1	12 962,0	8 718	350	4,01	297	3,41	647	429	816		
Podlaskie	4 049	40,5	164 055,8	8 479	349	4,11	291	3,43	640	439	830		
Mazowieckie	4 082	36,6	149 333,6	8 411	347	4,13	289	3,44	636	439	814		
Lubelskie	1 000	33,7	33 664,8	8 362	340	4,07	288	3,44	628	439	810		
Łódzkie	1 459	32,3	47 109,4	8 335	343	4,11	284	3,41	627	432	791		
Pomorskie	971	35,4	34 381,9	8 168	328	4,01	278	3,40	606	431	820		
Warmińsko-Mazurskie	1 559	43,6	67 948,6	8 050	328	4,07	272	3,38	600	430	850		
Świętokrzyskie	252	26,5	6 666,6	7 897	333	4,21	271	3,43	604	435	810		
Podkarpackie	330	22,3	7 368,2	6 181	259	4,19	211	3,42	470	430	851		
Małopolskie	712	17,7	12 616,6	5 969	244	4,09	201	3,36	445	424	813		
POLAND	20 644	39,8	820 652,6	8 530	347	4,07	292	3,42	639	433	812		

Table no 3. Average milk yield in recorded population, according to breeds, province and Milk Recording Regions

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age
			Milk	Fat		Protein		Fat + Protein		
HOLSTEIN										
Lubelskie	982	27 203,6	8 540	347	4,06	293	3,43	640	442	806
Łódzkie	1 454	40 471,5	8 462	345	4,08	288	3,40	633	435	789
Małopolskie	265	4 050,0	8 229	326	3,96	277	3,36	603	438	806
Mazowieckie	4 049	128 086,6	8 550	351	4,11	292	3,42	643	441	814
Podkarpackie	151	2 063,0	7 396	305	4,12	252	3,40	557	452	831
Podlaskie	4 011	142 413,2	8 634	353	4,09	295	3,42	648	441	828
Świętokrzyskie	242	5 091,1	8 131	339	4,17	277	3,40	616	440	804

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age		
			Milk	Fat		Protein		Fat + Protein				
				kg	%	kg	%					
RO PARZNIEW	11 154	349 379,0	8 563	350	4,09	293	3,42	643	441	816		
Dolnośląskie	174	12 794,9	9 945	394	3,96	340	3,42	734	423	778		
Lubuskie	74	5 874,6	9 458	384	4,06	322	3,40	706	434	798		
Opolskie	270	16 971,7	9 651	391	4,05	332	3,44	723	413	774		
Śląskie	312	15 406,4	9 371	369	3,94	318	3,39	687	421	792		
Wielkopolskie	3 465	140 855,2	9 147	366	4,00	313	3,42	679	430	795		
RO POZNAŃ	4 295	191 902,8	9 267	371	4,00	317	3,42	688	428	792		
Kujawsko-Pomorskie	1 621	57 311,3	8 984	359	4,00	306	3,40	665	433	798		
Pomorskie	963	29 752,9	8 390	335	3,99	284	3,39	619	432	814		
Warmińsko-Mazurskie	1 537	57 853,1	8 271	335	4,05	279	3,37	614	433	846		
Zachodniopomorskie	238	10 754,5	9 112	363	3,98	309	3,39	672	431	810		
RO BYDGOSZCZ	4 359	155 671,8	8 609	346	4,02	291	3,38	637	433	818		
POLAND	19 808	696 953,6	8 767	355	4,05	299	3,41	654	435	809		

RED HOLSTEIN

Lubelskie	511	1 212,2	7 952	331	4,16	276	3,47	607	431	799
Łódzkie	670	1 266,4	7 949	326	4,10	273	3,43	599	424	792
Małopolskie	344	1 736,1	6 691	277	4,14	228	3,40	505	420	816
Mazowieckie	2 377	5 929,2	7 968	334	4,19	276	3,46	610	429	814
Podkarpackie	145	544,8	6 519	282	4,33	225	3,45	507	441	815
Podlaskie	2 515	7 322,3	7 906	331	4,18	275	3,48	606	431	827
Świętokrzyskie	140	316,7	7 929	347	4,38	274	3,46	621	420	810
RO PARZNIEW	6 702	18 327,7	7 786	326	4,18	269	3,46	595	429	817
Dolnośląskie	127	1 682,5	7 823	327	4,18	267	3,41	594	428	849
Lubuskie	21	45,7	7 759	326	4,20	273	3,52	599	430	829
Opolskie	230	3 871,8	8 639	359	4,15	299	3,46	658	421	797
Śląskie	217	999,3	7 909	325	4,11	271	3,43	596	412	794
Wielkopolskie	1 366	2 722,6	7 908	333	4,21	277	3,50	610	424	794
RO POZNAŃ	1 961	9 321,9	8 195	342	4,17	284	3,46	626	422	803
Kujawsko-Pomorskie	611	1 058,2	7 736	316	4,09	267	3,45	583	424	811
Pomorskie	354	676,5	7 679	308	4,01	264	3,44	572	439	848
Warmińsko-Mazurskie	736	2 046,3	7 667	315	4,11	263	3,43	578	421	848
Zachodniopomorskie	75	247,6	6 479	273	4,21	220	3,39	493	436	857
RO BYDGOSZCZ	1 776	4 028,6	7 569	310	4,10	260	3,44	570	426	840
POLAND	10 439	31 678,2	7 879	329	4,17	273	3,46	602	426	815

SIMMENTAL

Lubelskie	141	409,8	6 611	275	4,16	231	3,50	506	420	887
Łódzkie	141	280,8	7 205	308	4,28	252	3,49	560	411	862
Małopolskie	162	522,2	5 326	217	4,08	181	3,40	398	419	861
Mazowieckie	434	1 066,4	7 414	308	4,15	260	3,51	568	428	831
Podkarpackie	271	3 952,1	5 622	235	4,18	192	3,42	427	419	872
Podlaskie	404	678,0	6 613	281	4,25	231	3,49	512	429	859
Świętokrzyskie	44	186,4	6 485	271	4,18	228	3,52	499	388	874
RO PARZNIEW	1 597	7 095,7	6 106	255	4,18	211	3,46	466	420	864
Dolnośląskie	20	263,5	6 802	273	4,01	245	3,60	518	405	909
Lubuskie	13	51,7	5 736	232	4,04	200	3,49	432	471	866
Opolskie	64	127,9	6 854	292	4,26	237	3,45	529	395	840
Śląskie	50	65,1	6 928	283	4,08	237	3,42	520	406	825
Wielkopolskie	252	1 440,1	7 423	315	4,24	265	3,57	580	404	865
RO POZNAŃ	399	1 948,3	7 242	304	4,20	258	3,56	562	405	869

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age		
			Milk	Fat		Protein		Fat + Protein				
				kg	%	kg	%					
Kujawsko-Pomorskie	117	379,2	6 113	271	4,43	215	3,52	486	416	831		
Pomorskie	81	193,2	6 248	259	4,15	218	3,49	477	437	937		
Warmińsko-Mazurskie	190	688,7	6 642	275	4,14	227	3,42	502	389	871		
Zachodniopomorskie	34	77,6	5 307	211	3,98	177	3,34	388	422	985		
RO BYDGOSZCZ	422	1 338,7	6 358	268	4,21	219	3,45	487	403	878		
POLAND	2 418	10 382,7	6 352	266	4,19	221	3,48	487	415	867		

RED POLISH

Lubelskie	6	26,8	2 058	91	4,43	74	3,59	165	604	1 159
Łódzkie	7	24,9	3 432	158	4,59	123	3,58	281	379	885
Małopolskie	244	1 996,9	3 787	163	4,30	127	3,36	290	412	825
Mazowieckie	28	161,9	2 947	130	4,40	102	3,47	232	441	901
Podkarpackie	14	78,0	4 151	187	4,50	145	3,49	332	420	839
Podlaskie	40	230,0	2 836	123	4,34	99	3,49	222	456	884
Świętokrzyskie	8	66,6	2 935	115	3,90	101	3,44	216	485	848
RO PARZNIEW	347	2 585,1	3 617	156	4,31	123	3,39	279	421	843
Dolnośląskie	3	47,0	3 203	139	4,35	117	3,65	256	399	810
Opolskie	1	1,0	7 941	385	4,85	227	2,86	612	-	-
Śląskie	13	61,3	2 510	109	4,35	85	3,39	194	425	984
Wielkopolskie	8	10,7	4 491	186	4,15	150	3,34	336	398	1 502
RO POZNAŃ	25	120,0	3 003	130	4,34	105	3,48	235	411	916
Kujawsko-Pomorskie	5	41,1	3 876	167	4,31	136	3,52	303	394	788
Pomorskie	4	19,4	3 116	130	4,18	110	3,53	240	470	801
Warmińsko-Mazurskie	7	115,8	3 117	119	3,83	105	3,38	224	518	1 024
Zachodniopomorskie	2	27,7	2 200	89	4,05	78	3,53	167	502	844
RO BYDGOSZCZ	18	204,0	3 145	126	4,00	108	3,44	234	481	975
POLAND	390	2 909,1	3 559	153	4,29	121	3,39	274	424	857

JERSEY

Lubelskie	17	29,8	6 308	338	5,35	257	4,08	595	405	716
Łódzkie	32	50,6	5 923	309	5,21	231	3,90	540	428	835
Małopolskie	18	19,6	5 193	265	5,10	193	3,72	458	426	844
Mazowieckie	97	105,7	6 683	328	4,90	250	3,74	578	437	831
Podkarpackie	11	21,5	3 574	192	5,38	137	3,82	329	471	734
Podlaskie	50	53,1	5 855	300	5,12	223	3,80	523	441	887
Świętokrzyskie	8	137,9	8 365	433	5,17	332	3,97	765	394	796
RO PARZNIEW	233	418,2	6 784	347	5,11	263	3,88	610	420	813
Dolnośląskie	7	13,6	5 707	312	5,47	220	3,86	532	379	824
Lubuskie	5	6,3	7 225	404	5,59	279	3,86	683	384	767
Opolskie	3	5,1	6 815	367	5,38	273	4,01	640	402	950
Śląskie	16	21,3	6 259	320	5,11	240	3,84	560	439	757
Wielkopolskie	101	420,9	6 609	341	5,16	254	3,85	595	417	761
RO POZNAŃ	132	467,2	6 577	340	5,17	254	3,86	594	416	764
Kujawsko-Pomorskie	18	83,0	5 142	254	4,94	198	3,84	452	427	899
Pomorskie	16	24,1	5 335	253	4,74	203	3,80	456	409	980
Warmińsko-Mazurskie	10	10,1	6 753	336	4,98	257	3,81	593	418	783
Zachodniopomorskie	5	6,6	3 607	177	4,90	135	3,73	312	401	964
RO BYDGOSZCZ	49	123,8	5 229	257	4,91	200	3,82	457	421	909
POLAND	414	1 009,2	6 497	333	5,12	251	3,86	584	418	804

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age
			Milk	Fat		Protein		Fat + Protein		
MONTBELIARDE										
Lubelskie	68	818,2	9 476	358	3,78	337	3,56	695	414	884
Łódzkie	53	77,7	7 732	319	4,12	271	3,50	590	397	828
Małopolskie	24	60,8	5 669	238	4,19	193	3,41	431	415	786
Mazowieckie	185	354,4	7 486	315	4,21	266	3,55	581	433	846
Podkarpackie	7	8,7	5 740	235	4,09	187	3,25	422	475	765
Podlaskie	138	275,0	7 375	306	4,15	257	3,48	563	424	951
Świętokrzyskie	18	22,9	7 068	290	4,10	244	3,45	534	421	902
RO PARZNIEW	493	1 617,7	8 402	332	3,95	297	3,54	629	419	881
Dolnośląskie	20	131,3	7 139	288	4,03	244	3,42	532	453	857
Lubuskie	13	33,4	7 479	329	4,40	261	3,49	590	419	889
Opolskie	2	0,5	8 246	410	4,97	252	3,06	662	-	779
Śląskie	5	8,6	6 910	292	4,22	230	3,33	522	372	753
Wielkopolskie	288	721,8	7 663	316	4,12	272	3,55	588	418	845
RO POZNAŃ	328	895,6	7 573	312	4,12	267	3,52	579	422	846
Kujawsko-Pomorskie	44	114,3	7 783	335	4,31	276	3,54	611	421	846
Pomorskie	40	82,2	7 331	284	3,88	252	3,44	536	430	850
Warmińsko-Mazurskie	41	53,1	7 313	301	4,12	253	3,46	554	437	898
Zachodniopomorskie	15	765,3	8 268	344	4,16	296	3,58	640	387	821
RO BYDGOSZCZ	140	1 014,9	8 086	336	4,15	288	3,56	624	396	830
POLAND	961	3 528,2	8 101	328	4,05	287	3,54	615	413	858
WHITEBACK										
Lubelskie	25	203,6	3854	158	4,11	130	3,37	288	405	801
Łódzkie	3	1,9	5858	236	4,03	192	3,28	428	357	-
Małopolskie	1	5,1	2308	89	3,84	77	3,33	166	570	681
Mazowieckie	26	169,3	3605	153	4,24	120	3,33	273	434	845
Podkarpackie	3	21,3	3151	124	3,93	108	3,43	232	418	956
Podlaskie	35	193,6	4174	169	4,04	141	3,37	310	415	853
RO PARZNIEW	93	594,8	3 855	158	4,11	130	3,36	288	417	838
Lubuskie	1	11,9	4 365	170	3,89	149	3,41	319	423	993
Wielkopolskie	3	17,5	3 729	139	3,72	122	3,26	261	394	716
RO POZNAŃ	4	29,4	3 986	152	3,80	133	3,33	285	406	855
Kujawsko-Pomorskie	2	19,0	3 760	146	3,87	117	3,11	263	475	848
Warmińsko-Mazurskie	11	140,2	4 471	178	3,99	146	3,26	324	395	894
RO BYDGOSZCZ	13	159,2	4 386	175	3,98	142	3,24	317	404	883
POLAND	110	783,4	3 968	162	4,07	132	3,33	294	414	847
RED POLISH										
Łódzkie	1	2,0	2 711	124	4,58	100	3,70	224	396	-
Małopolskie	331	3 241,3	4 216	175	4,14	137	3,26	312	420	817
Mazowieckie	4	14,4	3 269	142	4,35	112	3,42	254	570	697
Podkarpackie	6	42,4	4 994	212	4,24	162	3,25	374	408	1 151
Podlaskie	15	60,1	4 728	195	4,12	159	3,36	354	428	884
Świętokrzyskie	2	11,7	2 831	104	3,67	97	3,42	201	454	1 282
RO PARZNIEW	359	3 371,9	4 225	175	4,14	138	3,26	313	420	823
Dolnośląskie	30	407,8	4 929	199	4,03	166	3,37	365	437	951
Opolskie	8	138,3	6 606	285	4,31	235	3,55	520	394	824
Śląskie	7	21,4	7 195	312	4,33	251	3,49	563	385	825
Wielkopolskie	2	2,0	6 418	307	4,78	254	3,96	561	773	-
RO POZNAŃ	47	569,5	5 426	224	4,13	186	3,43	410	425	906
Kujawsko-Pomorskie	1	1,6	2 024	94	4,63	72	3,57	166	-	-
RO BYDGOSZCZ	1	1,6	2 024	94	4,63	72	3,57	166	-	-
POLAND	407	3 943,0	4 398	182	4,14	145	3,29	327	421	837

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age
			Milk	Fat		Protein		Fat + Protein		
POLISH BLACK AND WHITE										
Lubelskie	17	150,7	3 914	163	4,16	130	3,33	293	461	1 010
Łódzkie	2	11,8	4 123	159	3,86	134	3,24	293	395	-
Małopolskie	22	154,7	4 665	199	4,26	152	3,26	351	443	842
Mazowieckie	13	55,9	3 474	145	4,17	117	3,37	262	491	1 004
Podkarpackie	9	81,5	4 784	213	4,45	159	3,32	372	427	866
Podlaskie	31	285,0	5 222	220	4,22	176	3,37	396	453	922
Świętokrzyskie	5	25,3	4 251	185	4,36	139	3,28	324	528	-
RO PARZNIEW	99	764,9	4 627	196	4,24	154	3,33	350	454	918
Dolnośląskie	3	49,4	6 419	242	3,77	214	3,34	456	487	957
Lubuskie	1	14,1	4 837	202	4,17	162	3,34	364	372	771
Opolskie	1	40,5	4 995	201	4,02	168	3,37	369	401	1 060
Śląskie	2	15,0	9 356	371	3,97	321	3,43	692	395	858
Wielkopolskie	3	2,7	7 750	344	4,44	274	3,54	618	405	-
RO POZNAŃ	10	121,7	6 153	242	3,93	207	3,37	449	420	956
Kujawsko-Pomorskie	5	35,0	5 388	215	3,99	176	3,27	391	444	900
Pomorskie	31	236,2	4 507	187	4,15	150	3,33	337	424	881
Warmińsko-Mazurskie	53	725,4	4 075	164	4,03	135	3,30	299	427	973
Zachodniopomorskie	12	116,1	5 315	224	4,21	181	3,40	405	407	845
RO BYDGOSZCZ	101	1 112,7	4 338	177	4,08	144	3,32	321	425	938
POLAND	210	1 999,3	4 559	188	4,13	152	3,33	340	435	933
BROWN SWISS										
Lubelskie	17	19,1	7 920	343	4,33	287	3,62	630	465	738
Łódzkie	18	15,9	7 387	314	4,25	262	3,54	576	432	817
Małopolskie	2	6,3	3 881	169	4,35	130	3,36	299	508	963
Mazowieckie	24	32,0	7 287	316	4,34	259	3,56	575	438	824
Podkarpackie	1	1,0	5 688	249	4,38	188	3,31	437	363	-
Podlaskie	20	25,4	8 300	360	4,34	298	3,59	658	398	871
RO PARZNIEW	82	99,7	7 451	322	4,32	266	3,57	588	439	820
Dolnośląskie	2	1,7	5 383	243	4,51	205	3,81	448	-	-
Lubuskie	1	0,9	2 850	100	3,51	110	3,87	210	-	-
Opolskie	1	0,4	5 002	231	4,61	193	3,85	424	-	-
Śląskie	2	1,1	8 088	344	4,25	262	3,24	606	370	710
Wielkopolskie	15	24,3	7 856	334	4,25	286	3,64	620	446	875
RO POZNAŃ	21	28,4	7 518	320	4,26	273	3,63	593	442	854
Kujawsko-Pomorskie	9	43,2	6 462	284	4,39	237	3,66	521	444	759
Pomorskie	3	8,7	7 263	329	4,53	266	3,66	595	412	902
Warmińsko-Mazurskie	4	7,0	6 077	269	4,42	218	3,58	487	504	-
Zachodniopomorskie	6	130,1	5 411	229	4,24	191	3,53	420	488	1 083
RO BYDGOSZCZ	22	189,0	5 761	248	4,30	206	3,57	454	477	948
POLAND	125	317,1	6 450	277	4,30	231	3,58	508	463	884
SWEDISH RED										
Lubelskie	8	9,2	7 797	336	4,31	289	3,70	625	493	899
Łódzkie	9	22,0	7 728	339	4,39	271	3,51	610	389	755
Małopolskie	2	0,9	7 014	320	4,56	251	3,58	571	-	-
Mazowieckie	25	23,9	7 978	360	4,51	304	3,81	664	461	740
Podlaskie	35	45,8	7 967	354	4,44	289	3,63	643	433	829
Świętokrzyskie	1	0,7	6 936	344	4,96	228	3,28	572	-	733
RO PARZNIEW	80	102,5	7 888	350	4,44	288	3,65	638	430	798
Dolnośląskie	3	3,8	8 682	350	4,03	303	3,49	653	359	757
Opolskie	3	26,4	7 487	333	4,45	271	3,62	604	424	939

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age		
			Milk	Fat		Protein		Fat + Protein				
				kg	%	kg	%					
Śląskie	5	4,5	6 655	292	4,38	235	3,53	527	358	738		
Wielkopolskie	39	66,8	7 943	361	4,54	292	3,67	653	416	825		
RO POZNAŃ	50	101,5	7 795	350	4,49	285	3,65	635	413	845		
Kujawsko-Pomorskie	19	36,2	7 023	310	4,41	261	3,72	571	463	947		
Pomorskie	11	20,0	6 268	276	4,40	224	3,58	500	477	930		
Warmińsko-Mazurskie	16	15,7	7 988	338	4,23	283	3,54	621	398	759		
Zachodniopomorskie	2	1,6	10 896	385	3,53	367	3,37	752	356	782		
RO BYDGOSZCZ	48	73,5	7 108	308	4,33	258	3,63	566	450	926		
POLAND	178	277,5	7 647	339	4,43	279	3,65	618	430	862		

NORWEGIAN RED

Lubelskie	26	31,3	7 823	341	4,36	279	3,57	620	411	746
Łódzkie	20	20,3	8 472	352	4,16	297	3,50	649	391	804
Mazowieckie	70	65,6	7 471	318	4,25	261	3,49	579	421	873
Podkarpackie	1	0,9	6 143	226	3,68	195	3,18	421	-	714
Podlaskie	53	72,6	7 464	324	4,34	261	3,50	585	399	820
RO PARZNIEW	170	190,7	7 626	327	4,29	268	3,51	595	408	832
Lubuskie	1	0,2	8 391	418	4,98	311	3,71	729	-	-
Śląskie	2	1,0	6 200	234	3,78	195	3,14	429	-	705
Wielkopolskie	47	89,3	7 496	323	4,31	269	3,59	592	405	803
RO POZNAŃ	50	90,5	7 484	323	4,31	268	3,58	591	405	798
Kujawsko-Pomorskie	22	26,0	7 434	318	4,28	262	3,53	580	402	779
Pomorskie	3	3,6	7 808	315	4,04	282	3,61	597	414	-
Warmińsko-Mazurskie	28	24,6	7 341	315	4,29	247	3,37	562	386	927
Zachodniopomorskie	3	3,8	5 780	243	4,20	194	3,36	437	379	797
RO BYDGOSZCZ	56	58,0	7 309	311	4,26	253	3,46	564	395	873
POLAND	276	339,2	7 534	323	4,29	265	3,52	588	405	830

HYBRID WITHOUT MEAT BREEDS *

Lubelskie	767	3 307,6	7 567	319	4,21	263	3,47	582	425	808
Łódzkie	1 156	4 734,1	7 520	320	4,26	259	3,44	579	413	797
Małopolskie	269	798,6	6 265	264	4,21	212	3,39	476	420	790
Mazowieckie	3 231	12 659,4	7 516	318	4,23	259	3,45	577	422	812
Podkarpackie	191	543,9	6 141	259	4,21	210	3,42	469	428	823
Podlaskie	3 019	11 831,2	7 433	313	4,21	256	3,45	569	425	846
Świętokrzyskie	214	791,5	7 285	309	4,24	250	3,43	559	416	826
RO PARZNIEW	8 847	34 666,3	7 439	314	4,22	257	3,45	571	422	821
Dolnośląskie	148	1 220,2	7 923	328	4,14	273	3,45	601	403	799
Lubuskie	56	395,2	7 483	320	4,27	260	3,47	580	421	838
Opolskie	221	1 053,3	7 409	317	4,28	258	3,48	575	416	820
Śląskie	265	1 050,5	7 575	316	4,17	261	3,44	577	406	808
Wielkopolskie	2 783	10 653,7	7 767	328	4,22	271	3,49	599	420	800
RO POZNAŃ	3 473	14 372,9	7 734	326	4,22	269	3,48	595	417	802
Kujawsko-Pomorskie	1 162	4 431,4	7 273	306	4,20	252	3,47	558	421	818
Pomorskie	695	3 256,6	6 771	278	4,11	234	3,45	512	421	856
Warmińsko-Mazurskie	1 223	6 054,7	6 929	288	4,15	236	3,40	524	413	869
Zachodniopomorskie	176	783,2	6 318	261	4,13	217	3,44	478	435	869
RO BYDGOSZCZ	3 256	14 525,9	6 961	290	4,16	239	3,43	529	418	849
POLAND	15 576	63 565,1	7 396	311	4,21	255	3,45	566	420	823

