

Characteristics of Friesian Horses and Their Maintenance in Selected Centres in Poland

Katarzyna Strzelec¹, Izabela Wilk¹, Julia Wojtyczka¹, Iwona Janczarek¹, Alicja Rakowska²

*¹University of Life Sciences in Lublin, Department of Horse Breeding and Use,
ul. Akademicka 13, 20-950 Lublin; kasia.strzelec@poczta.fm*

²Warsaw University of Life Sciences, ul. Nowoursynowska 166, 02-787 Warszawa

The Friesian breed derives from the Dutch islands located in the North Sea and according to some sources, it is over 2,000 years old, which is considered one of the oldest horse breeds in Europe (Trojańska, 1997). It was created as a result of matching a light Celtic type horse with a heavy continental horse. This breed began to be distinguished and ennobled by inter-breeding with Andalusian and Arabian purebred horses (Bouma et al., 1999). The Friesian horses are nowadays one of the most popular breeds used in various branches of horse-riding sports (Bouma et al., 1999). Their selected interior properties, naturally impressive gaits and impressive exterior are features that have made them desirable to both breeders and practitioners of practically any horse-riding discipline. The Friesian horses are predisposed mainly for dressage and harness use (Trojańska, 1997, Boerma et al., 2012). It has its roots in the Dutch tradition, according to which the newlyweds chose carriages harnessed with such horses during the wedding ceremonies.

The Friesian breed is characterised by energetic and haughty, but light gaits, shiny black colour, lush fetlock and a gentle temperament (Zarawska and Walkowicz, 2016). The head with a gentle profile, with widely set large eyes is mounted on a long swan-like neck, which fits perfectly with the short ears, with slightly curved ends (Hermesen, 2006). The chest is wide and deep, and the blade is usually long with a shoulder never be too short, with a preferred high tail setting (Felgenau, 2012). Another characteristic element is a long and well-muscled back that passes smoothly into short, broad and well-muscled loin. The silhouette's nobility is emphasised by long legs with proper anatomical structure and proper angles.

It is allowed to have only black colour in two varieties: raven, which is obligatory for stallions and fawn allowed only for mares and geldings (Mierzwa, 2010). Within the Friesian breed there are three racial types: baroque, classical and modern (sports), which are diversified in terms of their anatomical structure. The quality of the gaits is strictly determined by the provisions of the Royal Friesian Horse Breeders Association in the Netherlands - KFPS (Koninklijk Friesch Paarden-Stamboek), in which the movements are required to be lope, elastic with a characteristic action of legs accentuated by strong bending of the carpal joint. Steps in the walk must be extensive with a clear substitution of the limbs to the log. Light trot, with a distinct suspension phase and energetic pelvic action. Circular and rhythmic gallop with impulse flowing from croup (KFPS Regulations, 2001). It is also important that the individuals of the breed in question are distinguished by impeccable health and good use of fodder, they perform well under the saddle, which is still reinforced by their low timidity (Piechocka, 2013). This breed is characterised by great intelligence, patience and unprecedented willingness to cooperate with people (Binder and Karcher, 2009). Learning and memorising new skills comes with clear ease.

The psychological and physical characteristics of Friesian horses contribute to their great popularity almost all over Europe and many other countries around the world (Pretorius et al., 2004, Gohl, 2010). The interest in the breeding and use of horses of this breed is also starting to increase in Poland. Unfortunately, currently there are no studies that would indicate the actual condition of their population, the way they are used and maintained, and hence, the purpose of this work is the characteristics of Friesian horses considered in the context of the description of the activities of some national centres specialising in breeding and use of the horse breed.

Materials and methods

The material for this work was collected in five national centres (I, II, III, IV, V) that breed Friesian horses. The necessary information was collected on the basis of the interviews conducted with the owners of the centres. As a part of the research methods, a detailed description of horses was made, which included information on their number, sex, age (adults or adolescents up to three years of age), type of use, basic biometric dimensions, character and temperament, possible vices and stereotypes, conformation type and entry to the stud book.

The next part of the work describes the type of use and breeding of the horses in the centres. Attention was paid to breeding aspects (mating method, participation in breeding surveys and positions held in the ranks), functional career (sports achievements, type of use) and breeding methods (stable type, bedding, basic feed, diet supplementation and other).