Province	Herds no. by breed	Average cows no.	Average yield						Calving interval	1st calving age
			Milk	Fat		Protein		Fat + Protein		
			kg	%	kg	%				
OTHER BREEDS **										
Lubelskie	182	246,3	7 912	338	4,27	282	3,56	620	422	797
Łódzkie	143	136,7	7 035	303	4,30	246	3,49	549	431	800
Małopolskie	31	24,9	5 920	246	4,15	203	3,43	449	432	823
Mazowieckie	559	608,5	7 642	329	4,31	271	3,55	600	427	815
Podkarpackie	19	10,2	4 327	180	4,15	147	3,40	327	424	905
Podlaskie	536	588,7	7 538	325	4,31	264	3,50	589	433	847
Świętokrzyskie	16	15,9	6 872	306	4,45	244	3,55	550	368	834
RO PARZNIEW	1 486	1 631,2	7 540	324	4,30	266	3,53	590	429	822
Dolnośląskie	38	40,7	7 192	292	4,06	247	3,44	539	379	933
Lubuskie	12	15,1	7 253	310	4,28	247	3,41	557	446	784
Opolskie	68	69,4	6 698	284	4,24	230	3,43	514	418	910
Śląskie	46	49,9	7 369	306	4,15	254	3,45	560	409	778
Wielkopolskie	592	679,0	7 314	307	4,20	257	3,51	564	420	808
RO POZNAŃ	756	854,1	7 266	304	4,19	254	3,50	558	418	814
Kujawsko-Pomorskie	182	191,4	6 336	264	4,17	222	3,50	486	403	830
Pomorskie	104	116,3	5 686	237	4,16	199	3,50	436	413	850
Warmińsko-Mazurskie	222	224,5	6 968	291	4,17	239	3,43	530	408	877
Zachodniopomorskie	48	49,7	5 432	218	4,02	182	3,35	400	415	858
RO BYDGOSZCZ	556	581,9	6 366	264	4,15	220	3,46	484	408	851
POLAND	2 798	3 067,2	7 241	308	4,25	254	3,51	562	421	825

* - in 2018 hybrids with and without meat breeds were shown together

** - in 2019 hybrids with meat breeds were added to others breeds

Table no 4. Average milk yield in recorded, according to sectors, province and Milk Recording Regions

Province Milk Recording Region	Herds no.	Average cows no.	Average yield					Calving interval	1st calving age
			Milk	Fat		Protein			
				kg	%	kg	%		
PUBLIC SECTOR									
Lubelskie	5	770,9	8 233	320	3,89	289	3,51	446	787
Łódzkie	4	883,2	10 522	430	4,09	358	3,40	448	770
Małopolskie	4	676,7	9 847	391	3,97	328	3,33	426	773
Mazowieckie	7	839,9	9 593	374	3,90	326	3,40	443	812
Podkarpackie	5	674,4	7 624	304	3,99	265	3,47	437	902
Podlaskie	2	576,2	8 226	358	4,35	287	3,49	444	772
Świętokrzyskie	3	392,4	9 476	443	4,67	347	3,66	445	790
RO PARZNIEW	30	4 813,7	9 132	372	4,07	315	3,45	441	801
Dolnośląskie	7	1 566,9	10 332	422	4,08	353	3,42	429	774
Lubuskie	3	1 333,2	12 178	442	3,63	415	3,41	416	751
Opolskie	9	5 410,0	10 914	441	4,04	383	3,51	401	737
Śląskie	4	880,7	11 406	424	3,72	384	3,37	416	751
Wielkopolskie	38	10 642,7	10 764	432	4,01	371	3,45	413	760
RO POZNAŃ	61	19 833,5	10 858	432	3,98	376	3,46	411	754
Kujawsko-Pomorskie	15	4 411,3	12 354	474	3,84	415	3,36	402	728
Pomorskie	5	699,8	9 216	354	3,84	308	3,34	431	755
Warmińsko-Mazurskie	7	1 055,7	7 906	305	3,86	266	3,37	444	847
Zachodniopomorskie	7	2 678,4	11 839	476	4,02	401	3,39	402	733
RO BYDGOSZCZ	34	8 845,2	11 469	447	3,90	387	3,37	409	744
POLAND	125	33 492,4	10 780	428	3,97	370	3,43	415	757
PRIVATE SECTOR									
Lubelskie	995	32 893,9	8 365	341	4,08	288	3,44	439	810
Łódzkie	1 455	46 226,2	8 293	341	4,11	283	3,41	431	791
Małopolskie	708	11 939,9	5 749	236	4,10	193	3,36	424	816
Mazowieckie	4 075	148 493,7	8 404	347	4,13	289	3,44	439	814
Podkarpackie	325	6 693,8	6 035	254	4,21	206	3,42	429	844
Podlaskie	4 047	163 479,6	8 480	349	4,11	291	3,43	439	830
Świętokrzyskie	249	6 274,2	7 799	326	4,18	266	3,41	434	812
RO PARZNIEW	11 854	416 001,3	8 301	342	4,12	285	3,43	437	818
Dolnośląskie	194	15 085,0	9 248	368	3,98	317	3,43	422	792
Lubuskie	72	5 114,3	8 500	361	4,25	290	3,41	438	819
Opolskie	275	16 893,4	8 803	361	4,10	301	3,42	419	797
Śląskie	320	16 820,4	9 019	359	3,98	307	3,40	420	795
Wielkopolskie	3 433	147 039,2	8 867	357	4,03	304	3,43	430	799
RO POZNAŃ	4 294	200 952,3	8 896	359	4,03	305	3,43	428	799
Kujawsko-Pomorskie	1 616	59 348,0	8 539	346	4,05	292	3,42	434	807
Pomorskie	966	33 682,1	8 147	327	4,01	277	3,40	431	822
Warmińsko-Mazurskie	1 552	66 892,9	8 053	328	4,07	272	3,38	430	850
Zachodniopomorskie	237	10 283,6	7 905	316	4,00	270	3,41	436	850
RO BYDGOSZCZ	4 371	170 206,6	8 215	333	4,05	279	3,40	432	829
POLAND	20 519	787 160,2	8 434	344	4,08	288	3,42	434	815

Tabel no 5. Average milk yield in recorded population, according to breeds and lactation groups

Rasa odmiana	Laktacje	Liczba laktacji	Średnio dni doju	Przeciętna wydajność					
				mleka kg	tłusczu		białka		tłuszcz + białko
				kg	%	kg	%		
HO	100-I	202 588	100	2 952	3,89	93	3,15	208	
	I	191 936	301	8 144	3,94	272	3,34	593	
	II	143 080	300	8 966	3,94	303	3,38	656	
	III	90 267	300	9 193	3,97	306	3,33	671	
	IV - i dalsze	99 831	300	8 678	4,00	286	3,30	633	
	razem rasa	727 702	300	8 650	343	3,96	289	3,34	632
RW	100-I	8 815	100	2 685	3,95	85	3,16	191	
	I	8 343	300	7 241	4,05	245	3,38	538	
	II	6 452	299	8 039	4,09	277	3,45	606	
	III	4 250	299	8 343	4,12	284	3,40	628	
	IV - i dalsze	5 062	299	7 904	4,12	265	3,35	591	
	razem rasa	32 922	300	7 788	319	4,09	265	3,40	584
SM	100-I	2 581	100	2 261	4,01	73	3,21	164	
	I	2 383	297	5 886	4,15	202	3,43	446	
	II	1 853	296	6 428	4,17	224	3,48	492	
	III	1 428	296	6 642	4,14	229	3,44	504	
	IV - i dalsze	2 477	296	6 336	4,13	215	3,40	477	
	razem rasa	10 722	296	6 279	261	4,15	216	3,44	477
RP	100-I	412	100	1 328	4,27	43	3,27	100	
	I	421	279	3 148	4,35	107	3,39	244	
	II	356	284	3 715	4,36	127	3,42	289	
	III	298	289	3 980	4,31	135	3,38	307	
	IV - i dalsze	1 284	290	3 915	4,27	132	3,37	299	
	razem rasa	2 771	287	3 756	162	4,30	127	3,38	289
JE	100-I	284	100	2 234	4,83	78	3,48	186	
	I	259	299	6 031	5,01	225	3,73	527	
	II	204	296	6 448	5,15	251	3,89	583	
	III	133	296	6 634	5,07	257	3,87	593	
	IV - i dalsze	198	296	6 480	4,96	246	3,79	567	
	razem rasa	1 078	297	6 351	321	5,05	242	3,81	563
MO	100-I	1 066	100	2 608	3,96	87	3,35	190	
	I	979	299	7 304	4,03	257	3,52	551	
	II	774	298	8 551	4,01	303	3,54	646	
	III	444	294	8 322	4,06	291	3,50	629	
	IV - i dalsze	573	296	7 946	3,99	278	3,50	595	
	razem rasa	3 836	297	7 948	320	4,02	280	3,52	600

Rasa odmiana	Laktacje	Liczba laktacji	Średnio dni doju	Przeciętna wydajność				
				mleka kg	tłuszcza		białka	
					kg	%	kg	%
BG	100-I	131	100	1 556	61	3,90	49	3,14
	I	132	282	3 656	150	4,11	121	3,31
	II	114	278	3 913	157	4,01	130	3,33
	III	97	280	4 147	170	4,09	138	3,32
	IV - i dalsze	287	275	4 222	169	4,01	139	3,28
	razem rasa	761	278	4 036	163	4,04	133	3,30
ZR	100-I	585	100	1 645	67	4,04	51	3,09
	I	597	294	4 044	168	4,16	131	3,24
	II	479	290	4 310	181	4,21	144	3,33
	III	439	292	4 722	197	4,17	155	3,28
	IV - i dalsze	1 782	293	4 669	192	4,11	151	3,24
	razem rasa	3 882	293	4 510	187	4,14	147	3,26
ZB	100-I	313	100	1 706	68	3,96	53	3,10
	I	329	291	4 215	177	4,19	139	3,30
	II	262	294	4 801	202	4,20	161	3,35
	III	231	292	4 882	203	4,16	161	3,29
	IV - i dalsze	707	289	4 905	197	4,02	160	3,27
	razem rasa	1 842	290	4 736	195	4,11	156	3,29
BS	100-I	46	100	2 309	95	4,13	75	3,25
	I	68	302	6 151	258	4,19	213	3,47
	II	34	289	6 309	273	4,32	225	3,57
	III	43	292	7 336	315	4,29	258	3,51
	IV - i dalsze	76	304	7 211	310	4,30	250	3,47
	razem rasa	267	299	6 770	289	4,27	237	3,50
SR	100-I	78	100	2 482	107	4,32	83	3,34
	I	58	301	7 054	310	4,40	252	3,57
	II	50	300	7 560	325	4,30	272	3,60
	III	43	300	8 458	368	4,35	303	3,58
	IV - i dalsze	42	296	8 036	340	4,23	277	3,45
	razem rasa	271	299	7 712	334	4,33	274	3,55
NR	100-I	130	100	2 538	106	4,18	80	3,16
	I	101	301	6 685	290	4,33	229	3,43
	II	73	300	7 326	315	4,30	260	3,55
	III	43	301	7 420	316	4,26	264	3,56
	IV - i dalsze	51	299	7 795	326	4,18	269	3,45
	razem rasa	398	300	7 189	308	4,28	251	3,49
MS *	100-I	17 527	100	2 522	101	4,02	80	3,17
	I	15 300	299	6 750	279	4,14	228	3,38
	II	11 898	298	7 429	308	4,15	256	3,45
	III	8 830	299	7 636	317	4,15	260	3,40
	IV - i dalsze	12 626	298	7 460	310	4,15	252	3,38
	razem rasa	66 181	299	7 261	301	4,15	247	3,40

Rasa odmiana	Laktacje	Liczba laktacji	Średnio dni doju	Przeciętna wydajność				
				mleka kg	tłuszcza		biała	
				kg	%	kg	%	
INNE RASY **	100-I	1 160	100	2 356	94	3,99	76	3,23
	I	813	293	6 187	253	4,09	212	3,42
	II	527	297	7 369	313	4,25	262	3,55
	III	375	296	7 722	331	4,28	270	3,50
	IV - i dalsze	398	297	7 378	311	4,22	255	3,45
	razem rasa	3 273	295	6 979	293	4,20	243	3,48
RAZEM RASY	100-I	235 716	100	2 888	113	3,91	91	3,16
	I	221 719	301	7 946	315	3,96	266	3,35
	II	166 156	300	8 745	347	3,97	296	3,39
	III	106 921	300	8 935	357	3,99	298	3,34
	IV - i dalsze	125 394	299	8 328	336	4,03	276	3,31
	razem rasa	855 906	300	8 408	335	3,98	282	3,35

* - in 2018, crosses with meat breeds and without meat breeds were shown together

** - in 2019, breeds with meat breeds were added to other breeds

Table no 6. Average lifetime production of culled cows in 2019, according to breeds and province

Breed	Cows no	Production length	Lifespan	Average yield				
				kg milk	Fat		Protein	
				kg	%	kg	%	
Holstein	233 538	2,93	5,41	24 223	980	4,05	816	3,37
Red Holstein	10 360	2,79	5,37	20 925	873	4,17	716	3,42
Simmental	3 411	3,04	5,82	18 714	781	4,17	649	3,47
Red Polish	298	6,47	9,45	24 665	1 073	4,35	834	3,38
Jersey	286	3,25	5,86	20 181	1 021	5,06	773	3,83
Montbeliarde	1 181	2,73	5,21	21 340	853	4,00	754	3,53
Whiteback	81	4,36	6,96	18 892	764	4,04	623	3,30
Polish Red and White	490	6,90	9,85	30 135	1 226	4,07	980	3,25
Polish Black and White	440	5,73	8,53	27 206	1 128	4,15	895	3,29
Brown Swiss	74	3,27	5,79	23 909	1 026	4,29	845	3,53
Swedish Red	104	3,13	5,38	23 654	1 051	4,44	857	3,62
Norwegian Red	84	2,85	5,07	19 464	831	4,27	676	3,47
Hybrid without meat breeds*	21 217	2,89	5,60	20 387	860	4,22	699	3,43
Other breeds**	1 300	2,02	4,57	13 634	582	4,27	477	3,50
Total breeds	272 864	2,94	5,44	23 676	963	4,07	799	3,37

* - in 2018, crosses with meat breeds and without meat breeds were shown together

** - in 2019, breeds with meat breeds were added to other breeds

Table no 7. Average lifetime production of culled cows in 2019, in particular institutions and sectors

Institution sector	Cows no.	Production length	Lifespan	Average yield				
				Milk	fat		protein	
					kg	%	kg	%
PUBLIC SECTOR	11 263	2,92	5,04	30 595	1 190	3,89	1031	3,37
PRIVATE SECTOR	261 601	2,94	5,46	23 378	953	4,08	789	3,37
POLAND	272 864	2,94	5,44	23 676	963	4,07	799	3,37

Table no 8. Distribution of cows by yield intervals and breeds

Yield intervals	Finished lactations	Breeds														
		HO	RW	SM	RP	JE	MO	BG	ZR	ZB	BS	SR	NR	MM	Other	
0 - 3999	106 572	84 563	4 272	2 091	1 589	247	541	381	1 502	743	50	52	32	9 677	832	
4000 - 4999	41 879	29 711	2 175	1 517	565	115	210	140	1 022	402	28	14	20	5 627	333	
5000 - 5999	66 441	49 903	3 568	2 034	243	175	338	71	701	330	35	21	53	8 589	380	
6000 - 6999	95 099	76 068	4 698	1 897	70	196	512	40	250	172	54	43	65	10 635	399	
7000 - 7999	115 506	97 605	4 842	1 369	27	171	605	25	82	84	47	54	69	10 162	364	
8000 - 8999	114 240	100 309	4 224	731	9	77	497	10	44	35	27	41	51	7 875	310	
9000 - 9999	93 292	84 279	2 957	395	4	36	422	8	9	8	16	22	16	4 897	223	
10000 - 10999	65 469	60 697	1 785	123	0	10	253	0	1	6	8	8	9	2 461	108	
11000 - 11999	40 582	38 271	1 029	56	0	1	116	1	1	2	1	5	3	1 050	46	
12000 - 12999	22 520	21 473	501	16	0	1	57	0	2	1	1	1	0	454	13	
13000 - 13999	11 607	11 177	221	5	0	0	15	0	1	0	0	2	0	176	10	
14000 - 14999	5 368	5 197	104	1	0	0	6	0	0	2	1	0	0	55	2	
15000 - 15999	2 244	2 183	39	1	0	0	1	0	0	0	0	0	0	19	1	
16000 - 16999	816	798	11	0	0	0	0	0	0	0	0	0	0	7	0	
17000 - 17999	253	252	0	0	0	0	0	0	0	0	0	0	0	1	0	
18000 - 18999	61	57	3	0	0	0	0	0	0	0	0	0	0	1	0	
19000 - 19999	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	
pow. 20000	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	781 984	662 578	30 429	10 236	2 507	1 029	3 573	676	3 615	1 785	268	263	318	61 686	3021	

Table no 9. Number of cowsheds and dairy cows by evaluation methods in given provinces and Evaluation Regions

Method	Province Evaluation Region Country	Barn	Avg. Number of cows	* %
A4	Lubelskie	105	5 471,6	16
	Łódzkie	96	6 230,3	13
	Małopolskie	9	1 238,9	10
	Mazowieckie	31	2 785,0	2
	Podkarpackie	31	1 744,5	24
	Podlaskie	89	6 287,2	4
	Świętokrzyskie	6	555,8	8
	RO PARZNIEW	367	24 313,3	6
	Dolnośląskie	76	11 895,6	71
	Lubuskie	29	3 836,3	60
	Opolskie	40	8 151,6	37
	Śląskie	76	7 831,1	44
	Wielkopolskie	852	55 121,4	35
	RO POZNAŃ	1 073	86 836,0	39
AT4	Kujawsko-Pomorskie	346	20 964,1	33
	Pomorskie	111	7 459,9	22
	Warmińsko-Mazurskie	52	5 277,2	8
	Zachodniopomorskie	20	4 892,1	38
	RO BYDGOSZCZ	529	38 593,3	22
	POLAND	1 969	149 742,6	18
	Lubelskie	815	25 817,7	77
	Łódzkie	1 276	38 487,2	82
	Małopolskie	694	11 076,3	88
	Mazowieckie	3 958	140 669,7	94
	Podkarpackie	259	4 974,6	68
	Podlaskie	3 876	152 795,5	93
	Świętokrzyskie	221	5 530,0	83
	RO PARZNIEW	11 099	379 351,0	90
AT4	Dolnośląskie	118	4 054,0	24
	Lubuskie	45	1 955,8	30
	Opolskie	206	12 970,8	58
	Śląskie	230	9 127,9	52
	Wielkopolskie	2 424	90 069,1	57
	RO POZNAŃ	3 023	118 177,6	54
	Kujawsko-Pomorskie	1 182	36 603,2	57
	Pomorskie	823	24 726,0	72
	Warmińsko-Mazurskie	1 484	60 811,9	89
	Zachodniopomorskie	212	7 884,2	61
	RO BYDGOSZCZ	3 701	130 025,3	73
	POLAND	17 823	627 553,9	76

Method	Province Evaluation Region Country	Barn	Avg. Number of cows	* %
A8	Lubelskie	68	1 242,6	4
	Łódzkie	82	1 866,2	4
	Małopolskie	5	68,3	1
	Mazowieckie	46	1 285,6	1
	Podkarpackie	37	482,1	7
	Podlaskie	57	2 112,2	1
	Świętokrzyskie	22	377,8	6
	RO PARZNIEW	317	7 434,8	2
	Dolnośląskie	5	199,3	1
	Lubuskie	1	655,4	10
	Opolskie	32	712,8	3
	Śląskie	14	352,1	2
	Wielkopolskie	128	2 804,5	2
	RO POZNAŃ	180	4 724,1	2
	Kujawsko-Pomorskie	77	3 535,3	6
	Pomorskie	28	428,9	1
	Warmińsko-Mazurskie	10	198,1	0
	Zachodniopomorskie	12	185,7	1
AR4	RO BYDGOSZCZ	127	4 348,0	2
	POLAND	624	16 506,9	2
	Lubelskie	12	1 132,9	3
	Łódzkie	5	525,7	1
	Małopolskie	3	165,2	1
	Mazowieckie	44	4 355,9	3
	Podkarpackie	3	167,0	2
	Podlaskie	24	2 557,8	2
	Świętokrzyskie	3	203,0	3
	RO PARZNIEW	94	9 107,5	2
	Dolnośląskie	2	503,0	3
	Lubuskie			
	Opolskie	6	468,2	2
	Śląskie	4	390,0	2
	Wielkopolskie	58	6 330,0	4
AR8	RO POZNAŃ	70	7 691,2	3
	Kujawsko-Pomorskie	22	1 590,7	2
	Pomorskie	8	485,9	1
	Warmińsko-Mazurskie	13	1 661,4	2
	Zachodniopomorskie			
	RO BYDGOSZCZ	43	3 738,0	2
	POLAND	207	20 536,7	3
	Małopolskie	1	67,9	1
	Mazowieckie	3	237,4	0
	Podlaskie	2	235,5	0
	RO PARZNIEW	6	540,8	0
	Wielkopolskie	4	420,4	0
	RO POZNAŃ	4	420,4	0
	Kujawsko-Pomorskie	4	1 066,0	2
	RO BYDGOSZCZ	4	1 066,0	1
	POLAND	14	2 027,2	0

Method	Province Evaluation Region Country	Barn	Avg. Number of cows	* %
AZ4	Podlaskie	1	67,6	0
	RO PARZNIEW	1	67,6	0
	Wielkopolskie	5	2 936,5	2
	RO POZNAŃ	5	2 936,5	1
	Pomorskie	1	1 281,2	4
	RO BYDGOSZCZ	1	1 281,2	1
	P O L A N D	7	4 285,3	1

% share of the number of cows in the method to the total number of cows evaluated in the voivodeship, the Evaluation Region or the Country

Table no 10. Evaluation status of the utility value of dairy cows as of 31.12.2019 by provinces and Evaluation Regions (RO)

Province Evaluation Region	Total no of barns evaluated	Total number of cows evaluated	% of cows evaluated to total herd *	Sectors						% of cows in individual farmers' barns to total headage**	
				Public		Private					
				Number		Total		Barns of individual farmers			
				barns	cows	barns	cows	barns	cows		
Lubelskie	920	33 182	27,0	5	764	915	32 418	901	30 377	25,2	
Łódzkie	1 344	45 617	25,2	4	902	1 340	44 715	1 316	43 639	24,2	
Małopolskie	679	12 361	17,2	4	709	675	11 652	643	10 760	15,4	
Mazowieckie	3 778	146 501	29,2	6	769	3 772	145 732	3 736	143 076	28,6	
Podkarpackie	303	6 980	20,2	5	633	298	6 347	291	5 748	17,3	
Podlaskie	3 703	157 995	36,8	2	570	3 701	157 425	3 687	156 205	36,4	
Świętokrzyskie	235	6 623	14,1	3	367	232	6 256	227	6 013	12,9	
RO PARZNIEW	10 962	409 259	29,5	29	4 714	10 933	404 545	10 801	395 818	28,7	
Dolnośląskie	179	16 466	66,4	5	1 577	174	14 889	139	7 448	43,8	
Lubuskie	71	5 978	47,1	3	1 386	68	4 592	56	3 110	34,8	
Opolskie	269	22 413	59,6	9	5 573	260	16 840	207	9 527	36,2	
Śląskie	315	17 511	40,1	3	877	312	16 634	289	13 116	32,1	
Wielkopolskie	3 324	159 055	58,9	38	10 758	3 286	148 297	2 757	107 222	45,7	
RO POZNAŃ	4 158	221 423	56,9	58	20 171	4 100	201 252	3 448	140 423	42,9	
Kujawsko-Pomorskie	1 522	62 675	44,6	15	4 402	1 507	58 273	1 447	49 115	38,5	
Pomorskie	916	33 811	58,9	4	721	912	33 090	859	25 285	49,0	
Warmińsko-Mazurskie	1 421	64 174	38,2	6	1 009	1 415	63 165	1 396	58 394	35,9	
Zachodniopomorskie	226	12 546	57,2	7	2 644	219	9 902	198	5 292	35,1	
RO BYDGOSZCZ	4 085	173 206	44,7	32	8 776	4 053	164 430	3 900	138 086	38,7	
P O L A N D	19 205	803 888	37,1	119	33 661	19 086	770 227	18 149	674 327	32,7	

* total dairy cows according to GUS as of December 2019

** dairy cows on individual farms according to GUS data as of December 2019

Table no 11. Herd structure as of 31.12.2019

Province Assessment Region (RO)	Herd numbers by head count											
	1	2	3-4	5-6	7-9	10-19	20-49	50-149	150-299	300-499	500-999	≥1 000
Lubelskie	-	1	5	9	22	229	501	144	4	3	2	-
Łódzkie	5	2	4	10	32	328	769	182	6	5	1	-
Małopolskie	2	1	24	63	118	319	131	16	2	3	-	-
Mazowieckie	3	2	6	18	40	655	2 307	700	40	5	2	-
Podkarpackie	-	4	6	17	41	105	113	14	3	-	-	-
Podlaskie	1	-	1	10	17	379	2 363	884	43	4	1	-
Świętokrzyskie	-	-	2	2	18	75	115	22	1	-	-	-
RO PARZNIEW	11	10	48	129	288	2 090	6 299	1 962	99	20	6	-
Dolnośląskie	-	-	1	-	2	37	67	40	17	11	4	-
Lubuskie	-	-	-	2	2	11	30	14	8	2	2	-
Opolskie	-	-	-	1	6	54	105	73	16	6	5	3
Śląskie	-	-	1	4	8	62	141	80	12	6	1	-
Wielkopolskie	3	1	13	28	91	729	1 590	741	86	25	14	3
RO POZNAŃ	3	1	15	35	109	893	1 933	948	139	50	26	6
Kujawsko-Pomorskie	-	3	11	13	34	353	818	240	34	14	2	-
Pomorskie	-	2	5	8	25	261	492	102	12	6	2	1
Warmińsko-Mazurskie	-	1	2	8	9	235	828	298	29	7	3	1
Zachodniopomorskie	2	1	3	3	18	71	85	27	5	7	4	-
RO BYDGOSZCZ	2	7	21	32	86	920	2 223	667	80	34	11	2
POLAND	16	18	84	196	483	3903	10455	3577	318	104	43	8

Table no 12. Structure of cows evaluated as of 31.12.2019

Province Assessment Region (RO)	Number of cows by size intervals											
	1	2	3-4	5-6	7-9	10-19	20-49	50-149	150-299	300-499	500-999	≥1 000
Lubelskie	-	2	19	52	181	3 392	15 410	10 496	956	1 260	1 414	-
Łódzkie	5	4	14	56	264	5 060	23 348	13 343	1 192	1 743	588	-
Małopolskie	2	2	94	344	960	4 499	3 674	1 198	445	1 143	-	-
Mazowieckie	3	4	23	100	328	10 202	73 095	51 772	7 861	1 813	1 300	-
Podkarpackie	-	8	23	99	325	1 466	3 331	1 069	659	-	-	-
Podlaskie	1	-	4	55	135	6 116	77 427	64 211	8 119	1 406	521	-
Świętokrzyskie	-	-	6	11	144	1 092	3 484	1 712	174	-	-	-
RO PARZNIEW	11	20	183	717	2 337	31 827	199 769	143 801	19 406	7 365	3 823	-
Dolnośląskie	-	-	4	-	16	567	1 962	3 401	3 658	4 296	2 562	-
Lubuskie	-	-	-	12	17	174	975	1 216	1 479	893	1 212	-
Opolskie	-	-	-	5	47	792	3 349	5 664	3 144	2 332	3 482	3 598
Śląskie	-	-	4	22	66	915	4 574	6 601	2 383	2 400	546	-
Wielkopolskie	3	2	43	158	749	11 022	49 880	57 628	17 080	9 568	9 411	3 511
RO POZNAŃ	3	2	51	197	895	13 470	60 740	74 510	27 744	19 489	17 213	7 109
Kujawsko-Pomorskie	-	6	40	73	273	5 454	25 012	18 213	7 077	5 445	1 082	-
Pomorskie	-	4	18	44	204	3 899	15 074	7 161	2 618	2 370	1 141	1 278
Warmińsko-Mazurskie	-	2	7	47	73	3 658	27 086	21 901	5 462	2 626	2 197	1 115
Zachodniopomorskie	2	2	11	16	147	1 082	2 388	2 278	1 059	2 868	2 693	-
RO BYDGOSZCZ	2	14	76	180	697	14 093	69 560	49 553	16 216	13 309	7 113	2 393
POLAND	16	36	310	1 094	3 929	59 390	330 069	267 864	63 366	40 163	28 149	9 502

Table no 13. Breed distribution in recorded population in 2018 and 2019

Breed	Average number of cows				2019 2018 %	
	2018		2019			
	cows	%	cows	%		
Holstein*	691 836,3	85,00	696 953,6	84,92	100,74	
Red Holstein *	30 959,8	3,80	31 678,2	3,86	102,32	
Simmental	10 466,5	1,29	10 382,7	1,27	99,20	
Red Polish	2 838,2	0,35	2 909,1	0,35	102,50	
Jersey	1 012,3	0,12	1 009,2	0,12	99,69	
Montbeliarde	3 407,0	0,42	3 528,2	0,43	103,56	
Whiteback	728,4	0,09	783,4	0,10	107,55	
Polish Red and White	3 939,1	0,48	3 943,0	0,48	100,10	
Polish Black and White	2 061,4	0,25	1 999,3	0,24	96,99	
Brown Swiss	323,5	0,04	317,1	0,04	98,02	
Swedish Red	270,7	0,03	277,5	0,03	102,51	
Norwegian Red	254,0	0,03	339,2	0,04	133,54	
Hybrid without meat breeds **	64 559,3	7,93	63 565,1	7,74	98,46	
Other breeds***	1 313,6	0,16	3 067,2	0,37	233,50	

* - refers to Polish Holstein Friesian

** - in 2018 hybrids with and without meat breeds were shown together

*** - in 2019 hybrids with meat breeds were added to other breeds

Table no 14. Overall results of the reproductive use of dairy cows

Specification	Total	Sectors	
		Public	Private
Total number of cows	1 095 811	45 746	1 050 065
Average number of cows	820 652,6	33 492,4	787 160,2
Number of cows evaluated all year round	545 402	22 223	523 179
HEIFERS IN HERD			
Number	250 081	12 534	237 547
% of heifer to average number of cows	30,47	37,42	30,18
1st calving age	812	757	815
PREGNANCY LOSS IN CATTLE			
Number of miscarriages	260	7	253
% to the average number of cows	0,03	0,02	0,03
CALVING INTERVAL LENGTH			
Number of calved cows (heifers included)	778 548	35 254	743 294
Number of cows with calving interval calculated	504 749	22 699	482 050
Calving interval (days)	433	415	434
Number of cows with calving interval longer than 365 days	423 596	15 836	407 760

Table no 15. Reproductive use of evaluated dairy cows by breed

Breed	Number of cows						Heifers		Avg.1st calving age	With calving interval calculated	Number of cows With calving interval longer than 365	Average calving interval
	Total	Average	Assessed all year round.	Calved		With miscarriage		Number				
				Cows	%**	Cows	%***	Cows	%****			
Holstein *	931 385	696 953,6	462 059	444 754	62,05	220	0,02	214 606	23,04	809	425 857	362 710 435
Red Holstein*	41 975	31 678,2	21 081	20 766	62,98	6	0,01	9 002	21,45	815	19 464	15 884 426
Simmental	13 710	10 382,7	6 938	7 250	65,68	6	0,04	2 671	19,48	867	6 755	4 777 415
Red Polish	3 244	2 909,1	2 332	2 201	78,95	1	0,03	456	14,06	857	2 166	1 625 424
Jersey	1 350	1 009,2	693	708	66,86	0	0,00	291	21,56	804	671	497 418
Montbeliarde	4 793	3 528,2	2 313	2 425	67,98	1	0,02	1 226	25,58	858	2 365	1 663 413
Whiteback	884	783,4	591	627	84,84	1	0,11	145	16,40	847	594	376 414
Polish Red and White	4 511	3 943,0	3 230	2 985	76,05	4	0,09	586	12,99	837	2 963	2 205 421
Polish Black and White	2 394	1 999,3	1 537	1 417	68,62	2	0,08	329	13,74	933	1 411	1 148 435
Brown Swiss	401	317,1	255	219	64,04	0	0,00	59	14,71	884	209	213 463
Swedish Red	367	277,5	170	196	70,50	0	0,00	89	24,25	862	188	131 430
Norwegian Red	447	339,2	224	205	66,13	0	0,00	137	30,65	830	200	161 405
Hybrid without meat breeds ¹	84 952	63 565,1	42 185	42 915	64,89	16	0,02	18 819	22,15	823	40 253	30 885 420
Other breeds ²	5 398	3 067,2	1 794	1 820	49,79	3	0,06	1 743	32,29	825	1 668	1 321 421

* - refers to Polish Holstein-Friesian

** - % calved cows calculated to the total number of cows minus the heifers

*** - %miscarriages calculated to the total number of cows. These include miscarriages that do not start a new lactation

**** - % the percentage of heifers calculated to the total number of cows

¹ - in 2018 hybrids with and without meat breeds were shown together² - in 2019 hybrids with meat breeds were added to other breeds

Table no 16. Breeding of the evaluated dairy cows by provinces and Assessment Regions (RO)

Province Assessment Region	Number of cows						Heifers		Number of cows		Avg. calving interval		
	Total	Average	Assessed all year round	Calved		With miscarriages		Number	Avg.1st calving age				
				cows	%*	cows	%**		With calving interval calculated	With calving interval longer than 365			
Lubelskie	45 390	33 664,8	22 269	21 107	59,53	32	0,07	9 933	21,88	810	20 130	17 737	439
Łódzkie	62 548	47 109,4	31 689	30 521	62,03	11	0,02	13 341	21,33	791	28 918	24 965	432
Małopolskie	15 602	12 616,6	9 348	8 929	68,69	5	0,03	2 603	16,68	813	8 437	6 617	424
Mazowieckie	200 344	149 333,6	99 076	92 559	59,13	41	0,02	43 805	21,86	814	86 453	78 329	439
Podkarpackie	9 544	7 368,2	5 110	5 122	65,54	3	0,03	1 729	18,12	851	4 831	3 766	430
Podlaskie	219 615	164 055,8	108 321	102 078	59,40	60	0,03	47 762	21,75	830	96 693	86 116	439
Świętokrzyskie	8 848	6 666,6	4 458	4 447	63,75	3	0,03	1 872	21,16	810	4 128	3 407	435
RO PARZNIEW	561 891	420 815,0	280 271	264 763	60,06	155	0,03	121 045	21,54	818	249 590	220 937	438
Dolnośląskie	22 520	16 651,9	11 029	11 257	66,69	4	0,02	5 641	25,05	790	11 106	8 153	423
Lubuskie	8 586	6 447,5	3 898	4 244	67,50	0	0,00	2 299	26,78	800	4 168	2 867	433
Opolskie	30 215	22 303,4	15 059	15 410	68,09	3	0,01	7 584	25,10	781	15 138	10 792	414
Śląskie	23 324	17 701,1	11 947	12 242	69,53	3	0,01	5 718	24,52	793	11 897	8 781	419
Wielkopolskie	212 152	157 681,9	104 491	102 515	64,95	58	0,03	54 312	25,60	796	99 036	80 628	429
RO POZNAŃ	296 797	220 785,8	146 424	145 668	65,84	68	0,02	75 554	25,46	794	141 345	111 221	426
Kujawsko-Pomorskie	85 464	63 759,3	42 584	41 557	63,37	17	0,02	19 881	23,26	800	40 134	33 059	432
Pomorskie	45 349	34 381,9	23 357	22 712	65,12	3	0,01	10 474	23,10	820	22 064	18 127	431
Warmińsko-Mazurskie	89 431	67 948,6	43 721	44 813	63,89	14	0,02	19 286	21,57	850	42 735	33 362	430
Zachodniopomorskie	16 879	12 962,0	9 045	8 954	68,68	3	0,02	3 841	22,76	816	8 881	6 890	429
RO BYDGOSZCZ	237 123	179 051,8	118 707	118 036	64,28	37	0,02	53 482	22,55	823	113 814	91 438	431
P O L A N D	1095 811	820 652,6	545 402	528 467	62,49	260	0,02	250 081	22,82	812	504 749	423 596	433

* - % of cows calved is calculated to the total number of cows minus the heifers

** - % miscarriages are counted to the total number of cows. Here - miscarriages that do not start a new lactation

*** - % of heifers calculated to the total number of cows

Table no 17. Milk cows fertility traits by province and Milk Assessment Regions (RO)

Province Assessment Region (RO)	1st calving age	Period				Calving mode						
		Calving interval	Days open	Pregnancy	Drying period	Unassisted	Easy	Difficult	Very difficult		Miscarriage	Caesarean section
Lubelskie	810	439	156	279	59	14 428	15 320	849	139	280	24	
Łódzkie	791	432	149	279	56	15 817	26 405	997	152	472	19	
Małopolskie	813	424	133	281	66	2 803	8 398	188	21	117	5	
Mazowieckie	814	439	155	279	57	56 690	73 265	4 175	480	1 685	69	

Podkarpackie	851	430	142	284	59	3 923	2 583	235	24	74	12
Podlaskie	830	439	155	279	58	83 391	62 608	2 152	328	1 287	74
Świętokrzyskie	810	435	151	280	57	2 625	3 512	109	19	52	2
RO PARZNEW	818	438	153	279	58	179 677	192 091	8 705	1 163	3 967	205
Dolnośląskie	790	423	141	278	64	7 721	8 190	772	62	145	8
Lubuskie	800	433	150	278	67	962	4 818	702	17	44	0
Opolskie	781	414	133	278	60	15 079	6 849	723	166	170	7
Śląskie	793	419	138	278	59	8 968	7 971	687	123	205	6
Wielkopolskie	796	429	146	278	58	58 778	89 779	5 868	391	1 941	70
RO POZNAŃ	794	426	144	278	59	91 508	117 607	8 752	759	2 505	91
Kujawsko-Pomorskie	800	432	149	279	58	26 982	31 559	2 008	166	686	37
Pomorskie	820	431	149	279	59	14 188	17 689	880	143	272	14
Warmińsko-Mazurskie	850	430	147	280	61	42 852	18 939	1 355	235	696	22
Zachodniopomorskie	816	429	143	279	64	7 454	4 574	639	45	80	3
RO BYDGOSZCZ	823	431	148	279	60	91 476	72 761	4 882	589	1 734	76
POLAND	812	433	149	279	59	362 661	382 459	22 339	2 511	8 206	372

Table no 18. Dairy cows fertility traits by breed

Breed	1st calving age	Period				Calving mode					
		Calving interval	Days open	Pregnancy	Drying period	Unassisted	Easy	Difficult	Very difficult	Miscarriage	Caesarean section
Holstein*	809	435	151	279	58	306 848	323 980	19 073	2 088	7 068	303
Red Holstein *	815	426	143	280	61	13 609	14 944	795	137	271	12
Simmental	867	415	126	284	64	5 165	4 366	262	30	89	9
Red Polish	857	424	128	284	88	1 134	1 442	39	5	35	2
Jersey	804	418	134	281	65	638	328	24	3	6	-
Montbeliarde	858	413	129	282	62	1 418	2 043	148	6	34	2
Whiteback	847	414	125	281	102	444	302	14	4	8	-
Polish Red and White	837	421	127	282	72	1 282	2 176	55	16	38	4
Polish Black and White	933	435	145	279	80	1 000	664	40	11	30	1
Brown Swiss	884	463	179	285	65	173	92	9	1	3	-
Swedish Red	862	430	154	278	64	139	136	6	-	4	-
Norwegian Red	830	405	120	279	58	162	168	7	2	3	-
Hybrid without meat breeds **	823	420	136	280	61	29 115	30 049	1 748	195	591	36
Other breeds***	825	421	138	280	64	1 592	1 803	124	15	26	3

* - refers to Polish Holstein Friesian

** - in 2018 hybrids with and without meat breeds were shown together

*** - in 2019 hybrids with meat breeds were added to other breeds

Table no 19. Best herds by milk yield per kg of milk, with an average number of dairy cows between 3.0 and 20.0

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.

The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

No	Herd/barn owner	Herd/barn location province	Assessment method	* Milk	Avg. cows no	Average yield per cow						Calving int.	
						Milk		Fat		Protein		F+P sum	
						kg	kg	%	kg	%	kg	F+P	
1.	PSZCZOŁA MAŁGORZATA, SYLWESTER	GUTANÓW LUBELSKIE	AT4	R	18,0	15 095	501	3,32	527	3,49	1 028	474	
2.	GR GROMADA MARCIN	LUDZISKO KUJAWSKO-POMORSKIE	A4	R	19,8	14 771	505	3,42	524	3,55	1 029	389	
3.	BUDNIEWSKI LESZEK	WIKIELEC WARMIŃSKO-MAZURSKIE	AT4	R	17,0	14 712	468	3,18	519	3,53	987	408	
4.	MAJEWSKY URSZULA, EUGENIUSZ	KOŁOZĄB POMORSKIE	AT4	R	19,3	14 008	429	3,06	444	3,17	873	397	
	MAJEWSKI EUGENIUSZ	wydajność obory wł. 1	AT4	R	6,0	14 528	439	3,02	456	3,14	895	430	
	MAJEWSKA URSZULA	wydajność obory wł. 2	AT4	R	13,3	13 774	423	3,07	438	3,18	861	389	
5.	CICHACZY DARIUSZ I ELŻBIETA	NIEWIERZ KUJAWSKO-POMORSKIE	AT4		15,8	13 638	554	4,06	476	3,49	1 030	406	
6.	ROSIK MAREK	KUCZYNA WIELKOPOLSKIE	AT4	R	18,8	13 005	493	3,79	453	3,48	946	382	
7.	DMOCHOWSKI RYSZARD	CZARTOSY PODLASKIE	A4	R	13,8	12 828	457	3,56	429	3,34	886	427	
8.	ŻOCHOWSCY PAWEŁ i ANETA	STARY SKARŻYN PODLASKIE	AT4		20,0	12 806	491	3,83	442	3,45	933	390	
9.	GR ROCH PIOTR	BUKOWSKA WOLA MAŁOPOLSKIE	AT4		6,3	12 512	453	3,62	409	3,27	862	492	
10.	WANDACHOWICZ JAN i RYSZARD	WYSZOBÓR ZACHODNIO POMORSKIE	A8		16,5	12 348	427	3,46	405	3,28	832	551	
	WANDACHOWICZ JAN	wydajność obory wł. 1	A8	R	9,8	12 740	431	3,38	414	3,25	845	561	
	WANDACHOWICZ RYSZARD	wydajność obory wł. 2 ZACHODNIO POMORSKIE	A8		6,7	11 773	422	3,58	391	3,32	813	515	
11.	PODIADŁY HALINA i STANISŁAW	JEZIORY ŁÓDZKIE	AT4		13,8	12 333	472	3,83	393	3,19	865	381	
12.	DMUCHOWSKA ELŻBIETA	WOLA SZYDŁOWIECKA ŁÓDZKIE	AT4	R	14,8	11 926	469	3,93	392	3,29	861	434	
13.	MOŚCICKI STANISŁAW	GULCZEW MAZOWIECKIE	AT4	R	11,2	11 771	464	3,94	396	3,36	860	389	
14.	RÓŻYCKI MARCIN	KOWALEWICE WŁOŚCIAŃSKIE MAZOWIECKIE	AT4		14,4	11 765	435	3,70	393	3,34	828	389	
15.	KOZŁOWSKI JERZY	PŁOCOCHOWO MAZOWIECKIE	AT4	R	13,9	11 675	459	3,93	382	3,27	841	441	
16.	MYSTKOWSKI JAN	PUŁAZIE ŚWIERŻE PODLASKIE	AT4	R	13,5	11 587	455	3,93	384	3,31	839	494	
17.	WRÓBEL SŁAWOMIR	GULCZEW MAZOWIECKIE	AT4	R	6,8	11 583	446	3,85	366	3,16	812	460	
18.	LEŚNIEWSKI DARIUSZ	PODLESIE MAZOWIECKIE	A4	R	19,1	11 568	487	4,21	385	3,33	872	423	
19.	GRUDZIŃSKI JACEK	JÓZEFÓW MAZOWIECKIE	AT4		13,0	11 311	488	4,31	419	3,70	907	466	
20.	FITUCH WALDEMAR	ZALESICE MAZOWIECKIE	AT4		16,3	11 270	459	4,07	399	3,54	858	368	

Milk * - The letter 'R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 20. Best herds by milk yield per kg of milk, with an average number of dairy cows between 20,1 to 50,0

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.

The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

No	Herd/barn owner	Herd/barn location province	Assessment method	Milk *	Avg. cows no	Average yield per cow						Calving int.
						Milk	Fat		Protein		F+P sum	
						kg	kg	%	kg	%	F+P	
1.	MÓRAWSKI ANDRZEJ	GOLANY MAZOWIECKIE	AT4	R	38,6	14 293	639	4,47	479	3,35	1 118	434
2.	MAZUREK ELŻBIETA	OSTROBUDKI WIELKOPOLSKIE	A4		32,0	13 833	531	3,84	472	3,41	1 003	370
3.	GR CHUDZIK TOMASZ	STRACHANÓW ŁÓDZKIE	AT4		39,5	13 616	596	4,38	464	3,41	1 060	409
4.	GR DZIAŁA MARCIN	MOCHLE KUJAWSKO-POMORSKIE	A4	R	30,9	13 502	498	3,69	465	3,44	963	405
5.	JOSIEWICZ ANDRZEJ	NIESZKI PODLASKIE	AT4	R	20,6	13 178	416	3,16	430	3,26	846	403
6.	GR PIETRZAK TOMASZ	RADORYŻ KOŚCIELNY LUBELSKIE	A4	R	40,3	13 069	455	3,48	440	3,37	895	419
7.	WNOROWSKI BOGDAN	NOWE GARBOWO PODLASKIE	A4	R	39,4	13 030	499	3,83	463	3,55	962	440
8.	GR JOŃCZY ANTONI	WIEPRZ MAŁOPOLSKIE	AT4		45,1	13 017	441	3,39	437	3,36	878	425
9.	GR KLENIEWSKI ZBIGNIEW	GALOMINEK MAZOWIECKIE	AT4	R	44,9	12 892	404	3,13	431	3,34	835	497
10.	BYSTREK MARIA I KAZIMIERZ	POKRZYWNO KUJAWSKO-POMORSKIE	A4		21,7	12 884	523	4,06	450	3,49	973	509
11.	STĘPNIAKOWSKI ADAM	KĘPNIEWO WARMIŃSKO-MAZURSKIE	A4		38,8	12 875	500	3,88	443	3,44	943	384
12.	RUTA WITOLD MIROSŁAW	KSIĄŻKI KUJAWSKO-POMORSKIE	AT4		38,8	12 819	497	3,88	469	3,66	966	442
13.	GR ZDUN PIOTR	JARCZÓWEK LUBELSKIE	A4	R	45,4	12 759	379	2,97	420	3,29	799	436
14.	KULESZA JACEK	WDZIĘKOŃ DRUGI PODLASKIE	AT4	R	36,0	12 630	460	3,64	441	3,49	901	492
15.	STEFĀŃSKI ANDRZEJ	SOŁTYSKI POMORSKIE	AT4	R	35,9	12 629	486	3,85	429	3,40	915	409
16.	ZIÓŁKOWSKI JÓZEF	SŁUGOCINEK WIELKOPOLSKIE	A8		35,8	12 608	532	4,22	430	3,41	962	473
17.	GR STAŃCZAK ARTUR KAMIL	STARÝ SZEŁKÓW MAZOWIECKIE	AT4	R	26,3	12 537	466	3,72	420	3,35	886	381
18.	RAJCHENBACH PRZEMYSŁAW	ORLINIEC POMORSKIE	AT4		33,5	12 468	446	3,58	413	3,31	859	475
19.	GR ROCH Czesław	BUKOWSKA WOLA MAŁOPOLSKIE	AT4		28,6	12 366	467	3,78	416	3,36	883	486
20.	GR SULIKOWSKI SEBASTIAN	ZALESIE WIELKIE WIELKOPOLSKIE	A4	R	41,9	12 359	488	3,95	412	3,33	900	390

Milk. * - The letter ,R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 21. Best herds by milk yield per kg of milk, with an average number of dairy cows between 50,1 to 150,0

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.