Statistical methods. The calculations were made with the use of PQStat software. The arithmetic mean, standard deviation and extreme values are given. Differences between the means were determined by T-Student test.

Results

In the analysed centres, a total of 36 Friesian horses were kept - mares in the majority (Tab. 1). There was not even one horse under the third year of life, that is, in the youth group. In two of the five centres, the owners refused to inform about the character and temperament of the horses. In other cases, the characteristics of horses were described positively from the point of view of their use. Only in centre II the descriptions differed from the others. The occurrence of vices and stereotypes was not found or information was not given (concerns one of the analysed centres). All the horses were entered into the relevant stud books. Entries to eight such books have been recorded. The average inbred of horses in the analysed cases ranged from 0.93 (± 0.62) to 4.24 (± 2.06), assuming the average total value of 3.04 (± 1.94). There were significant differences between the average values of this feature.

The average height at the withers of Friesian horses kept in the analysed centres was in the range from 160.51 (± 1.94) to 166.83 (± 3.40). There were statistically significant differences between the extreme values. The average chest circumference was in the range from 192.75 (± 4.99) to 202.62 (± 14.96), and most often these values differed. Significant differences, however, were not noted in the case of the average for the cannon circumference. The average total result in this respect was 23.25 (± 1.21). All the conformation types characteristic for the Frisian breed were recorded. Only one of the analysed centres did not specify the baroque type (Tab. 2).

In the analysed centres, various forms of use of Friesian horses were recorded (Tab. 3). Most often, the owners pointed to horse riding and harness use, but only at an amateur level. Only in two of the five centres, the Friesian horses were tested at sports competitions. They competed in dressage and four-horse carts. There was no horse breeding use only in one of the centres.

Table 1. Number and general characteristics of some features in Friesian horses at analysed centers

Centre	Total number of Friesian horses	Number of stallions	Number of mares	Number of geldings	Number of youth	Character and temperament	Vices and stereotypies	Stud Book	Average inbreeding /SD
I	4	1	1	2	–	gentle, patient, curious about surroundings, willing to work	none	Bijboek I, Bijboek II, Veulenboek, Voorlopig Veulenregister	0,93 a/ 0,62
II	4	–	2	2	–	timid, energetic, gentle	none	Bijboek I, Bijboek II, Veulenboek, Stamboek, Ruinenboek	1,98 b/ 1,12
III	17	5	12	–	–	gentle, willing to work	no data	Bijboek I, Veulenboek, Voorlopig Veulenregister, Stamboek Merries	4,24 c/ 2,06
IV	5	–	3	2	–	calm, even-tempered, gentle, willing to work	none	Bijboek I, Veulenboek, Stamboek Merries	2,24 b/ 1,99
V	6	3	–	3	–	no data	none	Veulenboek,	3,58 c/ 2,02
Total	36	9	18	9	–	–	–	–	–
Average /SD	–	–	–	–	–	–	–	–	3,04/ 1,94

Mean values marked with different letters are significantly different at $P \leq 0.05$.

Table 2. Basic biometric measurements and conformation type of Friesian horses at analysed centres

Centre	Average height at withers (cm)/SD	Average chest circumference (cm)/SD	Average cannon circumference (cm)/SD	Conformation type
I	160,51 a/ 1,94	192,75 a/ 4,99	23,12 a/ 0,63	baroque modern
II	166,83 b/ 3,40	197,34 ac/ 5,31	23,04 a/ 1,41	classical modern
III	164,62 bc/ 5,66	no data	no data	baroque modern
IV	162,84 ac/ 7,85	202,62 bc/ 14,96	23,46 a/ 1,67	baroque modern
V	163,06 bc/ 1,26	no data	no data	baroque modern
Average/SD	163,91/ 5,34	197,53/ 9,59	23,25/ 1,21	–

Mean values marked with different letters are significantly different at $P \leq 0.05$.