The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

No	Herd/barn owner	Herd/barn location province	Assessment method	Milk *	Avg. cows no	Average yield per cow					Calving int.	
						Milk	Fat		Protein			
						kg	kg	%	kg	%	F+P	
1.	GR POHL MACIEJ	KROTOSZYN WIELKOPOLSKIE	AT4	R	110,9	15 464	600	3,88	534	3,45	1134	379
2.	GR DUSZNIK MAŁGORZATA I LESZEK	WIERZBA LUBELSKIE	A4	R	61,6	15 360	505	3,29	525	3,42	1030	459
3.	GR JANUSZ PIETRZAK	ŁUBOWO WIELKOPOLSKIE	A4	R	58,4	14 499	654	4,51	499	3,44	1153	428
4.	MAZUREK WOJCIECH	KOŻUCHÓW MAZOWIECKIE	AT4	R	51,4	14 431	479	3,32	491	3,40	970	402
5.	GR SKONECZNY JACEK I KONRAD	STRZEBIESZEW ŁÓDZKIE	AT4	R	89,2	14 259	600	4,21	496	3,48	1096	464
6.	TUŁODZIECKI JAROSŁAW	WOŁĘCIN KUJAWSKO-POMORSKIE	AT4		140,6	14 059	508	3,61	470	3,34	978	441
7.	GR ŚWIERŻYŃSKI Rafał	NIENAŁTY SZYMANY MAZOWIECKIE	AT4	R	75,1	13 807	550	3,98	474	3,43	1024	391
8.	KRUSZEWSKI KRZYSZTOF	PŁONKA MATYSKI PODLASKIE	AT4		128,0	13 794	488	3,54	457	3,31	945	418
9.	NENEMAN ROBERT	WEŁNICA WIELKOPOLSKIE	A4	R	93,4	13 705	600	4,38	461	3,36	1061	435
10.	GR WYSOKIŃSKI SZCZEPAN	RADOMYSŁ MAZOWIECKIE	AT4	R	82,7	13 700	501	3,66	448	3,27	949	416
11.	KOMASA URSZULA	SREBRNA GÓRA WIELKOPOLSKIE	AT4		58,5	13 682	476	3,48	446	3,26	922	388
12.	NASIŁOWSKI DARIUSZ	SKWIERCZYN DWÓR MAZOWIECKIE	AT4	R	122,1	13 454	518	3,85	447	3,32	965	394
13.	GR KOKOCIŃSKI JERZY	SNOWIDOWO WIELKOPOLSKIE	A4	R	78,0	13 311	506	3,80	459	3,45	965	406
14.	GR BONISŁAWSKI SŁAWOMIR	KOŚCIESZE MAZOWIECKIE	AT4	R	67,7	13 061	536	4,10	475	3,64	1011	451
15.	KIEŁCZYKOWSKI KAROL	GÓZD LUBELSKIE	AT4	R	107,7	12 892	525	4,07	436	3,38	961	387
16.	GOŹDZIEWSKI GRZEGORZ	POKOJEWÓ MAZOWIECKIE	AT4	R	68,4	12 888	499	3,87	438	3,40	937	404
17.	GR KLIMCZAK-FUDAŁA CZESŁAW	RAKÓW MAZOWIECKIE	AT4		50,9	12 867	499	3,88	432	3,36	931	431
18.	PODBIELSKI KONRAD	BOBIN MAZOWIECKIE	AR4	R	67,0	12 782	468	3,66	426	3,33	894	453
19.	JASZCZUR KRZYSZTOF	ZAWADY MAZOWIECKIE	AT4	R	56,7	12 753	543	4,26	440	3,45	983	447
20.	SOKOŁOWSKI ZDZISŁAW	CHOJANE PAWŁOWIĘTA PODLASKIE	AT4		55,5	12 729	479	3,76	437	3,43	916	589

Milk. * - The letter 'R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 22. Best herds by milk yield per kg of milk, with an average number of dairy cows between 150,1 to 300,0

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.

The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

No	Herd/barn owner	Herd/barn location province	Assessment method	Milk *	Avg. cows no	Average yield per cow						Calving int.
						Milk kg	Fat kg	Protein %	F+P kg	F+P %		
1.	GR STEŁĘGOWSKI TADEUSZ	KUDELCZYN MAZOWIECKIE	AT4	R	260,1	13 281	481	3,62	452	3,40	933	391
2.	OHZ OSIĘCINY SP. Z O.O.	MICHAŁOWO KUJAWSKO-POMORSKIE	A4	R	256,5	13 115	497	3,79	424	3,23	921	389
3.	GR KACZAŁA-SZYM-CZAK ALINA	KONARZEW WIELKOPOLSKIE	AT4	R	213,0	13 039	472	3,62	437	3,35	909	428
4.	OHZ OSIĘCINY SP. Z O.O.	CHOTEL KUJAWSKO-POMORSKIE	A4	R	295,6	12 970	494	3,81	431	3,32	925	410
5.	GH MODZELEWSKI ADAM	SUŁĘCIN SZLACHECKI MAZOWIECKIE	AT4	R	175,7	12 657	476	3,76	427	3,37	903	386
6.	GUZEL ADAM i PAWEŁ	SZPAKOWO PODLASKIE	AR4	R	225,3	12 343	463	3,75	395	3,20	858	386
	GUZEL PAWEŁ	wydajność obory wł. 1	AR4	R	80,0	12 356	461	3,73	395	3,20	856	385
	GUZEL ADAM	wydajność obory wł. 2	AR4	R	145,3	12 336	464	3,76	395	3,20	859	387
7.	HENDRIPOL SP. Z O. O.	BRAMKA KUJAWSKO-POMORSKIE	AR8	R	252,1	12 331	485	3,93	413	3,35	898	389
8.	GRH CZECHNÓW SP. Z O.O.	TRZEBOSZ WIELKOPOLSKIE	A4		193,4	12 329	498	4,04	430	3,49	928	396
9.	GR WOJCIECH NOWICKI	PRUŚCE WIELKOPOLSKIE	AR4	R	181,6	12 317	472	3,83	410	3,33	882	409
10.	DZIAŁPOL SP. Z O.O.	DZIAŁYŃ WIELKOPOLSKIE	A4		164,7	12 210	493	4,04	407	3,33	900	421
11.	GR ŻANETA BAŁA KACZMAREK	LUTOGNIEW WIELKOPOLSKIE	AR4	R	174,2	12 170	447	3,67	403	3,31	850	409
12.	KAMIŃSKI JAN i DAMIAN	KIEDROWO WIELKOPOLSKIE	AR8	R	208,9	12 163	455	3,74	398	3,27	853	408
	GR DAMIAN KAMIŃSKI	wydajność obory wł. 1	AR8	R	56,3	12 310	464	3,77	406	3,30	870	413
	KAMIŃSKI JAN	wydajność obory wł. 2	AR8	R	152,6	12 108	452	3,73	394	3,25	846	406
13.	GR SŁUPIKOWSKI RYSZARD	SUCHORĄCZEK KUJAWSKO-POMORSKIE	A4	R	163,1	12 147	425	3,50	407	3,35	832	444
14.	GR BAJDA ALFRED	NIEWIERZ KUJAWSKO-POMORSKIE	A4		168,6	12 037	435	3,61	400	3,32	835	427
15.	GR SZCZEPANIŃSKI ANDRZEJ	POMASKI WIELKIE MAZOWIECKIE	AR4	R	151,9	11 940	466	3,90	401	3,36	867	412
16.	RSP IM."PRZYSZŁOŚĆ" WIEŚNICA	WIEŚNICA DOLNOŚLĄSKIE	A4	R	267,8	11 929	463	3,88	408	3,42	871	469
17.	KRASZEWSKI GRZEGORZ	ŁUNIEWO MAŁE PODLASKIE	AT4	R	155,4	11 738	434	3,70	405	3,45	839	372
18.	DANKO HR SP. Z O.O.	ŁAGIEWNIKI KUJAWSKO-POMORSKIE	A4	R	184,0	11 692	364	3,11	392	3,35	756	415
19.	CYBULKO WOJCIECH	LEWONIE PODLASKIE	AT4		160,0	11 679	452	3,87	390	3,34	842	398
20.	GR WIŚNIEWSKI ŚLAWOMIR	OSTRÓW ŚWIECKI KUJAWSKO-POMORSKIE	AR4	R	154,6	11 646	451	3,87	396	3,40	847	402

Milk. * - The letter 'R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 23. Best herds by milk yield per kg of milk, with an average number of dairy cows between 300,1 to 500,0

No	Herd/barn owner	Herd/barn location province	Assessment method	Milk*	Avg. cows no	Average yield per cow						Calving int.	
						Milk		Fat		Protein		F+P sum	
						kg	kg	%	kg	%	kg	F+P	
1.	OHZ OSIĘCINY SP.Z O.O.	JARANTOWICE KUJAWSKO-POMORSKIE	A4	R	338,5	15 060	482	3,20	496	3,29	978	395	
2.	OHZ OSIĘCINY SP.Z O.O.	OSIĘCINY KUJAWSKO-POMORSKIE	A4	R	301,3	14 065	580	4,12	453	3,22	1 033	410	
3.	SK "NOWE JANKOWICE" SP. Z O.O.	NOWE JANKOWICE KUJAWSKO-POMORSKIE	A4		330,3	13 293	528	3,97	449	3,38	977	397	
4.	HZZ "ŻOŁĘDNIKA" SP. Z O.O.	KAWCZE WIELKOPOLSKIE	A4	R	322,1	13 129	545	4,15	444	3,38	989	410	
5.	GR DRZEWCE HĄDZLIK LIPOWCZYK	DRZEWCE WIELKOPOLSKIE	A4	R	336,8	13 051	489	3,75	420	3,22	909	395	
6.	POLHOZ SP.Z O.O.	POGORZAŁA WIEŚ POMORSKIE	A4	R	494,4	12 743	526	4,13	421	3,30	947	384	
7.	ZPR W KOWROZIE SP. Z O.O.	PIGŻA KUJAWSKO-POMORSKIE	A4	R	392,3	12 728	458	3,60	429	3,37	887	392	
8.	BUTOR-FLESZAR BOŻENA, FLESZAR MATEUSZ, BUTOR WŁADYSŁAW	ŁANY WIELKIE ŚLĄSKIE	A4		457,7	12 653	468	3,70	411	3,25	879	405	
	FLESZAR MATEUSZ	wydajność obory wł. 1	A4		67,6	13 233	474	3,58	429	3,24	903	419	
	BUTOR WŁADYSŁAW	wydajność obory wł. 2	A4		218,6	12 554	465	3,70	409	3,26	874	402	
	BUTOR-FLESZAR BOŻENA	wydajność obory wł. 3	A4		171,5	12 549	471	3,75	408	3,25	879	402	
9.	HZZ "ŻOŁĘDNIKA" SP. Z O.O.	ZAKRZEWO WIELKOPOLSKIE	A4	R	428,2	12 518	478	3,82	431	3,44	909	427	
10.	SK DOBRZYNIEWO SP. Z O.O.	GLESNO WIELKOPOLSKIE	A4		311,9	12 360	499	4,04	409	3,31	908	400	
11.	DANKO H.R. SP. Z O.O. W CHORYNI	KROWIARKI ŚLĄSKIE	A4	R	423,7	12 338	433	3,51	418	3,39	851	419	
12.	OHZ LUBIANA SP. Z O.O.	BOGUSZYN ZACHODNIOPOMORSKIE	A4	R	377,4	12 326	493	4,00	411	3,33	904	391	
13.	STARY JAWORÓW S.A. MILIKOWICE	MILIKOWICE DOLNOŚLĄSKIE	A4		461,2	12 254	462	3,77	426	3,48	888	399	
	PW MILK MILIKOWICE	wydajność obory wł. 1	A4		299,5	12 341	459	3,72	428	3,47	887	401	
14.	STARY JAWORÓW S.A. MILIKOWICE	wydajność obory wł. 2	A4		161,7	12 093	467	3,86	423	3,50	890	394	
	PP-H "AGROPOL" SP.Z O.O.	SOKOŁOWO WIELKOPOLSKIE	A4	R	456,3	12 251	467	3,81	412	3,36	879	396	
15.	OHZZ CHODECZEK SP. Z O.O.	CHODECZEK KUJAWSKO-POMORSKIE	A4	R	366,8	12 156	462	3,80	413	3,40	875	440	
16.	OHZ KAMIENIEC ZĄBK. SP. Z O.O.	STARCZÓW DOLNOŚLĄSKIE	A4	R	373,1	12 143	489	4,03	414	3,41	903	422	
17.	RSP OTYLIN	OTYLIN WIELKOPOLSKIE	AR4		308,5	12 131	445	3,67	404	3,33	849	408	
18.	HZZ "ŻOŁĘDNIKA" SP. Z O.O.	GOLINA WIELKA WIELKOPOLSKIE	A4	R	309,5	12 125	481	3,97	421	3,47	902	411	
19.	GR BIENIAK RAFAŁ	KÓZKI MAZOWIECKIE	AT4	R	372,4	12 115	509	4,20	412	3,40	921	386	
20.	STRUMIŁOWSCY WOJCIECH, AGNIESZKA i TOMASZ	ŁUPKI WARMIŃSKO-MAZURSKIE	AR4 i AT4	R	402,4	12 111	494	4,08	418	3,45	912	431	
	STRUMIŁOWSKI TOMASZ	wydajność obory 1	AR4	R	102,5	14 906	549	3,68	501	3,36	1 050	417	
	STRUMIŁOWSCY WOJCIECH i AGNIESZKA	wydajność obory 2	AR4	R	132,1	14 563	548	3,76	492	3,38	1 040	445	
	STRUMIŁOWSKI TOMASZ	wydajność obory 3	AT4	R	68,5	8 684	433	4,99	314	3,62	747	432	
	STRUMIŁOWSCY WOJCIECH i AGNIESZKA	wydajność obory 4	AT4	R	99,3	8 330	409	4,91	304	3,65	713	430	

Milk. * - The letter 'R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.
The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

Table no 24. Best herds by milk yield per kg of milk, with an average number of dairy cows over 500

The eligible herds are qualified by the number of samples per year required by ICAR for the assessment method.

The herd is qualified according to the number of cows and the cumulative yield, regardless of the number of owners, breeds and milking systems.

No	Herd/barn owner	Herd/barn location province	Assessment method	Milk *	Avg. cows no	Average yield per cow						Calving int.	
						Milk		Fat		Protein		F+P sum	
						kg	kg	%	kg	%	kg	F+P	
1.	GR TADEUSZ LISIECKI	CZECHNÓW WIELKOPOLSKIE	AZ4		1 239,3	13 297	508	3,82	445	3,35	953	385	
2.	HZZ OSOWA SIĘŃ SP. Z O.O.	JĘDRZYCHOWICE LUBUSKIE	A4	R	605,9	13 233	397	3,00	449	3,39	846	413	
3.	KOMBINAT ROLNY SZESTNO SP. Z O.O.	LEMBRUK WARMIŃSKO-MAZURSKIE	AT4	R	1 098,1	13 053	458	3,51	419	3,21	877	416	
4.	OHZ LUBIANA SP. Z O.O.	NADARZYN ZACHODNIOPOMORSKIE	A4	R	662,7	12 989	512	3,94	435	3,35	947	390	
5.	OHZ "GARZYN" SP. Z O.O.	GÓRZNO WIELKOPOLSKIE	A4	R	571,5	12 966	523	4,03	446	3,44	969	412	
6.	ZDIZ-PIB KOŁBACZ SP. Z O.O.	DĘBINA ZACHODNIOPOMORSKIE	A4	R	828,8	12 837	512	3,99	442	3,44	954	405	
7.	OHZ "GARZYN" SP. Z O.O.	MIERZEJE WOWIELKOPOLSKIE	A4	R	560,8	12 797	507	3,96	447	3,49	954	402	
8.	SK DOBRZYNIEWO SP. Z O.O.	MROZOWO KUJAWSKO-POMORSKIE	A4		546,0	12 636	532	4,21	421	3,33	953	376	
9.	PW GRUNWALD SP. Z O.O.	GRUNWALD WARMIŃSKO-MAZURSKIE	A4		515,6	12 599	488	3,87	411	3,26	899	411	
10.	FORTUNE SP. Z O.O.	CIESZYMOWO POMORSKIE	AZ4	R	1 281,2	12 570	449	3,57	430	3,42	879	384	
11.	MARZEC KATARZY-NA G.R.	WIEJKOWO ZACHODNIOPOMORSKIE	A4	R	623,6	12 434	486	3,91	427	3,43	913	409	
12.	RKS BĄDECZ	CZAJCZE-FERMA WIELKOPOLSKIE	A4	R	1 010,0	12 427	424	3,41	423	3,40	847	405	
13.	K & B & A LTD SP. Z O.O.	RZECZYN ZACHODNIOPOMORSKIE	A4	R	623,2	12 310	446	3,62	419	3,40	865	397	
14.	PAUL-PON POLSKA SP. Z O.O.	TOPOLA WIELKOPOLSKIE	AT4	R	1 203,1	12 179	440	3,61	406	3,33	846	395	
15.	AGRO-DĄBRÓWKA SPÓŁKA Z O.O.	DĄBRÓWKA KUJAWSKO-POMORSKIE	A4	R	515,7	12 014	470	3,91	400	3,33	870	402	
16.	PR-H "GAŁOPOL" SP. Z O.O.	GAŁOWO WIELKOPOLSKIE	A4	R	549,7	11 825	477	4,03	408	3,45	885	388	
17.	PIETRUSZYŃSKI ADAM i STANISŁAW	STRADUNY WARMIŃSKO-MAZURSKIE	A4		881,9	11 601	435	3,75	390	3,36	825	419	
	PIETRUSZYŃSKI ADAM	wydajność obory wł. 1	A4		735,9	11 676	437	3,74	391	3,35	828	422	
	PIETRUSZYŃSKI STANISŁAW	wydajność obory wł. 2	A4		146,0	11 226	428	3,81	383	3,41	811	406	
18.	HZNIR POLANOWICE SP. Z O.O.	POLANOWICE KUJAWSKO-POMORSKIE	A4	R	516,9	11 570	458	3,96	398	3,44	856	395	
19.	CZERNINA SP. Z O.O.	LIGOTA DOLNOŚLĄSKIE	A4		501,2	11 556	418	3,62	379	3,28	797	413	
20.	KR KIETRZ SP. Z O.O.	LANGOWO OPOLSKIE	AT4	R	1 368,3	11 520	470	4,08	412	3,58	882	393	

Milk. * - The letter ,R' indicates that the farmer has consented to the recording of information on the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 25. Best herds with the highest milk yield kg by breed

Herds shall be eligible for comparison with the number of trials per year required by ICAR for the assessment method, and satisfying the following conditions for each breed.

The herd shall be eligible according to the number of cows and the cumulative yield for the breed, irrespective of the number of owners and milking systems.

No	Herd owner location province	Assessment method	Milk*	Average number of cows		Average capacity					Calving interval	1st calving age
				In barn	In breed	Milk kg	kg	%	kg	%		

POLISH HOLSTEIN-FRIESIAN BLACK AND WHITE

1.	GR POHL MACIEJ KROTSZYN WIELKPOLSKIE	AT4	R	110,9	108,9	15 471	599	3,87	532	3,44	380	757
2.	GR DUSZNIK MAŁGORZATA I LESZEK WIERZBA LUBELSKIE	A4	R	61,6	59,6	15 311	504	3,29	524	3,42	462	748
3.	PSZCZOŁA MAŁGORZATA, SYLWESTER GUTANÓW LUBELSKIE	AT4	R	18,0	13,1	15 308	507	3,31	533	3,48	497	806
4.	OHZ OSIĘCINY SP. Z O.O. JARANTOWICE KUJAWSKO POMORSKIE	A4	R	338,5	335,7	15 079	481	3,19	496	3,29	395	725
5.	GR GROMADA MARCIN LUDZISKO KUJAWSKO POMORSKIE	A4	R	19,8	19,8	14 771	505	3,42	524	3,55	389	756
6.	BUDNIEWSKI LESZEK WIKIELEC WARMIŃSKO-MAZURSKIE	AT4	R	17,0	16,2	14 683	460	3,13	515	3,51	414	731
7.	GR JANUSZ PIETRZAK ŁUBOWO WIELKPOLSKIE	A4	R	58,4	58,2	14 478	653	4,51	497	3,43	428	988
8.	MAZUREK WOJCIECH KOŻUCHÓW MAZOWIECKIE	AT4	R	51,4	49,4	14 471	479	3,31	492	3,40	399	751
9.	MÓRAWSKI ANDRZEJ GOLANY MAZOWIECKIE	AT4	R	38,6	38,6	14 293	639	4,47	479	3,35	434	724
10.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	AT4	R	89,2	81,8	14 278	598	4,19	495	3,47	468	882

POLISH HOLSTEIN-FRIESIAN RED FACTOR

1.	MYDLARZ MACIEJ INWAŁD MAŁOPOLSKIE	AT4	R	23,2	22,2	11 259	482	4,28	399	3,54	439	792
2.	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D ZAWADA OPOLSKIE	A4	R	335,2	281,1	11 038	444	4,02	375	3,40	411	766
3.	DOMASIK MARIOLA FRYDRYCHOWICE MAŁOPOLSKIE	AT4	R	32,8	18,2	10 643	435	4,09	373	3,50	375	779
4.	SK PRUDNIK SP. Z O.O. WIERZBIEC OPOLSKIE	A4		694,3	588,8	10 620	417	3,93	356	3,35	406	775
5.	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D WRÓBLIN OPOLSKIE	A4	R	213,8	172,1	10 514	422	4,01	366	3,48	416	747
6.	KONTNY KRISTIAN JÓZEF LEŚNIK OPOLSKIE	AT4		92,6	88,4	10 353	431	4,16	372	3,59	442	830
7.	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D BIEDRZYCHOWICE OPOLSKIE	A4	R	176,7	149,5	10 319	424	4,11	361	3,50	409	763
8.	GOETZ STEFAN ŚCIĘGÓW OPOLSKIE	AT4		86,5	51,9	10 259	406	3,96	370	3,61	404	790
9.	GR KOPAŃSKI ZBIGNIEW SOBISKA LUBELSKIE	AT4	R	55,9	46,0	10 177	417	4,10	351	3,45	409	776

No	Herd owner location province	Assessment method	Milk *	Average number of cows		Average capacity				Calving interval	1st calving age	
				In barn	In breed	Milk kg	Fat kg	Protein %				
10.	SEIFERT-SZEWIOR ANNA KOMORNIKI-NOWY MŁYN OPOLSKIE	AT4		34,4	22,1	10 053	421	4,19	359	3,57	430	813
SIMENTALER HERDS up to 50 cows in breed												
1.	PAŚKO ARTUR GLINKI PODKARACKIE	AT4		11,1	7,8	10 380	441	4,25	361	3,48	707	831
2.	GR DOMASZK ZOFIA GOTELP POMORSKIE	A4	R	29,4	15,3	8 915	382	4,28	329	3,69	412	863
3.	GH JACEK SADOWSKI KRZYCZKI-ŻABICZKI MAZOWIECKIE	AT4	R	21,8	12,4	8 820	405	4,59	306	3,47	392	797
4.	PUCHALSCY ŁUKASZ I DOMINIKA NAGÓRKI KUJAWSKO-POMORSKIE	AT4	R	8,3	8,3	8 748	386	4,41	311	3,55	446	832
5.	GR ZGLINICKI TOMASZ SIERAKOWO MAZOWIECKIE	AT4	R	50,3	36,6	8 645	335	3,88	308	3,56	408	824
SIMENTALER HERDS with over 50 cows in breed												
1.	ZGLINICKI PAWEŁ ZDUNÓWEK MAZOWIECKIE	AT4	R	62,4	59,1	8 983	367	4,09	322	3,58	386	798
2.	GR JAN KURPIEWSKI WITOSŁAW WIELKOPOLSKIE	A4	R	99,7	61,9	8 572	353	4,12	305	3,56	373	846
3.	SK "PEPOWO" SP.Z O.O. PEPOWO I WIELKOPOLSKIE	A4	R	361,8	356,1	7 937	322	4,06	285	3,59	607	387
4.	RGR "ANTCZAK" SZCZODROWO WIELKOPOLSKIE	AT4		169,4	169,4	7 631	345	4,52	272	3,56	617	390
5.	RSP WISŁOCZEK WISŁOCZEK PODKARPACIE	A4	R	131,4	75,0	7 589	326	4,30	268	3,53	594	441
POLISH RED												
1.	KRAUS MIROSLAW PODSARNIE MAŁOPOLSKIE	AT4	R	22,7	21,7	7 578	290	3,82	250	3,30	363	804
2.	SOLARCYK ADAM I EDWARD WRÓBLÓWKA MAŁOPOLSKIE	AT4	R	20,9	20,0	6 003	283	4,72	206	3,43	407	791
	SOLARCYK EDWARD	AT4	R	9,8	8,9	6266	292	4,66	213	3,40	361	784
	SOLARCYK ADAM	AT4	R	11,1	11,1	5792	276	4,76	200	3,45	488	796
3.	ŁUKASZ WOJCIECH I EWA KREMPACHY MAŁOPOLSKIE	AT4	R	10,2	10,2	5 909	267	4,52	192	3,24	386	778
4.	SYMUSIAK TADEUSZ ZAŁUCZNE MAŁOPOLSKIE	AT4		33,9	19,2	5 643	260	4,61	195	3,46	404	0
5.	FILIPOWICZ TERESA JASIENNA MAŁOPOLSKIE	AT4	R	5,1	5,1	5 614	240	4,27	186	3,32	364	742
JERSEY												
1.	SK MICHAŁÓW SP.Z O.O. MICHAŁÓW ŚWIĘTOKRZYSKIE	A4	R	130,5	130,5	8 448	438	5,18	337	3,99	396	800
2.	SK "IWNO" SP.Z O.O. WIKTOROWO WIELKOPOLSKIE	A4	R	268,4	233,3	6 705	347	5,17	260	3,87	425	757
3.	NOWAK MARTA PIOTRKÓW TRYBUNALSKI ŁÓDZKIE	A8		15,5	12,5	6 313	343	5,43	259	4,10	409	871
4.	STRZELECKI GRZEGORZ KONIEC KUJAWSKO-POMORSKIE	AT4	R	13,3	8,0	4 134	214	5,17	142	3,43	454	895
5.	G.R. LANGOS PIOTR WRÓBLIK KRÓLEWSKI PODKARPACIE	AT4		14,2	11,3	3 142	170	5,42	123	3,92	529	735
MONTBELIARD												
1.	GR PRZYDANEK JERZY DAKOWY SUCHE WIELKOPOLSKIE	AT4		17,2	9,1	9 497	397	4,18	327	3,44	373	866
2.	MONTAGRO SP.Z O.O. WIERZBICA LUBELSKIE	AT4	R	388,5	388,1	9 405	338	3,59	343	3,65	433	909
3.	ZAKŁAD ROLNY BAS SEŃKO ANDRZEJ GOSTYŃ SZCZECIŃSKI ZACHODNIOPOMORSKIE	AT4	R	459,8	450,2	8 663	368	4,25	310	3,58	375	820

No	Herd owner location province	Assessment method	Milk*	Average number of cows		Average capacity				Calving interval	1st calving age
				In barn	In breed	Milk kg	kg	%	kg		
4.	ŻABIEREK KAROL CIENIN ZABORNY WILEKPOLSKIE	A4	R	22,3	21,9	8 205	377	4,59	297	3,62	463
5.	ROLGO SC W.P.R. STUCHOWO ZACHODNIOPOMORSKIE	AT4		276,8	276,1	8 098	322	3,97	291	3,59	406

LINEBACK

1.	RYBAŁT DAWID DUBAŚNO PODLASKIE	AT4	R	39,3	24,0	7 501	313	4,17	259	3,45	417
2.	GR MAKAREWICZ WOJCIECH TEREBELA LUBELSKIE	AT4		37,7	21,4	7 006	286	4,08	242	3,46	361
3.	JABŁOŃSKA MARIOLA JESIONOWIEC WARMIŃSKO-MAZURSKIE	AT4		19,0	16,0	6 098	223	3,65	198	3,24	421

POLISH RED-WHITE

1.	MOCZYGEMBA PIOTR BORYCZ OPOLSKIE	AT4		83,0	55,3	7 457	321	4,31	267	3,58	388
2.	KSIĄŻEK KRYSYNA JORDANÓW MAŁOPOLSKIE	AT4	R	10,7	10,7	6 721	302	4,49	235	3,50	426
3.	DUDEK ZDZISŁAW DAŃCZÓW DOLNOŚLĄSKIE	AT4		12,8	12,2	6715	277	4,12	217	3,23	442

POLISH BLACK-WHITE

1.	SZULWIC JACEK GROSZKI WARMIŃSKO-MAZURSKIE	AT4		41,6	41,6	7 275	252	3,46	239	3,28	423
2.	ZIÓŁKO MAREK BUKOWSKA WOLA MAŁOPOLSKIE	AT4		18,1	16,1	6 841	317	4,64	239	3,49	451
3.	TROJANOWSKI ROMAN ŁAWICZEK KUJAWSKO-POMORSKIE	A8	R	20,6	16,1	6 491	265	4,08	215	3,31	388

The above tables present barns that meet the following criteria:

1. the proportion of cows of a given breed exceeding 50 % of the average number of cows evaluated in the herd per year
2. the number of cows on average assessed per year in a given breed from 5,0 for the breeds: HO, RF, SM, JE, MO
3. the number of cows evaluated on average per year in a given breed from 4,0 for breeds RP, LB, ZR and ZB

BROWN SWISS

1.	GR LAUFERSKI WOJCIECH OSTRÓMEĆ- CZYN KOLONIA MAZOWIECKIE	AT4	R	22,8	5,6	8 105	351	4,33	285	3,51	445
2.	GR EGIERT ANDRZEJ WĘGIERKI WIELKOPOLSKIE	A4	R	88,5	5,8	7 879	347	4,40	294	3,73	456
3.	GR OLEŚ JAN PÓŁKO-POMORSKIE POMORSKIE	AT4		223,3	6,1	7837	353	4,5	287	3,66	424

Additionally - the only larger herd in Poland in the Brown Swiss breed

	JUCHOWO SPÓŁKA ROLNICZA JUCHOWO ZACHODNIOPOMORSKIE	A4		388,0	1209	5 347	227	4,25	189	3,53	416
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SWEDISH RED

1.	BAKUN DAMIAN SITAWKA PODLASKIE	AT4	R	58,8	8,4	8 530	382	4,48	312	3,66	351
2.	GR SEBASTIAN MARCINIAK POŚWIĘTNIE WIELKOPOLSKIE	AT4	R	101,0	6,6	8 428	357	4,23	301	3,57	383
3.	GR SOWIŃSKI HENRYK GAJÓWKA WIEŚ ŁÓDKIE	AT4	R	80,7	14,3	7 932	344	4,33	274	3,45	391

NORWEGIAN RED

1.	GR B.STACHOWIAK-PAZUNCZYN SEBASTIANOWO WIELKOPOLSKIE	A4	R	52,7	6,5	8 194	375	4,57	313	3,82	384
2.	GR R.WŁODARZ M.STASZAK CZERLEJNO WIELKOPOLSKIE	A4	R	252,6	38,6	7 619	319	4,19	272	3,57	400
3.	GR LITKA MAREK ŽELEŽNIKI MAZOWIECKIE	AT4		23,6	4,2	7 556	338	4,47	261	3,45	674

The above tables for the BS, SR, NR breeds show barns in which an average of at least 4.0 cows per year were assessed without the min. 50,01 % of the proportion of the breed concerned in the number of cows in the barn

Milk * - The letter „R” indicates that the farmer has agreed to record the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 26. A comparison of cows with the highest lactation yield per kg of milk by breed

No	Owner Location Province	Cow	Father	Year born	No lac.	Milking days	Cow capacity					
							Milk kg	Fat kg	%	Protein kg	%	F+P kg
POLISH HOLSTEIN-FRIESIAN BLACK AND WHITE												
1.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005299175811 MIŠKA	NL-491586643 SALINAS	2014	3	305	22 562	869	3,85	752	3,34	1 621
2.	GR POHL MACIEJ KROTO- SZYN WIELKOPOLSKIE	PL-005417991361 NYSZA	NL-441801015 SCARLET	2014	3	305	22 275	780	3,50	661	2,97	1 441
3.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005413589654 PATENA	US-55967184 ALTAPATENT	2016	1	304	21 850	954	4,36	725	3,32	1 679
4.	GR POHL MACIEJ KROTO- SZYN WIELKOPOLSKIE	PL-005237337516 BELA	DE-0580675108 GUARINI	2012	5	305	21 704	634	2,92	666	3,07	1 300
5.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005299175774 RITA	NL-443047659 ALTABERLAGE	2014	4	305	21 548	940	4,36	800	3,71	1 740
6.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005253416998 NOWINKA	DE-0534650505 NORWIN	2013	4	305	21 344	956	4,48	704	3,30	1 660
7.	GR STEŁĘGOWSKI TADEUSZ KUDELZYN MAZOWIECKIE	DE-1264405039 ULA		2015	3	305	21 103	601	2,85	593	2,81	1 194
8.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005307714377 DANIELA	PL- 005308598822 DANIELLO	2015	2	305	21 021	623	2,96	641	3,05	1 264
9.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005336004142 LOLKA	FR-0801948260 CHAMP-EURO	2014	2	305	20 568	917	4,46	699	3,40	1 616
10.	KIEŁCZYKOWSKI KAROL GÓZD LUBELSKIE	DK-04222802873	IT-4990218717 ARDEN	2012	5	305	20 464	639	3,12	565	2,76	1 204
POLISH HOLSTEIN-FRIESIAN RED FACTOR												
1.	KIRCHNIAWY HUBERT PRZEWÓZ OPOLSKIE	PL-005267425016 IDA	DK-249780 D EXPO	2013	2	305	18 745	648	3,46	604	3,22	1 252
2.	ZPR W KOWRO- ZIE SP. Z O.O. PIĘŻA KUJAWSKO-POMORSKIE	PL-005273897494 POGORZELICA CZE	NL-288458773 CANVAS	2013	4	305	18 405	488	2,65	565	3,07	1 053
3.	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005413589647 WALTRA	NL-532478861 OUTLAW	2016	1	305	18 078	733	4,05	641	3,55	1 374
4.	FORTUNE SP. Z O.O. CIE- SZYMOWO POMORSKIE	PL-005276094579 ZAWODOWA 3	US-133080890 LAWN BOY RED	2012	5	305	16 576	515	3,11	515	3,10	1 030
5.	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D BIEDRZYCHO- WICE OPOLSKIE	PL-005303837889 KLAERCHEN	US-136549448 MATRIX-RED	2012	4	305	16 540	559	3,38	525	3,17	1 084
6.	SPR"DIAMENT"GH ŻABNO OTFINÓW MAŁOPOLSKIE	PL-005379486882 AURORA	NL-429467307 ELWOOD	2014	3	305	16 515	477	2,89	504	3,05	981
7.	SK PRUDNIK SP. Z O.O. WIERZBIEC OPOLSKIE	PL-005258070737 PIRAMIDA 77	US-133080890 LAWN BOY RED	2011	5	305	16 512	502	3,04	490	2,97	992
8.	GR KRZEMIOWSKI GRZEGORZ DĘBOWO KUJAWSKO-POMORSKIE	PL-005356731646 MARLA	US-139141470 APPLE	2014	3	305	16 401	635	3,87	586	3,57	1 221

No	Owner Location Province	Cow	Father	Year born	No lac.	Cow capacity							
						Milking days	Milk kg	Fat		Protein		F+P kg	
						kg	%	kg	%				
9.	PIETRUSZYŃSKI ADAM STRADUNY WARMIŃSKO-MAZURSKIE	PL-005321235940 POLA	NL-248268086 CLASSIC RED	2014	3	305	16 336	538	3,29	568	3,48	1 106	
10.	SK PRUDNIK SP. Z O.O. WIERZBIEC OPOLSKIE	PL-005252158097 TAMARA 99	PL-005277236169 LUKAS RED	2013	3	305	16 279	622	3,82	490	3,01	1 112	
SIMENTALER													
1.	PENDZIAŁEK ARNOLD GAMÓW ŚLĄSKIE	PL-005289307581 LILA	CH- 120040124602 TAMBOURIN	2012	4	305	14 437	665	4,61	493	3,41	1 158	
2.	MATYSIAK MIECZYSŁAW I RENATA PUSZCZYKOWIEC WIELKOPOLSKIE	CZ-189519972 DOBRAWA	DE-0938063849 MANGOPE	2011	5	305	13 216	503	3,81	454	3,44	957	
3.	SPR "DIAMENT" GH ŻABNO OTFINÓW MAŁOPOLSKIE	PL-005345074037 AISZA	DE-0942352954 MANKUR	2016	2	305	13 177	502	3,81	444	3,37	946	
4.	GR JAŁMUŻNA WOJCIECH POPIELAWY ŁÓDZKIE	PL-005337734307 AGAWA 10	DE-0813516428 WILLE	2015	2	305	13 073	521	3,98	476	3,64	997	
5.	GR WĄSOWSKI JANUSZ JERZY SUCHODÓŁ MAZOWIECKIE	PL-005246425860 SMERF	DE-0939168722 WEBRAND	2014	3	305	13 063	480	3,68	432	3,31	912	
POLISH RED													
1.	KRAUS MIROSŁAW PODSARNIE MAŁOPOLSKIE	PL-005194657672 BAJKA	DE-0111026481 WALSTAD	2009	7	296	9 628	363	3,77	286	2,97	649	
2.	SZYMUSIAK TADEUSZ ZAŁUCZNE MAŁOPOLSKIE	PL-005237408490 WESTWALIA	PL-005260593989 CENTUŚ W	2014	3	305	9 439	427	4,53	339	3,59	766	
3.	KRAUS MIROSŁAW PODSARNIE MAŁOPOLSKIE	PL-005257675872 MAŁOCHA	DK-36099 R DAVID	2014	3	302	9 426	366	3,88	299	3,17	665	
4.	SZYMUSIAK TADEUSZ ZAŁUCZNE MAŁOPOLSKIE	PL-005260594023 BONA	DK-36099 R DAVID	2012	4	305	9 214	359	3,89	314	3,41	673	
5.	KRAUS MIROSŁAW PODSARNIE MAŁOPOLSKIE	PL-005300876348 BYSTRA	DE-0113873632 EUKAL	2013	3	305	8 478	349	4,11	279	3,30	628	
JERSEY													
1.	PACZÓSKI KAZIMIERZ KSIĘZOPOLE KOMORY MAZOWIECKIE	PL-005247655433 DODA 3	US-113636848 FANTOM	2013	5	305	12 258	499	4,07	519	4,24	1 018	
2.	GR SZATKOWSKA AGNIESZKA BABOSZEWO MAZOWIECKIE	PL-005262857317 CYGANKA 18	US-111506075 DO RIGHT	2012	5	305	11 602	470	4,05	426	3,67	896	
3.	GAŚIOR WOJCIECH SUSZEC ŚLĄSKIE	PL-005380972510 SARENKA	US-067000675 MANGOLD	2013	3	305	10 718	409	3,82	369	3,44	778	
4.	SK MICHAŁÓW SP. Z O.O. MICHAŁÓW ŚWIĘTOKRZYSKIE	PL-005268713433 JEŻYNA 77	US-116279413 VALENTINO	2015	2	305	10 537	457	4,34	385	3,66	842	
5.	GR SZYMKIEWICZ DARIUSZ SARBICE DRUGIE ŚWIĘTOKRZYSKIE	PL-005295212817 STASIA		2014	2	305	10 451	461	4,41	384	3,67	845	
MONTBELIARDE													
1.	PSZCZOŁA MAŁGORZATA, SYLWESTER GUTANÓW LUBELSKIE	PL-005393070548 BESIA	FR-7120048292 DUPARC	2016	1	305	15 061	562	3,73	510	3,38	1 072	

No	Owner Location Province	Cow	Father	Year born	No lac.	Cow capacity							F+P kg
						Milking days	Milk kg	Fat		Protein		F+P kg	
								kg	%	kg	%		
2.	WÓJCIK KRZYSZTOF KOROLÓWKA OSADA LUBELSKIE	PL-005328778785 EPOS 815	FR-7044714726 CARGO	2015	2	305	14 553	514	3,53	513	3,53	1 027	
3.	MONTAGRO SP.Z O.O. WIERZBICA LUBELSKIE	PL-005286843143 HALA	FR-7120543744 UGOSTAR	2012	4	305	14 547	473	3,25	506	3,47	979	
4.	WÓJCIK KRZYSZTOF KOROLÓWKA OSADA LUBELSKIE	PL-005328777559 KAROLA 751	FR-2547072148 CORTIL	2015	2	305	14 543	516	3,55	472	3,25	988	
5.	WÓJCIK KRZYSZTOF KOROLÓWKA OSADA LUBELSKIE	PL-005382281351 EROTA 754	PL-005281385099 PANIAN	2015	2	305	14 484	507	3,50	493	3,40	1 000	
LINEBACK													
1.	SPILKOWSKI MARCIN SZUĆ WARMIŃSKO-MAZURSKIE	PL-005250312125 JAGA 1		2012	4	305	11 126	550	4,95	381	3,42	931	
2.	RYBAŁT DAWID DUBAŃO PODLASKIE	PL-005358008524 MAFIA	PL-005212921365 WŁODEK "O"	2015	3	280	9 825	432	4,40	319	3,25	751	
3.	SPILKOWSKI MARCIN SZUĆ WARMIŃSKO-MAZURSKIE	PL-005250312071 ŁAGODNA 1		2012	4	305	9 678	450	4,65	362	3,74	812	
POLISH RED-WHITE													
1.	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005266072655 LILKA	PL-005167696394 JAROCIN	2011	4	305	13 022	545	4,18	461	3,54	1 006	
2.	BERDYCHOWSCY KRYSY- NA I STEFAN OLSZYNY DOLNOŚLĄSKIE	PL-005288906242 MADZIA	PL-005225530264 ACHMET	2013	3	305	12 216	422	3,45	413	3,38	835	
3.	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005056232047 ASIA		2003	12	305	12 023	470	3,91	428	3,56	898	
POLISH BLACK-WHITE													
1.	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005083758091 KAPA 1		2005	11	305	14 846	520	3,50	471	3,17	991	
2.	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005415011856 KINGA	PL-005220751930 LINUS	2015	2	305	14 419	492	3,41	467	3,24	959	
3.	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005266073744 GALA	PL-005158282087 TRAMP	2012	5	305	12 944	467	3,61	420	3,24	887	
BROWN SWISS													
1.	GR SKUP JANUSZ SKUPIE MAZOWIECKIE	PL-005291323661 GANS 1	CH- 120030104102 SANDO	2012	5	305	14 305	587	4,10	484	3,39	1 071	
2.	GR STACHYRA JOLANTA KOSARZEW DOLNY KOLONIA LUBELSKIE	PL-005362298263 KALINA	CH-120047041117 ZENIT	2016	1	305	12 468	465	3,73	445	3,57	910	
3.	WOJCIECHOWSKI PAWEŁ LEONARDÓW LUBELSKIE	AT-240715619 EMMA	DE-0814366846 ELIAS	2011	4	305	11 217	473	4,22	369	3,29	842	
SWEDISH RED													
1.	K & B & A LTD SP. Z O.O. RZECZYN ZACHODNIOPOMORSKIE	PL-005409800114 KOLNA 13	SE-92388 VALA	2015	2	302	13 051	407	3,12	444	3,40	851	
2.	ZWIERSKI MI- CHAŁ GAJEWIEC WARMIŃSKO-MAZURSKIE	DK-04702702868 DORIS	SE-92671 BUCKARBY	2012	4	305	12 362	532	4,31	454	3,67	986	

No	Owner Location Province	Cow	Father	Year born	No lac.	Cow capacity						
						Milking days	Milk kg	Fat kg	Fat %	Protein kg	Protein %	F+P kg
3.	SAWICKI TOMASZ DWO-RAKI PIKATY PODLASKIE	PL-005357728928 MALINKA	SE-92518 PRASTGARD	2014	3	305	11 976	474	3,96	401	3,34	875
NORWEGIAN RED												
1.	CZAJKA BOGUSŁAW LISI-KIERZ LUBELSKIE	PL-005384971533 SOSNA	NO-10432 VELSVIK	2013	4	305	11 955	467	3,91	418	3,50	885
2.	GR GZARA SŁAWOMIR TRZEBIESZÓW I LUBELSKIE	PL-005341037340 KROTKA	NO-10617 SKEI	2015	2	305	11 893	476	4,00	396	3,33	872
3.	DĄBROWSKI GRZEGORZ KRZECZKOWO NOWE BIEŃKI PODLASKIE	PL-005228859331 MAŁA	NO-10232 SAND	2012	5	305	11 455	487	4,25	385	3,36	872

The table above presents cows in breed groups by kg of milk, regardless of the size of the herd they come from.

Criterion - lactation yield of 305 days completed in 2019, and the share of the breed above 50%.

Table no 27. The best cows by lifetime production, which gave above 100 000 kg during the whole life

No	Cow	Cow owner Lokation	Year born	Cow productivity					Province
				Years assessed	Milk kg	Status	Fat kg	Protein kg	
1.	DE-1302155053 DORIS 129	GR "KOMOROWO" SP. Z O.O. SOBIESIERZNO	2003	14,1	174970	P	8574	6159	KUJAWSKO-POMORSKIE
2.	PL-005003617224 OMEGA	GR "KOMOROWO" SP. Z O.O. SOBIESIERZNO	2002	14,9	173763	P	6742	5560	KUJAWSKO-POMORSKIE
3.	NL-362462182 WILTING ROEL 13	SOKOŁOWSKI ZDZISŁAW CHOWIŃSKI JANE PAŁOWIĘTA	2003	14,8	152330	P	5453	5118	PODLASKIE
4.	PL-005186444037 KAŚKA	GR POHL MACIEJ KROTONSYN	2008	9,3	150384	P	5910	4933	WIELKOPOLSKIE
5.	PL-005103922563 FAJA	GR KOCIEBA TOMASZ KOLONIA ŁAZNÓW	2005	12,7	146559	P	5320	4719	ŁÓDZKIE
6.	PL-005163395697 KRASULA	GR POHL MACIEJ KROTONSYN	2008	9,7	140047	P	5574	4496	WIELKOPOLSKIE
7.	DE-0346919464 ADELA	MATYSIAK MIECZYSŁAW I RENATA PUSZCZYKOWIEC	2002	14,7	139714	P	5253	5002	WIELKOPOLSKIE
8.	PL-005138378267 ŁAJKA 1	GR KRZEMKOWSKI GRZEGORZ DĘBOWO	2006	11,4	138717	P	4633	4411	KUJAWSKO-POMORSKIE
9.	PL-005169630617 BOSA 10	SK "NOWE JANKOWICE" SP. Z O.O. NOWE JANKOWICE	2006	10,9	137113	P	5608	4785	KUJAWSKO-POMORSKIE
10.	DE-1302450455 SETRA	GR "KOMOROWO" SP. Z O.O. SOBIESIERZNO	2005	12,2	136939	P	6340	4670	KUJAWSKO-POMORSKIE
11.	PL-005120895857 WIEJA	KUCZYŃSKI JAN CZARNOCIN	2005	12,8	135231	P	5193	4436	PODLASKIE
12.	PL-005100967116	ZOCHOWSKI STANISŁAW KAMIŃSKIE WIKTOR	2004	12,4	134688	P	5105	4458	PODLASKIE
13.	DE-1302978363 WANNA	GR TADEUSZ LISIECKI CZECHNÓW	2006	10,1	134575	P	5114	4347	WIELKOPOLSKIE
14.	PL-005032728335 SARA 4	JOŃCZYK EWA I WOJCIECH GARZEWKO	2003	13,8	133493	P	5887	4472	WARMIŃSKO-MAZURSKIE

No	Cow	Cow owner Lokation	Year born	Cow productivity					Province
				Years assessed	Milk kg	Status	Fat kg	Protein kg	
15.	PL-005127144873 MAŁA	PP-H "AGROPOL" SP.Z O.O. BIERZGLIN	2006	9,5	132417	P	4754	3933	WIELKOPOLSKIE
16.	PL-005094952860 MIZIA	OHZ OSIEK SP. Z O.O. NIDEK	2007	10,5	132224	P	5844	4562	MAŁOPOLSKIE
17.	PL-005125362880 GOLA	GR "KOMOROWO" SP. Z O.O. SOBIESIERZNO	2007	10,4	131868	P	5301	4325	KUJAWSKO- POMORSKIE
18.	PL-005098375665 SABA	KARBOWSCY HANNA I WALDE- MAR GORTATOWO	2005	12,9	130707	P	4888	4392	KUJAWSKO- POMORSKIE
19.	PL-005142073165 KOZA 115	OHZ DĘBOŁĘKA SP. Z O.O. DĘBOŁĘKA	2007	10,4	129716	P	4916	4112	ŁÓDZKIE
20.	PL-005082271072 NYSKA	GR BAJDA ALFRED NIEWIERZ	2004	13,2	129617	P	5146	4485	KUJAWSKO- POMORSKIE
21.	PL-005114929322 OLA 1	WRÓBEL SŁAWOMIR GULCZEWO	2006	11,6	129361	P	4903	4165	MAZOWIECKIE
22.	PL-005007967653 KAMA 17	KALINOWSKI ROMAN JAWORY KLEPACZE	2000	17	129168	P	4482	3914	PODLASKIE
23.	PL-005157282576 SARNA	GR CHMIEL IRENEUSZ TRZUSKOŁONI	2007	9,8	129009	P	4399	4412	WIELKOPOLSKIE
24.	PL-005001204211 SPOKOJNA 1	CYBULSKI PAWEŁ ANDRZEJ STARCZEWKO WIELKIE	2002	15,7	128611	P	5183	4116	MAZOWIECKIE
25.	CZ-171648981 BUTIRO	GR KRZEMKOWSKI GRZEGORZ DĘBOWO	2008	9,4	128425	P	4174	4392	KUJAWSKO- POMORSKIE
26.	PL-005097977723 WISŁĄ 30	MÓRAWSKI ANDRZEJ GOLANY	2005	12	128294	P	5157	4041	MAZOWIECKIE
27.	PL-005129365634 WDA 9	MARZEC KATARZYNA G.R. WIEJKOWO	2006	10,9	128116	P	4945	4151	ZACHODNIOPÓ- MORSKIE
28.	PL-005178790036 BURKA	GR TERESA JACEK DOPIERAŁ BIEŻYN	2007	10,1	127916	P	3658	3799	WIELKOPOLSKIE
29.	DE-1302225781 MALMA	TOMASZEWSKI RYSZARD BOMBALICE	2003	13,2	127335	P	4635	4151	MAZOWIECKIE
30.	PL-005167500806 KALIOPA	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D BIEDRZYCHOWICE	2007	9,2	127318	P	5322	4265	OPOLSKIE
31.	PL-005143017762 BENETA 2	STRUMIŁOWSKI WOJCIECH AG- NIESZK ŁUPKI	2007	9,8	127247	P	4505	3677	WARMIŃSKO- MAZURSKIE
32.	DE-1302579100 FILA	GR TADEUSZ LISIECKI CZECHNÓW	2005	11,1	127143	P	4755	4259	WIELKOPOLSKIE
33.	PL-005204135589 FUNIA	GR "KOMOROWO" SP. Z O.O. SOBIESIERZNO	2009	8,7	127081	P	5503	4321	KUJAWSKO- POMORSKIE
34.	PL-005186444365 OMEGA	GR POHL MACIEJ KROTOSZYN	2009	8,7	125659	P	4398	4021	WIELKOPOLSKIE
35.	PL-005124015343 NOWA	ZPR W KOWROZIE SP. Z O.O. PIGŻA	2006	9,8	125432	P	5055	4189	KUJAWSKO- POMORSKIE
36.	PL-005176971604 TAMA 66	OHZ OSIĘCINY SP. Z O.O. JARANTOWICE	2007	9,6	125162	P	4518	4105	KUJAWSKO- POMORSKIE
37.	PL-005164015006 ZORA	HZZ "ŻOŁĘDNICA" SP. Z O.O. ZAKRZEWO	2007	9,3	125154	P	4818	4005	WIELKOPOLSKIE
38.	PL-005124641504 KOLONIA	GR TADEUSZ LISIECKI CZECHNÓW	2006	11,2	125118	P	4479	4054	WIELKOPOLSKIE
39.	PL-005194130434 TONIA 4	OHZ DĘBOŁĘKA SP. Z O.O. DĘBOŁĘKA	2008	9,7	124852	P	5007	4095	ŁÓDZKIE
40.	PL-005111822985 DUSIA	GR KANKOWSKI KRZYSZTOF STARA RUSKOŁĘKA	2006	11,8	124545	P	4272	4197	MAZOWIECKIE
41.	PL-005207797296 GIZA	AGROMARINA SP.Z O.O. KUL- CZYN KOLONIA	2009	8,8	124506	P	3561	3810	LUBELSKIE

No	Cow	Cow owner Lokation	Year born	Cow productivity					Province
				Years assessed	Milk kg	Status	Fat kg	Protein kg	
42.	PL-005176865057 MUSE 4	MARZEC KATARZYNA G.R. WIEJKOWO	2007	9,9	124478	P	3996	3672	ZACHODNIOPO- MORSKIE
43.	PL-005008233665 ŁAJKA	GR WOJCIECH ZAJDOWICZ KOŁACZKOWO	1999	18	124247	P	5343	3852	WIELKOPOLSKIE
44.	PL-005032694432 MOŃKA 15	MATEBŁOWSKI PAWEŁ OLSZTYN	2004	13	124218	P	4186	3664	WARMIŃSKO- MAZURSKIE
45.	PL-005220983751 HELLADA 22	OHZ OSIĘCINY SP. Z O.O. OSIĘCINY	2009	8,2	123915	P	4808	3903	KUJAWSKO- POMORSKIE
46.	PL-005115144090 CZARKA	GR ŁOPACZYK MIROSŁAW KOBYLIN	2005	12,5	123879	P	4138	4001	WIELKOPOLSKIE
47.	PL-005131760298 GICKA 13	OHZ OSIĘCINY SP. Z O.O. CHOTEL	2006	10,5	123789	P	5385	3837	KUJAWSKO- POMORSKIE
48.	PL-005129365733 POGODA 14	MARZEC KATARZYNA G.R. WIEJKOWO	2006	11,1	123630	P	4315	3758	ZACHODNIOPO- MORSKIE
49.	PL-005086265619 NELLJE 241	HORBAN SP. Z O.O. CIEĆMIERZ	2005	12,1	123468	P	4889	4124	ZACHODNIOPO- MORSKIE
50.	PL-005152457924 MIZIA	KULA-KRAUSE IRENA NOWE MOSTY	2007	9,6	123055	P	3692	3975	KUJAWSKO- POMORSKIE
51.	PL-005131754075 HILA 4	OHZ OSIĘCINY SP. Z O.O. MICHAŁOWO	2006	10,4	123001	P	4477	3653	KUJAWSKO- POMORSKIE
52.	PL-005114264270 LUNA	LUTKIEWICZ ADAM CANKI	2005	11,6	122659	P	6636	3962	WARMIŃSKO- MAZURSKIE
53.	PL-005098335096 RAMA 5	GR HANCZEWSKI WŁADYSŁAW WOLA KOŻUSZKOWA	2006	11,5	122438	P	4885	3967	KUJAWSKO- POMORSKIE
54.	PL-005094076948 WIEPKJE	OHZ OSIEK SP. Z O.O. NIDEK	2005	11	122401	P	4039	3464	MAŁOPOLSKIE
55.	PL-005097977730 WISŁA 33	MÓRAWSKI ANDRZEJ GOLANY	2005	11,9	122311	P	4795	4110	MAZOWIECKIE
56.	PL-005143883718 BIUTE 8	GR GROCHOWALSKA-HEIN BO- ŻENA KIEŁPINY	2007	9,9	122267	P	4781	4010	KUJAWSKO- POMORSKIE
57.	PL-005136056129 JACKA	GR KRZYSZTOF KUCHARCZYK ŻABNO	2006	10,6	122241	P	4608	3887	WIELKOPOLSKIE
58.	PL-005066354135 FINKA	GR ARKADIUSZ SZWARC ROSZKOWO	2004	12,8	122081	P	4529	3943	WIELKOPOLSKIE
59.	PL-005219792128 JANNA 5	AGROMADEX SP. Z O.O. KUNICE	2009	8,5	121929	P	3780	3890	DOLNOŚLĄSKIE
60.	PL-005094137007 GRANA	KIEŁBASA MAREK LUSŁAWICE	2005	12,7	121929	P	5158	3963	MAŁOPOLSKIE
61.	PL-005172716186 DANUSIA 3	PAUL-PON POLSKA SP.Z O.O. TOPOLA	2008	9,8	121909	P	4352	3889	WIELKOPOLSKIE
62.	PL-005293722974 MIŁA 23	MAJEWSKA URSZULA KOŁOZĄB	2009	8,1	121784	P	3118	3812	POMORSKIE
63.	PL-005140226297 DIORA	BRZYSKO-ROL SP. Z O. O. GÓR- KI DĄBSKIE	2005	11,5	121739	P	4492	3835	KUJAWSKO- POMORSKIE
64.	PL-005198696202 PILICA	OHZ "GARZYN" SP. Z O.O. GÓRZNO	2010	7,8	121645	P	4270	3844	WIELKOPOLSKIE
65.	PL-005143883824 GRITT 9	GR GROCHOWALSKA-HEIN BO- ŻENA KIEŁPINY	2007	10	121552	P	5227	3963	KUJAWSKO- POMORSKIE
66.	PL-005106814339 TOSKA	SZYMČZYK MARIUSZ PRUSKA MAŁA	2006	11,2	121474	P	4410	3717	PODLASKIE
67.	PL-005093511044 DIANA 15	KARWASZ JAN KRYNICA MORSKA	2005	11,8	121059	P	4261	4007	POMORSKIE
68.	PL-005123621057 ŁYSA 9	GR OWCAZARSKI PIOTR DĘBOWIERZCHY	2006	11,2	120719	P	5456	3948	LUBELSKIE
69.	DE-1303225606 MOLA	AGRO-TAK ZAGRODNO SP. JAW- NA MODLIKOWICE	2008	9,3	120514	P	5303	4146	DOLNOŚLĄSKIE

No	Cow	Cow owner Lokation	Year born	Cow productivity					Province
				Years assessed	Milk kg	Status	Fat kg	Protein kg	
70.	PL-005208723492 BRYŁA 6	OHZ OSIĘCINY SP. Z O.O. JARANTOWICE	2008	9,7	120433	P	4444	3806	KUJAWSKO- POMORSKIE
71.	PL-005086548392 KIRA 67	ZDIZ-PIB KOŁBACZ SP. Z O.O. DĘBINA	2004	12,3	120425	P	4793	4119	ZACHODNIOPO- MORSKIE
72.	PL-005169912423 BUZA 4	TUŁODZIECKI JAROSŁAW WOŁĘCIN	2007	9,1	120302	P	3465	3597	KUJAWSKO- POMORSKIE
73.	PL-005206125380 NOCKA	GR DAMIAN KAMIŃSKI KIEDROWO	2008	8,6	120275	P	3704	3548	WIELKOPOLSKIE
74.	PL-005178767236 KAWA 12	KOM-ROL KOBYLNICKI SP. Z O.O. WITOWICZKI	2008	8,8	120228	P	4905	3823	KUJAWSKO- POMORSKIE
75.	PL-005098583367 ŻEBERKA 4	DĄBROWSKI JAROSŁAW WÓJCIN	2004	12,4	120207	P	4808	3775	KUJAWSKO- POMORSKIE
76.	PL-005278741563 FIRMA 17	OHZ OSIĘCINY SP. Z O.O. OSIĘCINY	2010	7,3	120163	P	4482	3905	KUJAWSKO- POMORSKIE
77.	PL-005157990945 ANGELA	PIETRUSZYŃSKI ADAM STRADUNY	2007	9,4	120061	P	3650	3734	WARMIŃSKO- MAZURSKIE
78.	PL-005044925036 ANSA 4	GR NIEWIADÓW JABŁOŃSKI W. KONSTANCIN	2005	12	119817	P	4445	4026	ŁÓDZKIE
79.	PL-005267976600 FAMA	PRZEŹDZIECKI ADAM GRODZKIE SZCZEPANOVIĘTA	2010	7,8	119629	P	4043	3589	PODLASKIE
80.	PL-005146998242 ALKA	GR ŚLUPIKOWSKI RYSZARD SUCHORĄCEK	2008	9,7	119609	P	3385	3457	KUJAWSKO- POMORSKIE
81.	PL-005220984314 HALMA 49	OHZ OSIĘCINY SP. Z O.O. OSIĘCINY	2009	8	119299	P	4307	3484	KUJAWSKO- POMORSKIE
82.	PL-005152692011 BIAŁA 29	ZALEWSKI LECH OKONIN	2008	9,4	119297	P	4152	3853	KUJAWSKO- POMORSKIE
83.	PL-005128733663 DODA	CHALIŃSKI PAWEŁ BOROWIANKA	2005	11,9	118888	P	4387	3650	ŚLĄSKIE
84.	PL-005216744502 GROTA	OHZ OSIEK SP. Z O.O. WIEPRZ	2008	9,5	117906	P	3903	3679	ŚLĄSKIE
85.	PL-005107588888 ROMA 7	MAZUROWSKA EWA LUBAWA	2004	13,2	117786	P	5006	3840	WARMIŃSKO- MAZURSKIE
86.	PL-005128287449 ZINAJDA 6	AGRO-TAK ZAGRODNO SP. JAW- NA MODLIKOWICE	2005	11,3	117784	P	4876	3793	DOLNOŚLĄSKIE
87.	DE-1302883750 ASIA	GR TADEUSZ LISIECKI CZECHNÓW	2006	10,6	117669	P	4789	4142	WIELKOPOLSKIE
88.	PL-005197982450 HAWCIARA	DANKO HODOWLA ROŚLIN KOPASZEWKO	2009	8,8	117665	P	3377	3506	WIELKOPOLSKIE
89.	PL-005036533720 OAZA 65	OHZ DĘBOŁĘKA SP. Z O.O. DĘBOŁĘKA	2005	12	117554	P	4549	3738	ŁÓDZKIE
90.	PL-005140434470 AGRAFKÄ 7	GR GÜLA GRZEGORZ DWORNIA	2006	11,5	117549	P	5490	3938	LUBELSKIE
91.	PL-005181094701 DZIKA	KOMBINAT ROLNY SZESTNO SP.ZOO LEMBRUK	2008	9	117230	P	4349	3939	WARMIŃSKO- MAZURSKIE
92.	PL-005209176815 BELA	HZZ "ŻOŁĘDNICA" SP. Z O.O. KAWCZE	2009	7,6	116749	P	3993	3409	WIELKOPOLSKIE
93.	PL-005216970284 MAGORA 55	GR OWCZARSKI PIOTR DĘBOWIERZCHY	2009	9	116554	P	4650	3660	LUBELSKIE
94.	PL-005278741747 MISA 26	OHZ OSIĘCINY SP. Z O.O. OSIĘCINY	2010	7,6	116538	N	3904	3415	KUJAWSKO- POMORSKIE
95.	PL-005151154459 HIRA 3	AGRO-TAK ZAGRODNO SP. JAWNA MODLIKOWICE	2006	10,4	116383	P	5831	4143	DOLNOŚLĄSKIE
96.	PL-005053554562 BESTRA	TRZCIŃSKI ANDRZEJ MARZENIN	2004	12,6	116333	P	4560	3641	WIELKOPOLSKIE
97.	PL-005123172696 BRONA 1	NOSARZEWSKI ADAM SŁA- WIUSZ OLSZEWO BORZYMY	2005	12,2	116251	P	3941	3650	MAZOWIECKIE
98.	PL-005109680054 JARLUTKA 5	GR TRĘTOWSKI ZBIGNIEW DŁUGOLEŁKA	2003	13	116167	P	4414	3903	MAZOWIECKIE

No	Cow	Cow owner Lokation	Year born	Cow productivity					Province
				Years assessed	Milk kg	Status	Fat kg	Protein kg	
99.	PL-005181222678 RABA 10	MARZEC KATARZYNA G.R. WIEJKOWO	2008	9,2	116028	P	4490	3550	ZACHODNIO- POMORSKIE
100.	PL-005220982518 LIGAWA 6	OHZ OSIĘCINY SP. Z O.O. OSIĘCINY	2009	7,9	115813	P	4494	3845	KUJAWSKO- POMORSKIE

„N” - a cow that in 2019 exceeded 100,000 kg of life milk yield.

„P” - a cow that has reached 100,000 kg of life milk yield in previous years and improved it in 2019.

The table shows the 100 most productive cows, the full list is available at www.pfhb.pl.

Table no 28. A list of distinctive herds according to the highest average yield per kg of fat + protein, by breed.

Flocks shall be eligible for comparison with the number of trials per year required by ICAR, for the assessment method and meeting the given conditions for each breed.

The herd shall be eligible according to the number of cows and the cumulative yield for the breed, irrespective of the number of owners and milking systems.

No	Herd owner Location Province	Assessment method	Milk*	Average no of cows		Average capacity					calving interval	1st calving age		
				In barn	In breed	Milk kg	Fat		Protein					
							kg	%	kg	%				

POLISH HOLSTEIN-FRIESIAN BLACK AND WHITE

1	GR JANUSZ PIETRZAK ŁUBOWO WIELKOPOLSKIE	A4	R	58,4	58,2	14 478	653	4,51	497	3,43	1 150	428	988
2	GR POHL MACIEJ KROTOSZYN WIELKOPOLSKIE	AT4	R	110,9	108,9	15 471	599	3,87	532	3,44	1 131	380	757
3	MÓRAWSKI ANDRZEJ GOLANY MAZOWIECKIE	AT4	R	38,6	38,6	14 293	639	4,47	479	3,35	1 118	434	724
4	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	AT4	R	89,2	81,8	14 278	598	4,19	495	3,47	1 093	468	882
5	NENEMAN ROBERT WEŁNICA WIELKOPOLSKIE	A4	R	93,4	92,4	13 729	600	4,37	461	3,36	1 061	436	760

POLISH HOLSTEIN-FRIESIAN RED FACTOR

1	MYDLARZ MACIEJ INWAŁD MAŁOPOLSKIE	AT4	R	23,2	22,2	11 259	482	4,28	399	3,54	881	439	792
2	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D ZAWADA OPOLSKIE	A4	R	335,2	281,1	11 038	444	4,02	375	3,40	819	411	766
3	DOMASIK MARIO- LA FRYDRYCHOWICE MAŁOPOLSKIE	AT4	R	32,8	18,2	10 643	435	4,09	373	3,50	808	375	779
4	KONTNY KRISTIAN JÓZEF LEŚNIK OPOLSKIE	AT4		92,6	88,4	10 353	431	4,16	372	3,59	803	442	830
5	OHZ "GŁOGÓWEK" SP. Z O.O. Z-D WRÓBLIN OPOLSKIE	A4	R	213,8	172,1	10 514	422	4,01	366	3,48	788	416	747

SIMENTALER

1	PAŠKO ARTUR GLINKI PODKARPACZIE	AT4		11,1	7,8	10 380	441	4,25	361	3,48	802	707	831
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No	Herd owner Location Province	Assessment method	Milk *	Average no of cows		Milk kg	Average capacity				Fat + Protein kg	calving interval	1st calving age
				In barn	In breed		kg	%	kg	%			
2	GR DOMASZK ZOFIA GOTELP POMORSKIE	A4	R	29,4	15,3	8 915	382	4,28	329	3,69	711	412	863
3	GH JACEK SADOWSKI KRZYCZKI-ŽABICZKI MAZOWIECKIE	AT4	R	21,8	12,4	8 820	405	4,59	306	3,47	711	392	797
4	PUCHALSCY ŁUKASZ I DOMINIKA NAGÓR- KI KUJAWSKO-PO- MORSKIE	AT4	R	8,3	8,3	8 748	386	4,41	311	3,55	696	446	832
5	ZGLINICKI PAWEŁ ZDUNÓWEK MAZOWIECKIE	AT4	R	62,4	59,1	8 983	367	4,09	322	3,58	689	386	798
POLISH RED													
1	KRAUS MIRO- SŁAW PODSARNIE MAŁOPOLSKIE	AT4	R	22,7	21,7	7 578	290	3,82	250	3,30	540	363	804
2	SOLARCYK ADAM I EDWARD WRÓBLÓW- KA MAŁOPOLSKIE	AT4	R	20,9	20,0	6 003	283	4,72	206	3,43	489	407	791
	SOLARCYK EDWARD	AT4	R	9,8	8,9	6266	292	4,66	213	3,40	505	361	784
	SOLARCYK ADAM	AT4	R	11,1	11,1	5792	276	4,76	200	3,45	476	488	796
3	ŁUKASZ WOJCIECH i EWA KREMPACHY MAŁOPOLSKIE	AT4	R	10,2	10,2	5 909	267	4,52	192	3,24	459	386	778
4	SZYMUSIAK TADEUSZ ZAŁUCZNE MAŁOPOLSKIE	AT4		33,9	19,2	5 643	260	4,61	195	3,46	455	404	-
5	LACH STFAN JODŁOW- NIK MAŁOPOLSKIE	AT4	R	13,0	13,0	5 232	260	4,96	183	3,49	443	404	-
JERSEY													
1	SK MICHAŁÓW SP. Z O.O. MICHAŁÓW ŚWIĘTOKRZYSKIE	A4	R	130,5	130,5	8 448	438	5,18	337	3,99	775	396	800
2	SK "IWNO" SP. Z O.O. WIKTORO- WO WIELKOPOLSKIE	A4	R	268,4	233,3	6 705	347	5,17	260	3,87	607	425	757
3	NOWAK MARTA PIOT- RKÓW TRYBUNALSKI ŁÓDZKIE	A8		15,5	12,5	6 313	343	5,43	259	4,10	602	409	871
4	STRZELECKI GRZE- GORZ KONIEC KU- JAWSKO-POMORSKIE	AT4	R	13,3	8,0	4 134	214	5,17	142	3,43	356	454	895
5	G.R. LANGOS PIOTR WRÓBLIK KRÓLEWSKI PODKARPACKIE	AT4		14,2	11,3	3 142	170	5,42	123	3,92	293	529	735
MONTBELIARDE													
1	GR PRZYDANEK JERZY DAKOWY SU- CHE WIELKOPOLSKIE	AT4		17,2	9,1	9 497	397	4,18	327	3,44	724	373	866
2	MONTAGRO SP.Z O.O. WIERZBICA LUBELSKIE	AT4	R	388,5	388,1	9 405	338	3,59	343	3,65	681	433	909

No	Herd owner Location Province	Assessment method	Milk*	Average no of cows		Average capacity						calving interval	1st calving age	
				In barn	In breed	Milk kg	Fat kg	%	Protein kg	%	Fat + Protein kg			
3	ZAKŁAD ROLNY BAS SEŃKO ANDRZEJ GO- STYŃ SZCZECIŃSKI ZACHODNIOPOMORSKIE	AT4	R	459,8	450,2	8 663	368	4,25	310	3,58	678	375	820	
4	ŻABIEREK KAROL CIENIN ZABORNY WIELKOPOLSKIE	A4	R	22,3	21,9	8 205	377	4,59	297	3,62	674	463	832	
5	ROLGO SC W.P.R. STUCHOWO ZACHODNIOPOMORSKIE	AT4		276,8	276,1	8 098	322	3,97	291	3,59	613	406	822	
LINEBACK														
1	RYBAŁT DAWID DUBAŚNO PODLASKIE	AT4	R	39,3	24,0	7 501	313	4,17	259	3,45	572	417	755	
2	GR MAKAREWICZ WOJCIECH TEREBELA LUBELSKIE	AT4		37,7	21,4	7 006	286	4,08	242	3,46	528	361	764	
3	WŁODARCZYK SŁAWOMIR GOŁĄB LUBELSKIE	AT4	R	33,7	20,8	5 748	258	4,49	198	3,45	456	359	733	
4	GR KRZYSZTOF BOGUSKI JAWOR SOLECKI MAZOWIECKIE	AT4		18,3	18,3	5 463	253	4,63	182	3,33	435	392	868	
5	JABLONSKA MARIOLA JE- SIONOWIEC WARMIŃSKO-MAZURSKIE	AT4		19,0	16,0	6 098	223	3,65	198	3,24	421	421	1186	
POLISH RED-WHITE														
1	MOCZYGEMBA PIOTR BORYCZ OPOLSKIE	AT4		83,0	55,3	7457	321	4,31	267	3,58	588	388	1061	
2	KSIĄŻEK KRYSTYNA JORDANÓW MAŁOPOLSKIE	AT4	R	10,7	10,7	6 721	302	4,49	235	3,50	537	426	827	
3	FEDKO PAWEŁ PRZYDO- NICA MAŁOPOLSKIE	AT4		14,7	9,0	6374	307	4,81	216	3,39	523	422	715	
4	GR MAZUROL MAZUR MAREK NIEDŹWIADA PODKARPACKIE	AT4		6,1	5,1	6452	310	4,8	210	3,25	520	350	-	
5	GR JANIK WOJCIECH ŁAPANÓW MAŁOPOLSKIE	AT4	R	14,0	11,0	6 458	291	4,51	210	3,25	501	425	763	
POLISH BLACK-WHITE														
1	ZIÓŁKO MAREK BUKOWSKA WOLA MAŁOPOLSKIE	AT4		18,1	16,1	6841	317	4,64	239	3,49	556	451	810	
2	PARUCH KRZYSZTOF G.R. RZEP CZYNO ZA- CHODNIOPOMORSKIE	AT4	R	23,9	22,9	6 356	285	4,48	219	3,44	504	405	1248	
3	URBAN JERZY WYSZA- TYCE PODKARPACKIE	AT4	R	11,6	7,0	6 360	281	4,41	220	3,46	501	390	-	
4	SZULWIC JACEK GROSZKI WARMIŃSKO-MAZURSKIE	AT4		41,6	41,6	7275	252	3,46	239	3,28	490	423	779	

No	Herd owner Location Province	Assessment method	Milk *	Average no of cows		Average capacity						calving interval	1st calving age	
						Milk kg	Fat		Protein		Fat + Protein kg			
				In barn	In breed		kg	%	kg	%				
5	TROJANOWSKI ROMAN ŁAWICZEK KUJAWSKO-POMORSKIE	A8	R	20,6	16,1	6 491	265	4,08	215	3,31	480	388	1063	
BROWN SWISS														
1	ŁASKI RADOSŁAW KOŁO- NIA SZYDŁÓW ŁÓDZKIE	A8		40,3	4,0	7 595	381	5,01	297	3,91	678	642	-	
2	GR EGIERT ANDRZEJ WĘGIERKI WIELKOPOLSKIE	A4	R	88,5	5,8	7 879	347	4,40	294	3,73	641	456	-	
3	GR OLEŚ JAN PÓŁKO-POMORSKIE POMORSKIE	AT4		223,3	6,1	7 837	353	4,50	287	3,66	640	424	830	
4	GR LAUFERSKI WOJCIECH OSTRO- MĘCZYN KOLONIA MAZOWIECKIE	AT4	R	22,8	5,6	8 105	351	4,33	285	3,51	636	445	848	
5	PAŃCZYK JAN G.R. SZCZECINEK ZACHODNIOPOMORSKIE	AT4	R	18,3	4,3	7 573	307	4,05	273	3,60	580	376	-	
SWEDISH RED														
1	BAKUN DAMIAN SITAW- KA PODLASKIE	AT4	R	58,8	8,4	8 530	382	4,48	312	3,66	694	351	838	
2	GR SEBASTIAN MAR- CINIĄK POŚWIĘTNO WIELKOPOLSKIE	AT4	R	101,0	6,6	8 428	357	4,23	301	3,57	658	383	816	
3	GR SOWIŃSKI HENRYK GAJÓWKA WIEŚ ŁÓDZKIE	AT4	R	80,7	14,3	7 932	344	4,33	274	3,45	618	391	-	
4	ZD BIEBRZA BIEBRZA PODLASKIE	AT4		318,6	5,0	7 739	324	4,19	289	3,74	613	495	-	
5	RSP MIEJSCE ODRZAŃSKIE OPOLSKIE	A4	R	104,4	24,0	7 452	332	4,45	270	3,62	602	430	939	
NORWEGIAN RED														
1	GR B. STACHOWIAK-PA- ZUNCZYN SEBASTIANOWO WIELKOPOLSKIE	A4	R	52,7	6,5	8 194	375	4,57	313	3,82	688	384	-	
2	GR LITKA MAREK ŻELEŻNIKI MAZOWIECKIE	AT4		23,6	4,2	7 556	338	4,47	261	3,45	599	674	880	
3	GR R. WŁODARZ M. STASZAK CZERLEJNO WIELKOPOLSKIE	A4	R	252,6	38,6	7 619	319	4,19	272	3,57	591	400	826	
4	WYSZOMIERSKI BOGUSŁAW RYNOŁTY PODLASKIE	AT4	R	40,1	24,9	7 080	314	4,44	243	3,43	557	402	803	

The above list includes barns that meet the following criteria:

- the proportion of cows of a given breed exceeding 50 % of the average number of cows evaluated per year in the herd including:
 - the number of cows on average assessed per year in the breed from 5,0 for the breeds HO, RW, SM, JE, MO
 - the number of cows on average assessed per year for a given breed from 4,0 for the breeds RP, LB, ZR and ZB
- for the BS, SR, NR breeds, the presented herds with an average of at least 4,0 cows per year assessed without requiring min. 50,01 % of the breed's share of the number of cows in the barn
- milk * - The letter 'R' indicates that the farmer has agreed to record the quantity of milk sold and has recorded complete information for the whole of 2019.

Table no 29. Summary of cows with the highest yield of the sum of kg of fat + protein in a 305-day lactation, by breed.

No	Owner Location Province	Cow	Father	Days milkingin lact.	Milk kg	Fat + Protein sum	Fat		Protein	
							%	kg	%	kg
POLISH HOLSTEIN-FRIESIAN BLACK AND WHITE										
1	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005299175774 RITA	NL-443047659 ALTABERLAGE	4 305	21 548	1 740	940	4,36	800	3,71
2	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005413589654 PATENA	US-55967184 ALTAPATENT	1 304	21 850	1 679	954	4,36	725	3,32
3	GR SKONECZNY JACEK I KONRAD STRZEBIESZEW ŁÓDZKIE	PL-005253416998 NOWINKA	DE-0534650505 NORWIN	4 305	21 344	1 660	956	4,48	704	3,30
POLISH HOLSTEIN-FRIESIAN RED FACTOR										
1	GR SKONECZNY JACEK I KON- RAD STRZEBIESZEW ŁÓDZKIE	PL-005413589647 WALTRA	NL-532478861 OUTLAW	1 305	18 078	1 374	733	4,05	641	3,55
2	SK PRUDNIK SP. Z O.O. WIERZBIEC OPOLSKIE	PL-005337722151 MURAWA 217	NL-396647605 FIDELITY	4 305	14 559	1 258	702	4,82	556	3,82
3	KIRCHNIAWY HUBERT PRZEWÓZ OPOLSKIE	PL-005267425016 IDA	DK-249780 D EXPO	2 305	18 745	1 252	648	3,46	604	3,22
SIMENTALER										
1	PENDZIAŁEK ARNOLD GAMÓW ŚLĄSKIE	PL-005289307581 LILA	CH- 120040124602 TAMBOURIN	4 305	14 437	1 158	665	4,61	493	3,41
2	PP-H "ROL-SAD" SP.Z.O.O. LUBOSTROŃ KUJAWSKO-POMORSKIE	PL-005399736684 HERA	DE-0938662295 WATNOX	4 305	11 689	1 001	594	5,08	407	3,48
3	GR JAŁMUŻNA WOJCIECH POPIELAWY ŁÓDZKIE	PL-005337734307 AGAWA 10	DE-0813516428 WILLE	2 305	13 073	997	521	3,98	476	3,64
POLISH RED										
1	SZYMUSIAK TADEUSZ ZAŁUCZNE MAŁOPOLSKIE	PL-005237408490 WESTWALIA	PL- 005260593989 CENTUŚ W	3 305	9 439	766	427	4,53	339	3,59
2	ŁUKASZ WOJCIECH i EWA KREMPACHY MAŁOPOLSKIE	PL-005243552026 WATRA	PL- 005050279925 UNIK	5 300	8 312	735	455	5,48	280	3,37
3	POPŁAWSKI TADEUSZ PIETRASZKI PODLASKIE	PL-005281005249 SABA	PL- 000607007033 SZPARAG	6 305	7 877	728	443	5,63	285	3,62
JERSEY										
1	PACZÓSKI KAZIMIERZ KSIĘZOPOLE KOMORY MAZOWIECKIE	PL-005247655433 DODA 3	US-113636848 FANTOM	5 305	12 258	1 018	499	4,07	519	4,24
2	SK MICHAŁÓW SP. Z O.O. MICHAŁÓW ŚWIĘtokrzyskie	PL-005316931970 PALMA 46	US-116279413 VALENTINO	2 305	9 445	952	555	5,87	397	4,20
3	SK MICHAŁÓW SP. Z O.O. MICHAŁÓW ŚWIĘtokrzyskie	PL-005354317118 KAMELIA 86	PL- 005299660201 TYMON	1 305	10 290	918	532	5,17	386	3,75
MONTBELIARDE										
1	PSZCZOŁA Małgorzata, SYLWESTER GUTANÓW LUBELSKIE	PL-005393070548 BESIA	FR-7120048292 DUPARC	1 305	15 061	1 072	562	3,73	510	3,38

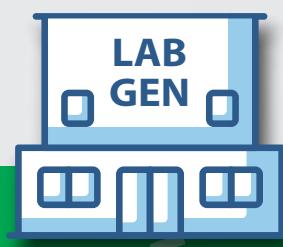
No	Owner Location Province	Cow	Father	Days milking in lact.	Milk kg	Fat + Protein sum	Fat		Protein	
							%	kg	%	kg
2	ZAKŁAD ROLNY BAS SEŃKO ANDRZEJ GOSTYŃ SZCZECIŃSKI ZACHODNIOPOMORSKIE	PL-005226716971 MAŁPA 3		2 305	12 015	1 038	585	4,87	453	3,77
3	WÓJCIK KRZYSZTOF KORO- LÓWKA OSADA LUBELSKIE	PL-005328778785 EPOS 815	FR-7044714726 CARGO	2 305	14 553	1 027	514	3,53	513	3,53
LINEBACK										
1	SPILKOWSKI MARCIN SZUĆ WARMIŃSKO-MAZURSKIE	PL-005250312125 JAGA 1		4 305	11 126	931	550	4,95	381	3,42
2	SPILKOWSKI MARCIN SZUĆ WARMIŃSKO-MAZURSKIE	PL-005250312071 ŁAGODNA 1		4 305	9 678	812	450	4,65	362	3,74
3	RYBAŁT DAWID DUBAŚNO PODLASKIE	PL-005358008524 MAFIA	PL- 005212921365 WŁODEK "O"	3 280	9 825	751	432	4,40	319	3,25
POLISH RED-WHITE										
1	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005266072655 LILKA	PL- 005167696394 JAROCIN	4 305	13 022	1 006	545	4,18	461	3,54
2	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005056232047 ASIA		12 305	12 023	898	470	3,91	428	3,56
3	"BERDYCHOWSCY KRYSTYNA i STEFAN OLSZYNY DOLNOŚLĄSKIE"	PL-005288906242 MADZIA	PL- 005225530264 ACHMET	3 305	12 216	835	422	3,45	413	3,38
POLISH BLACK-WHITE										
1	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005083758091 KAPA 1		11 305	14 846	991	520	3,50	471	3,17
2	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005415011856 KINGA	PL- 005220751930 LINUS	2 305	14 419	959	492	3,41	467	3,24
3	WIENCIERZ ROMAN BUDZISKA ŚLĄSKIE	PL-005266073744 GALA	PL- 005158282087 TRAMP	5 305	12 944	887	467	3,61	420	3,24
BROWN SWISS										
1	GR SKUP JANUSZ SKUPIE MAZOWIECKIE	PL-005291323661 GANS 1	CH- 120030104102 SANDO	5 305	14 305	1 071	587	4,10	484	3,39
2	GR STACHYRA JOLANTA KOSARZEW DOLNY KOŁO- NIA LUBELSKIE	PL-005362298263 KALINA	CH- 120047041117 ZENIT	1 305	12 468	910	465	3,73	445	3,57
3	GR SZEWCAK MARCIN KOBIAŁKI NOWE LUBELSKIE	PL-005417490925 MOLITA 1	DE-0814462607 VIFF	3 305	10 374	883	487	4,70	396	3,82
SWEDISH RED										
1	ZWIERSKI Michał GAJEWIEC WARMIŃSKO-MAZURSKIE	DK-04702702868 DORIS	SE-92671 BUCKARBY	4 305	12 362	986	532	4,31	454	3,67
2	GR MAJCHRZYCKI KRZYSZTOF LUDWIKOWO WIELKOPOLSKIE	SE-0402154313 HEDDA	SE-99519 FIZZ	3 297	10 812	926	513	4,75	413	3,82
3	GR MAJCHRZYCKI KRZYSZTOF LUDWIKOWO WIELKOPOLSKIE	SE-0402154268 TORILA	SE-99426 SAMPO	4 294	11 303	892	485	4,29	407	3,60
NORWEGIAN RED										
1	CZAJKA BOGUSŁAW LISIKIERZ LUBELSKIE	PL-005384971533 SOSNA	NO-10432 VELSVIK	4 305	11 955	885	467	3,91	418	3,50
2	GR GZARA SŁAWOMIR TRZEBIESZÓW I LUBELSKIE	PL-005341037340 KROTKA	NO-10617 SKEI	2 305	11 893	872	476	4,00	396	3,33
3	DĄBROWSKI GRZEGORZ KRZECZKOWO NOWE BIEŃKI PODLASKIE	PL-005228859331 MAŁA	NO-10232 SAND	5 305	11 455	872	487	4,25	385	3,36



DATA FOR THE YEAR 2019



DAIRY CATTLE BREEDING



PFH BiPM

GENETICS IS A GUARANTEE OF HIGH QUALITY RESULTS



COWS REGISTERED IN HERD BOOKS
735 343



GENOTYPED ANIMALS
6 400



ISSUED ZOOTECHNICAL CERTIFICATES
6 345

ECONOMIC INDEX THE NEWEST BREEDING TOOL



GEN
index



BREEDING TASKS PERFORMING

from 01.01.2019 to 31.12.2019

The Polish Federation of Cattle Breeders and Dairy Farmers creates and carries out breeding programs for dairy cattle breeds. The Cattle Breeding Department of PFCBDF has been established to manage the essential projects. This Department consists of dairy cattle advisors and specialists of breeding documents. In the connection with herd book keeping the following action is carried out.

Females registered in herd books in 2019



2 622 Elite class established for the cows with high breeding value and at least good plus (GP) body score and at least good plus (GP) udder, in the main section of the book

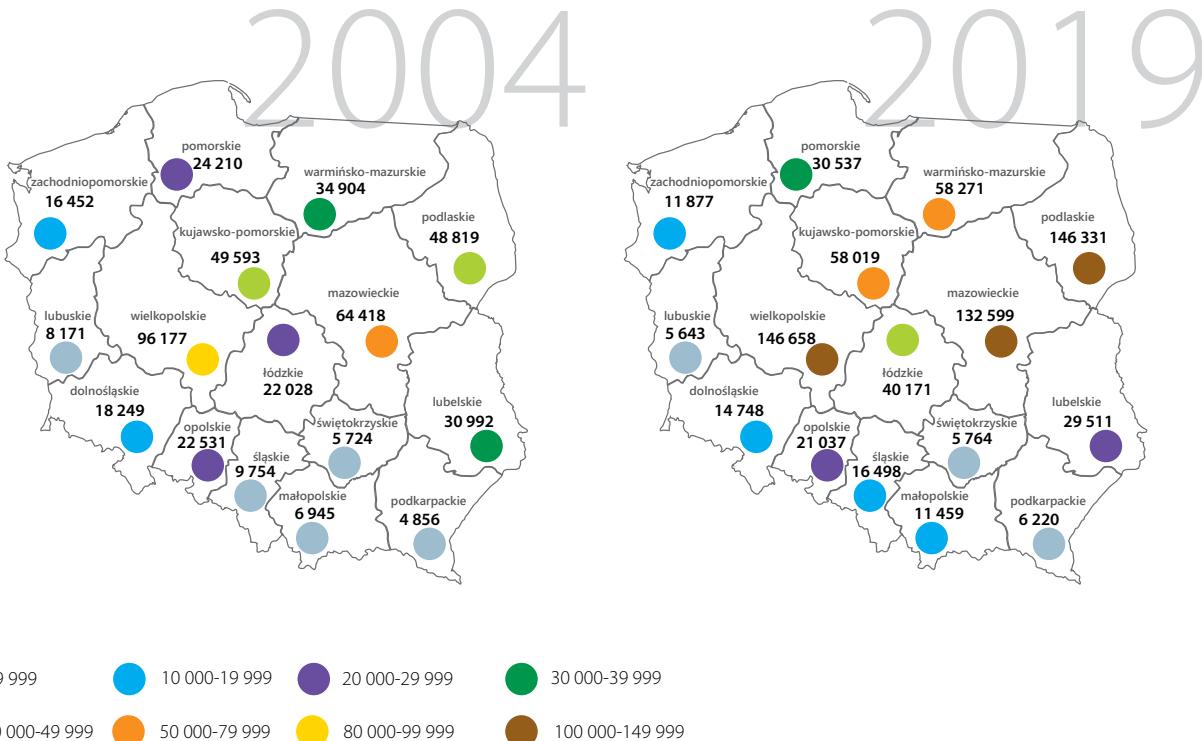
The number of cows registered in herd books as of the day of 31.12.2019 in Poland



The progress in the number of cows registered in herd books in Poland in the end of years 2004-2019 are illustrated in the chart below.



Maps of Poland below presents the number of cows registered in herd books as of the day of 31.12.2004 and 31.12. 2019 in individual voivodships:



Number of cows registered in the herd books according to breed.**681 519**

HOLSTEIN

**29 481**

RED HOLSTEIN

**9 103**SIMMENTAL
(meat and dairy class)**3 834**RED POLISH
(meat and dairy class)**956**

JERSEY

**3 402**

MONTBELIARDE

**1 885**

POLISH BLACK AND WHITE

**3 915**

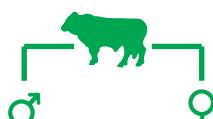
POLISH RED AND WHITE

**306**

BROWN SWISS

**198**

SWEDISH RED

**744**WHITEBACK *
Herdbook for BG keeps
University of Life Science in Lublin**Bulls registered in herd books in 2019.****1 252** bull calves and bulls**1 096**

HOLSTEIN

**82**

RED HOLSTEIN

**23**SIMMENTAL
(meat and dairy class)**32**RED POLISH
(meat and dairy class)**2**

JERSEY

**4**

MONTBELIARDE

**5**

POLISH BLACK AND WHITE

**7**

POLISH RED AND WHITE

**1**

BROWN SWISS

**0**

SWEDISH RED

Certificates confirming the registration of dairy cattle in herd book

In 2019 PFCDDF issued:



1 208 certificates confirming the registration of cows and bulls in herd book

Zootechnical certificates

In 2019 PFCBDF issued:



6 345 zootechnical certificates and certificates confirming the parentage

The 2016/1012 Regulation, that is in force from November 1, 2018, has changed the name and the appearance of documents accompanying to pure-bred animals for trade and biological material derived from them. Certificates issued so far as the pedigree certificates were replaced by zootechnical certificates. Their graphic form and content sets out COMMISSION IMPLEMENTING REGULATION (EU) 2017/717 of 10 April 2017.

„Laying down rules for applying Regulation (EU) 2016/1012 of the European Parliament and of the Council for model forms of zootechnical certificates for farmed animals and their germinal products.” Breeding programs also provide for the possibility of issuing certificates confirming the origin for animals which not entered the main section of the herd book in a form known to Polish breeders so far.

Zootechnical certificate on the rewers additional information about pure-bred animal.

Selection indexes in Poland

In Poland, selection indexes are used for two breeds: Polish Holstein and Simmental.

Selection index **PF** "Production and Functionality" for the Holsteins bulls, being in force since 2007, was modified and adapted to the current needs of farmers in 2014 and starting from April 2014 it is also calculated and used in breeding works for Holsteins females.

The current formula of the index PF is as follows:

$$\text{PF} = 0.4 * \text{PI_PROD} + 0.25 * \text{PI_POKR} + 0.15 * \text{PI_PŁOD} + 0.1 * \text{WH_KSOM} + 0.1 * \text{WH_DŁUG}$$

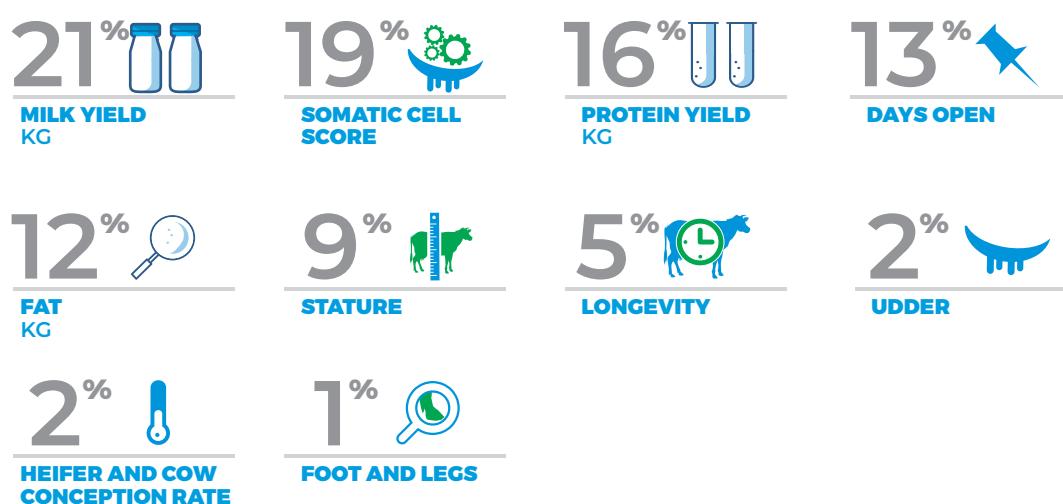
- PI_PROD – Production Index
- PI_POKR – Conformation index
- PI_PŁOD – Fertility index
- WH_KSOM – Breeding Value for Somatic Cell Score
- WH_DŁUG – Breeding Value for Longevity



Economic Index

In addition to the PF selection index, from December 2019, Polish breeders have the opportunity to use a new alternative selection criterion for cows and bulls of the Polish Holstein-Friesian breed. That index contains following traits having big impact on economic dairy cattle improvement: fat yield, protein yield, milk yield, heifer conception rate, cow conception rate, calving interval, height in the cross, somatic cell count, longevity, udder, legs and feet. The weights for individual traits in this index depend on their economic influence on profits in milk production and can be periodically updated.

Relative share of traits in the Economic Index



Since the season 2016.2 index selection for the Simmental breed was introduced. Index for Simmental "Production and Functionality" (**PFSM**) was constructed in accordance to the breeding goal which was defined in the Breeding program for Simmental cattle in Poland. The main purpose of breeding work on this breed is to achieve sustainable progress both in the milk and meat performance. Therefore, the index matched the corresponding „weight” to reflect the importance of production and functional traits covering health, fertility, longevity and conformation and its impact on milk and meat production in Simmental.

The formula of PFSM index is as follow:

$$\text{PFSM} = 0,40 * \text{PI_PROD} + 0,35 * \text{PI_POKR} + 0,10 * \text{PI_PŁOD} + 0,08 * \text{WH_KSOM} + 0,07 * \text{WH_DŁUG}$$

The National Animal Breeding Exhibition

On May 17-18th, 2019, the National Animals Breeding Exhibition took place in Poznań. The exhibition's main judge was Mark Nutsford (from UK) and he was assisted by Roman Januszewski (PFCBDF) and Marek Solarek (PFCBDF). There were 135 breeding dairy cattle (74 cows and 61 heifers) of the Polish Holstein – Friesian, Red Polish, Jersey, Simmental, and Montbeliarde breeds on the exhibition and they belong to 29 breeders. The most beautiful animals in each group were awarded with champion and reserve champion titles. As usually, the greatest emotions were provided by the selection of exhibition Grand Champions. The most beautiful Holstein-Friesian was being the second lactation cow named ISKRA No. PL005351794684,



bred in Breeding Center „Żołędnica” llc. The Grand Champion title in the category of heifers of this breed, in the group at 10-11 months of age received SOLANA No. PL005382662501 from the private farm owned by Mr. Klupś Artur Marek located in Pępowo. Among Jersey, Simmental, Red Polish and Monbeliarde breeds, the title of Grand Champion went to Jersey cow named JASNOŚĆ 98 no. PL005235403473 bred at Stud Farm Iwno llc.



The heifer SOLANA with the number PL005382662501 (DENVER X CLOWN) from the farm owned by Mr. Klupś Artur Marek in Pępowo, the Grand Champion at the National Animal Breeding Exhibition in Poznan.



ISKRA cow with the number PL005351794684 (DEFENDER X SL LOREDO) bred in Breeding Center "Żołędnica" the Grand Champion at the National Animal Breeding Exhibition in Poznan.



Jersey cow JASNA 98 with the number PL005235403473 (DJ ZUMA x ACTION) bred in Stud Farm Iwno Llc. the Grand Champion at the National Animal Breeding Exhibition in Poznan

Type classification concern first lactation cow and the older ones. It is performed in the proper stage of lactation and is used for different purposes:

- for bull evaluation
- for qualifying cows as a bull dams and register cow in Elite Class
- for judging on the ring during exhibitions and shows
- as a data used in DoKo mating program.

Information about type classification and conformation activity and results are enclosed on tables below.

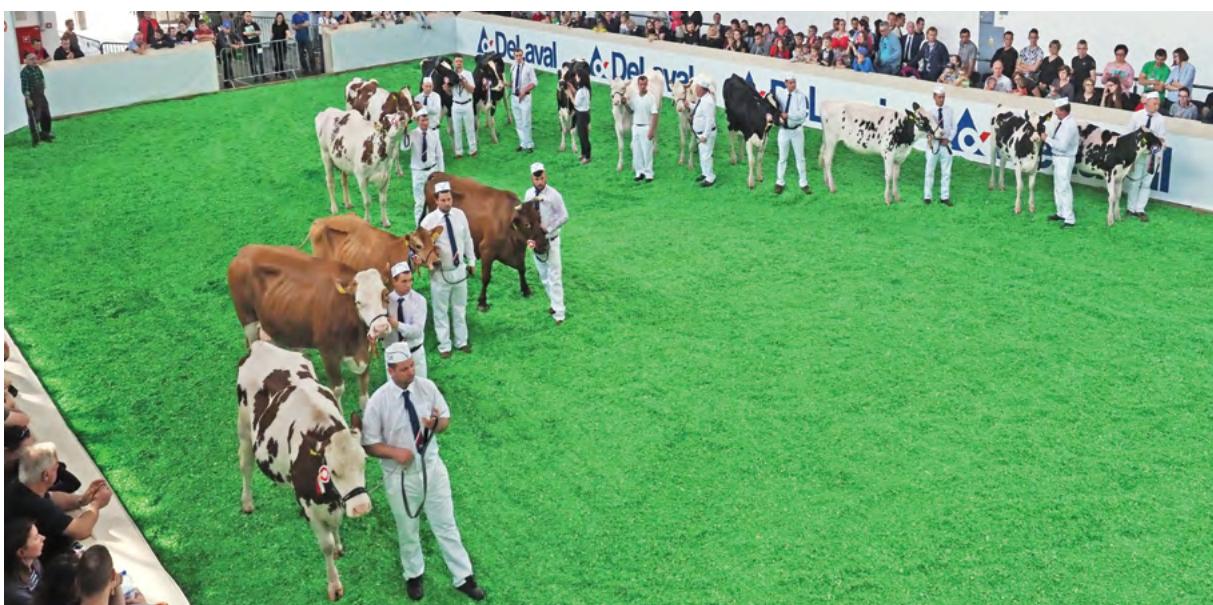
Classification activity 2019

CLASSIFICATION ACTIVITY IN 2019	
Herd Visits	4 180
Holsteins Animals	43 537
Other Dairy Breed Animals	904
Total Animals	44 441

Classification activity by voivodship 2019

CLASSIFICATION ACTIVITY BY VOIVODSHIP IN 2019	
DOLNOŚLĄSKIE	1 233
KUJAWSKO-POMORSKIE	5 077
LUBELSKIE	1 662
LUBUSKIE	1 239
ŁÓDZKIE	1 478
MAŁOPOLSKIE	657
MAZOWIECKIE	3 507
OPOLSKIE	2 978
PODKARPACKIE	527
PODLASKIE	5 786
POMORSKIE	2 049
ŚLĄSKIE	411
ŚWIĘTOKRZYSKIE	114
WARMIŃSKO-MAZURSKIE	1 537
WIELKOPOLSKIE	14 627
ZACHODNIOPOMORSKIE	1 559
Total Animals	44 441

Type classification and conformation





ISKRA – PL005351794684 EX92 • sire: DEFENDER • breeder: HZZ „Żołędnica” Sp. z o. o. • The Grand Champion at the National Animal Breeding Exhibition in 2019 in Poznan.



KAMA – PL005275774182 EX90 (SM) • sire: ROMEO • breeder: GRH Bryś Daniel
• The Grand Champion at the XV National Simmental Cattle Exhibition



RINA 36 – PL005244212493 EX91 • sire: LADD P RED • breeder: Stanisław Źochowski



FIA – PL005218352682 EX93/ 8 lactation • sire: SE • breeder: „Agrofarm” Sp. z o. o. Jurkowice

Breeding Advisory

Managing a dairy cattle herd for genetic improvement while increasing your farm's profitability is not simple and obvious. Breeding work in a herd is a long-term activity and it is difficult to implement it without proper information and modern technologies.

Using breeding advisory the breeder has the opportunity to access:

- **genotyping** – allows selection for breeding animals just after birth, so you don't need to wait for their production to make selection decisions
- **genetic balance of the herd** – presents a new approach to assessing herd genetic development by combining in practice the information on breeding values and inseminations carrying out in the herd. The genetic balance allows defining directions for improving production and functional traits and defining the quality of bulls used in the herd.
- **type classification** – type classification provides an important tool for herd management. Allows you to optimize the selection of bulls for matchmaking.
- **a matchmaking plan using the DoKo program** – the program's assumption is to optimize the selection of bulls for mating based on breeding value for individual traits. The advantage of the program is avoiding the close relationship between the parents.



Genotyping – Cattle Genetics Laboratory



The Cattle Genetics Laboratory is the only laboratory in Poland that performs cattle genotyping services for individual breeders and at the same time the only one that is the exclusive property

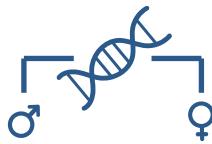
of breeders' organization, which makes it unique on a European scale. Therefore, it is completely focused on meeting the needs of the Polish breeders. In 2019, The Polish Federation CGL performed over 6,400 animal tests, available on request for estimating breeding value. At the same time, cooperation with foreign customers is also being developed, which thanks to the effect of scale allows keeping the price of services as low as possible. The laboratory constantly strives to adapt its profile to the clients' requirements and develop its competences to respond to their needs as efficiently as possible. In 2019, CGL began to use the latest microarrays containing over 40 thousand SNPs, which allows maintaining European quality of services in prices acceptable in Poland .

In 2019, CGL participated in comparative tests of ISAG, in which the quality of cattle genotyping is tested. Based on the results, the CGL was qualified to „Rank 1”, i.e. it obtained the highest possible rating, which shows that the results from CGL are at the highest global level.

The Polish Federation CGL's excellent competence is confirmed by the fact that its employee is a member of the international working group ICAR (The International Committee for Animal Recording) working on the rules and recommendation of DNA testing in animal production.

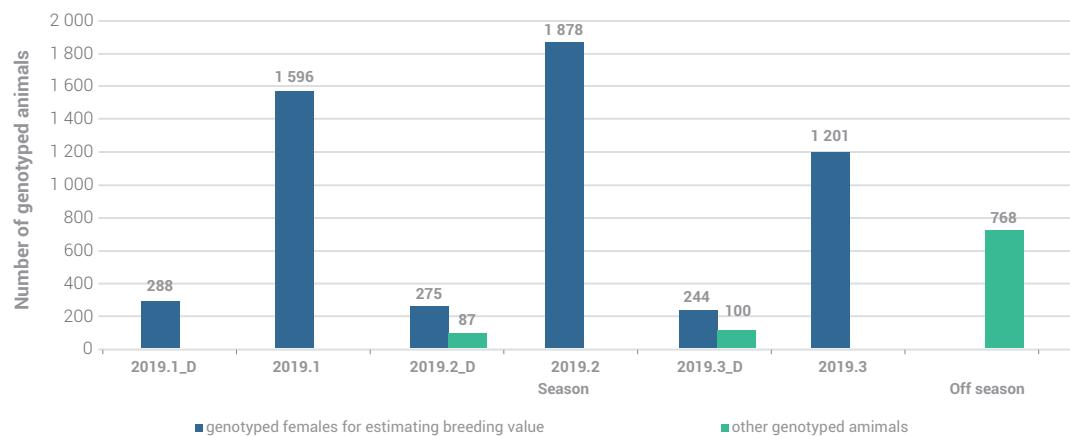


In 2019 Cattle Genetics Laboratory performed:



SNP tests on 6 400 animals in order to predict their genomic evaluation

Number of animals genotyped in CGL in 2019



Recording of meat traits in dual purpose breeds

In 2019, the White-Backed breed joined the Simmental and Polish Red. This type of rating applies to everyone animals in a herd which must be used only in the meat direction on cessation milk production. The condition for changing the type of assessment to meat is the complete cessation of milking cows and keeping them like suckler cows raising their calves.

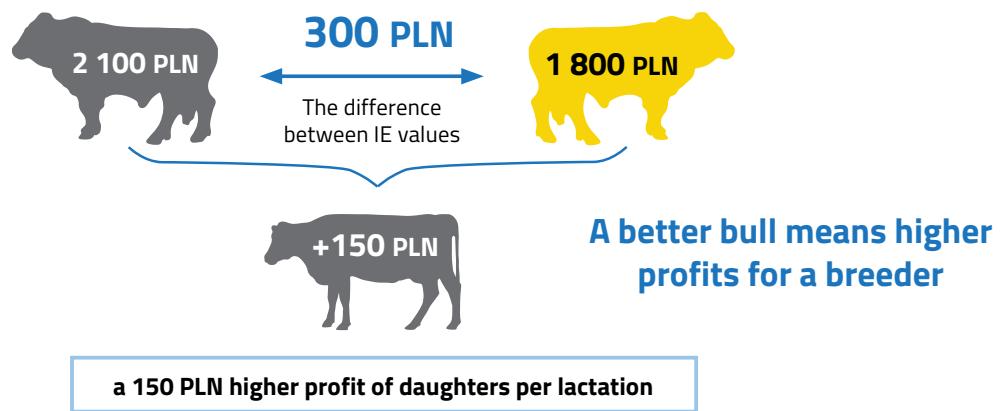
Average results of cows evaluated for meat traits by breeds and provinces.

PROVINCE	Number			Average		
	Cows	Calves	Herds	Birth weight kilograms	Standardised weight on 210 day kilograms	Daily gains to 210 day grams
WHITEBACK BREED						
PODLASKIE	2	—	1	—	—	—
LUBELSKIE	10	—	1	—	—	—
WARMIŃSKO-MAZURSKIE	5	—	1	—	—	—
MAZOWIECKIE	27	—	2	—	—	—
POLAND	44	—	5	—	—	—
RED POLISH BREED						
PODLASKIE	276	151	11	29,64	215,43	882,63
KUJAWSKO-POMORSKIE	39	25	4	33,32	205,07	814,29
POMORSKIE	41	17	4	24,24	—	—
ZACHODNIOPOMORSKIE	113	67	8	30,44	145,60	526,67
MAŁOPOLSKIE	26	11	1	30,27	—	—
LUBELSKIE	82	46	8	31,98	216,03	870,00
ŁÓDZKIE, ŚWIĘTOKRZYSKIE	4	—	1	—	—	—
WARMIŃSKO-MAZURSKIE	192	101	8	31,83	201,66	804,23
DOLNOŚLĄSKIE, OPOLSKIE, ŚLĄSKIE	13	8	1	28,88	—	—
MAZOWIECKIE	91	46	7	32,22	221,63	904,09
LUBUSKIE, WIELKOPOLSKIE	242	140	11	33,48	214,91	856,88
POLAND	1 119	612	64	31,41	208,65	835,82
SIMMENTAL BREED						
KUJAWSKO-POMORSKIE	6	4	1	40,25	—	—
MAZOWIECKIE	20	—	1	—	—	—
PODKARPACKIE	52	22	3	39,23	—	—
POLAND	78	26	5	39,38	—	—
TOGETHER BREEDS						
MAZOWIECKIE	138	46	10	32,22	221,63	904,09
PODLASKIE	278	151	12	29,64	215,43	882,63
KUJAWSKO-POMORSKIE	45	29	5	34,28	205,07	814,29
POMORSKIE	41	17	4	24,24	—	—
ZACHODNIOPOMORSKIE	113	67	8	30,44	145,60	526,67
MAŁOPOLSKIE	26	11	1	30,27	—	—
LUBELSKIE	92	46	9	31,98	216,03	870,00
ŁÓDZKIE, ŚWIĘTOKRZYSKIE	4	—	1	—	—	—
WARMIŃSKO-MAZURSKIE	197	101	9	31,83	201,66	804,23
DOLNOŚLĄSKIE, OPOLSKIE, ŚLĄSKIE	13	8	1	28,88	—	—
LUBUSKIE, WIELKOPOLSKIE	242	140	11	33,48	214,91	856,88
PODKARPACKIE	52	22	3	39,23	—	—
POLAND	1 241	638	74	31,75	208,65	835,82

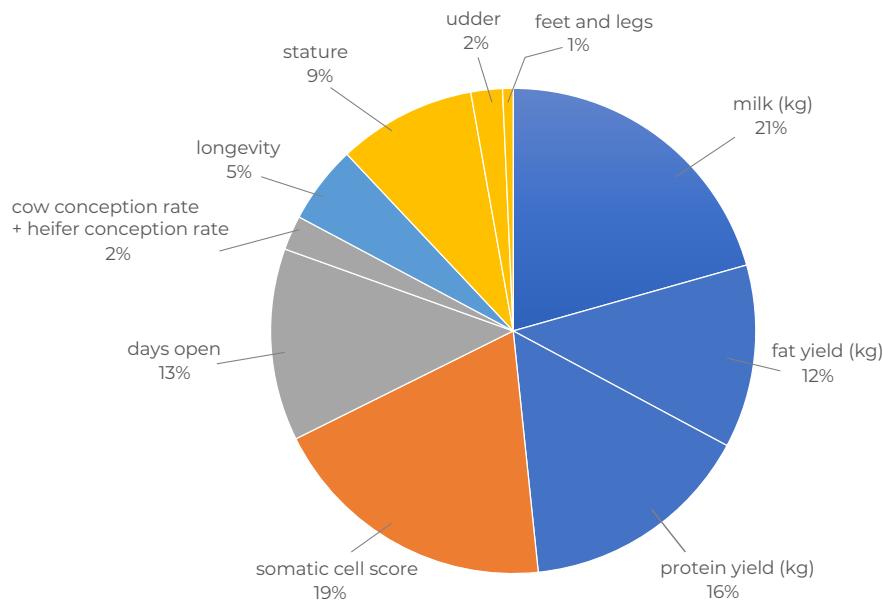
The Economic Index (IE)



The Economic Index (IE) created for the Polish Holstein-Friesian cattle is a total breeding value of an individual. It allows for a comparison of milk production profits in relation to a single lactation.



IE contains the following traits which are subject to genetic improvement: fat yield, protein yield, milk yield, somatic cell score, days open, heifer conception rate, cow conception rate, longevity, stature, udder, feet and legs.



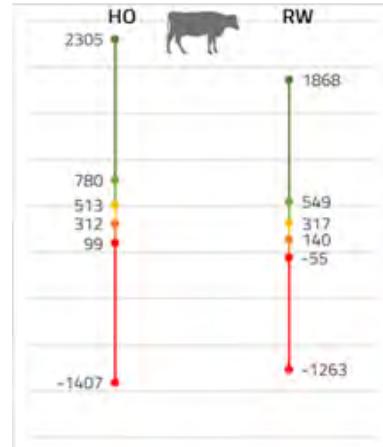
Each value of the IE index has its reliability, which indicates how precisely the index was estimated. It helps to understand changes in rankings which are available at www.cgen.pl/en/indexes.

Rank	ID	Name	IE	IE rel.
1		bull 1	2617	0,71
2		bull 2	2541	0,96
3		bull 3	2531	0,75

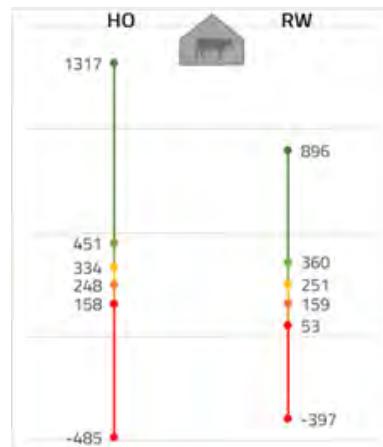
Summary of female genomic values is available for breeders who genotyped their females with Polish Federation. It provides breeders with a clear overview of genomic breeding values in their herd.

First results of the IE

The average value of the IE for Holstein-Friesian black and white dams is 477 PLN and for Holstein-Friesian red and white it is 253 PLN (calculation based on the results from season 2019.3, as of 15 December 2019). The range of IE values (in PLN) for Holstein-Friesian black and white dams (HO) and red and white dams (RW) is shown in the figure below. The 20% of animals with the highest positions in the ranking have IE values in the red range and the 20% of animals with the lowest positions have IE values in the green range in the figure.



The average value of IE for Holstein-Friesian black and white herds is 311 PLN and for Holstein-Friesian red and white is 215 PLN. The range of IE values (in PLN) for Holstein-Friesian black and white herds (HO) and red and white herds (RW) is shown in the figure below.



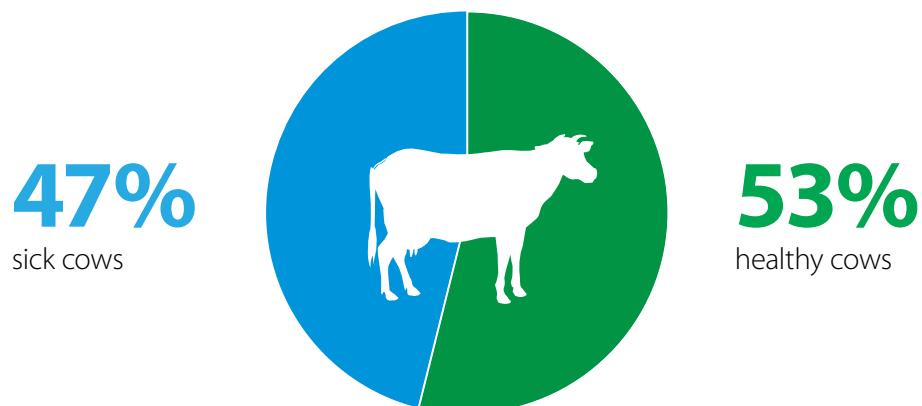
Current results of IE values are available at www.cgen.pl/en/economic-index.

„CGen trimming” project



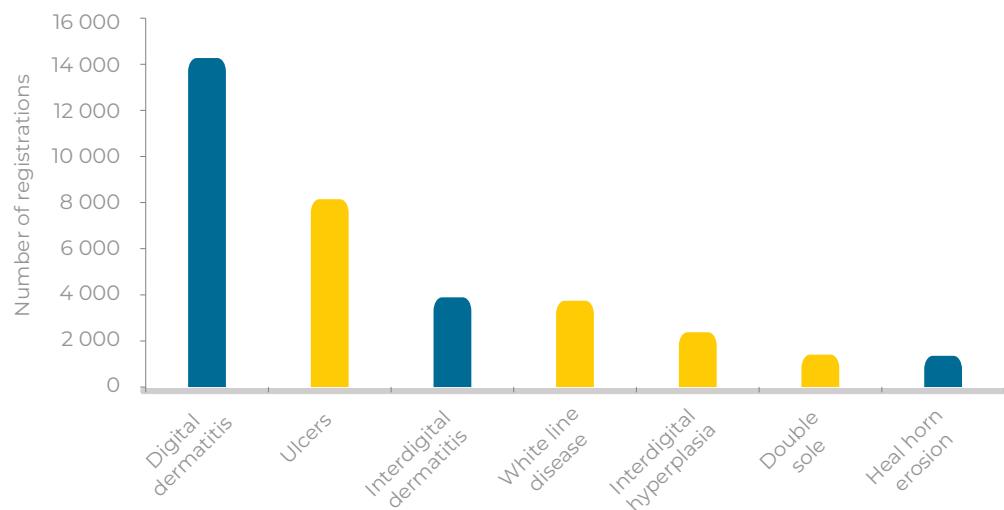
In 2019 hoof trimming results were recorded in 296 herds. Those herds were located across the whole territory of Poland. The highest number of cows with results were located in podlaskie voivodeship.

Results from analyses show that 47% of cows that were trimmed had at least 1 hoof disease in 2019. This is on the same level as in 2018.

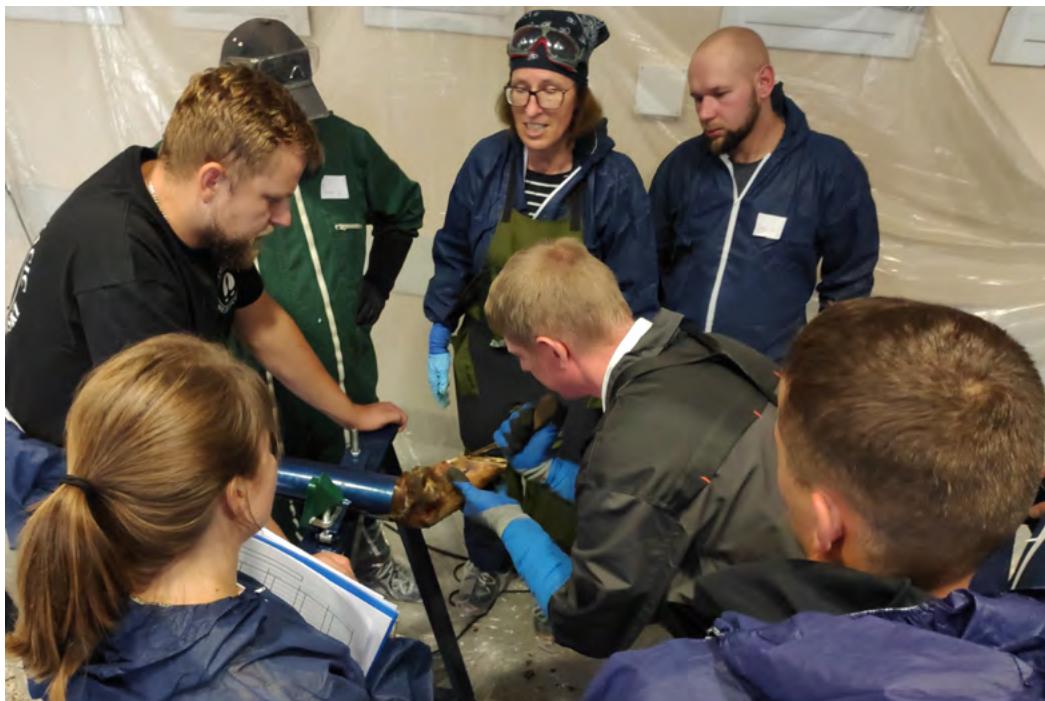


The most frequent disease is digital dermatitis (DD) the same as in 2018. Next one are ulcers (U) which are noninfectious diseases so they are not caused by bacterial infections.

Occurrence of each disease in the analysed population.



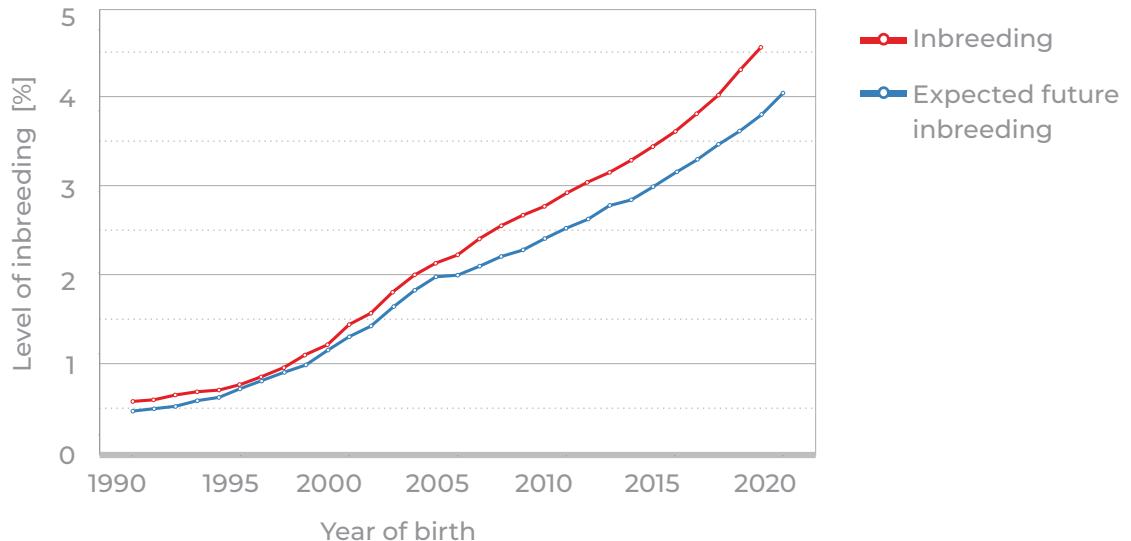
In 2019 a training for the users of "CGen trimming" application was organised. It was conducted by dr. Andrea Fiedler. The main part of the training was the evaluation of hoof diseases recognition in accordance with the ICAR atlas and the ability of performing a therapeutic hoof trimming. Accurate recognition of diseases gives a breeder the opportunity to have a clear view of the situation in the herd. It also improves therapeutic trimming results and hoof health. At the same time accurate recognition of diseases guarantees a high quality of data used for evaluation of breeding values for hoof lesions resistance.



Inbreeding

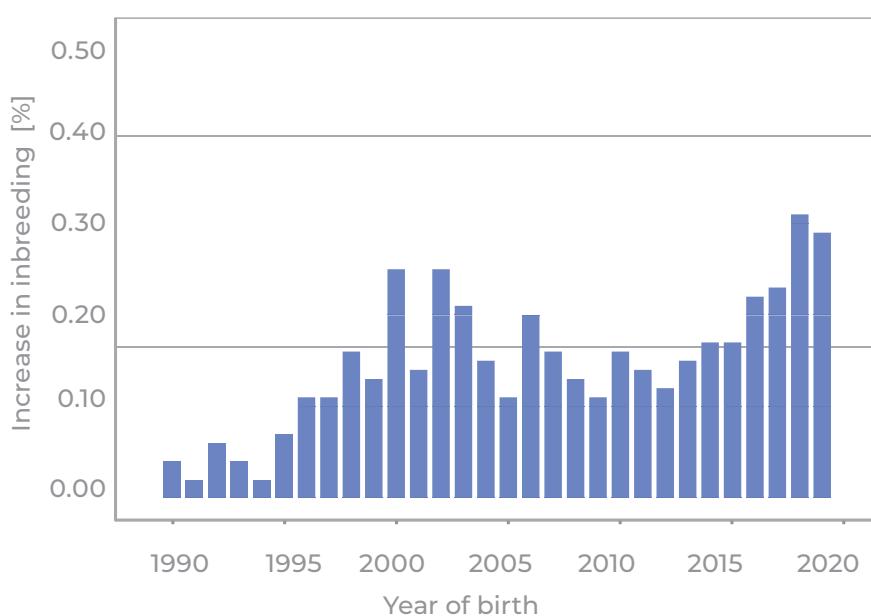
In Holstein, a significant increase in milk yield has been observed, while the genetic diversity of the animals is decreasing. The level of inbreeding manifested as inbreeding depression reduces the health, productivity and vitality of animals. Centre for Genetics estimated the level of inbreeding, expected future inbreeding and increase in inbreeding of Polish Holstein-Friesian cows. Analyses were performed on December 30, 2019. The average inbreeding level of the Polish Holstein-Friesian cows in 2019 was 4.8% and it was 0.85% higher than the expected future inbreeding of offspring (Figure 1). The expected future inbreeding describes the relationship of bulls with the population of reproductively active cows and heifers.

Average level of inbreeding and expected future inbreeding of Polish Holstein-Friesian cows.



An important indicator is not only the inbreeding level, but its increase. Figure 2 shows the average increase in inbreeding in a given birth year of cows. The increase in inbreeding in 2019 compared to 2018 was + 0.3% higher. In the last 10 years a steady increase in inbreeding can be observed.

Increase in inbreeding in Polish Holstein-Friesian cows.



www.pfhb.pl