In each of the analysed centres horses were kept in standard corridor stables with boxes (Tab. 4). Only in one of the centres, not only straw, but also additives of peat and sawdust were used as litter. Except for one exception of the use of complete feed, the horses were fed in a standard way, i.e. with hay and oats. Some of the owners indicated the use of the supplement to the basic feed - among others hay silage or corn. Dietary supplements in the form of root crops, vitamins, minerals, chopped lucerne, garlic, oil or vitamin C were recorded in all the centres. These additives were most often fed in autumn and winter season.

Table 3. Characteristics of the use of horses at analysed centres

Information about use of horses	Centre				
	I	II	III	IV	V
Type of use	riding use (leisure and sports) and amateur harness	riding use (leisure), harness, occasionally breeding use	breeding use, riding use (leisure)	riding use (leisure) with the majority horseback tours	harness, riding use (leisure)
Sporting achievements	1st place in dressage “Galicyjskie Lato z Ko-niem 2015”(harness); Polish Championship in the side-saddle- 1st place small round	none	none	none	Harness (sports four-in-hand cart)
Mating method	artificial insemination	natural	natural mating and artificial insemination (depending on mare)	artificial insemination	mares are not mated; young horses are bought in the Netherlands
Participation in breeding shows	no	yes	yes	yes	participation in the breeding show, in IBOP* test (harness and dressage) in 2011
Results at breeding shows	none	leading placings in all-Polish exhibitions	*ster/*stb, *vb-awarded while entering stud book; III, II premium and title	leading placings in Friesian breeding shows	passed IBOP*test

*stb- Stamboek; vb – veulenboek; ster – title conferred on the basis of exterior and horse achievement; *IBOP – Friesian Horse Performance Test.

Table 4. Characteristics of horse management at analysed centres

Information about management	Centre				
	I	II	III	IV	V
Type of stable	corridor stable with boxes	corridor stable with boxes	corridor stable with boxes	corridor stable with boxes	corridor stable with boxes
Type of litter	torf z trocinami, słoma peat with sawdust, straw	słoma straw	słoma straw	straw	straw
Type of feedstuff	hay, balanced feed for horses with good feed efficiency	oat, hay silage, hay	hay, oat, maize occasionally	hay, oat	hay, oat
Type of supplements	oil, vitamin C	garlic, carrot, vitamins in the winter period	vitamin-mineral salt lick, pelleted feed with chaffed lucerne for horses with poor condition, for nursing and pregnant mares	carrot and vitamins in the autumn-winter period	vitamins and minerals periodically

The analysis of the condition of the Friesian horse population indicates their wide use. Individual specimens find great use as livestock, working in recreation under saddle and in harness. Some of them are sports horses that compete in the riding disciplines or harness. Similar information was provided in their work by Pretorius et al. (2004), characterising the Friesian horse populations in the Republic of South Africa and Namibia. According to Pracuch (2013), these are the best forms of advertising for animals not belonging to native breeds, i.e. imported to new areas. It seems important that the representation of not only the baroque type, but also modern or classical, may not only increase the number of their potential owners, but also extend the current breeding trends of Friesian horses in Poland.

One of the factors driving or hindering the development of breeding horses of a given breed in a foreign area is the way they are maintained (Pruck et al., 2006). The results of this study indicate that the requirements for horses of this breed do not differ from those in which horses of domestic half-breeds are kept (Lawin, 2004). This situation concerns both stable conditions and diet and the intensity of dietary supplementation. It should be assumed that these are factors that will have a positive impact on the growth of the Friesian horse population in Poland. An additional element that may be favourable to the development of breeding horses of this breed are the favourable climatic conditions prevailing in Poland. According to van Grevenhof et al. (2007), in addition to genetic conditions, the climate that prevails during the year determines the hypersensitivity to insect bites. It can also be stated that the psychological characteristics of the horses of the breed in question may have a positive impact on their popularity.

Most of the horses analysed under the research were described by its owners as gentle, friendly, calm, but, at the same time, willing to work. Such features are desirable above all in recreation and tourism (McBride and Mills, 2012). The next step may be the increase in the interest with Friesian horses among people involved in teaching horse-riding at the basic level.

In the summary of the discussion of the obtained results, it can be stated that the breeding and use of Friesian horses in Poland should remain at a similar level or increase.

Conclusions

Based on the obtained results and data collected through the interviews with the owners of Friesian horses in Poland, the following statements and conclusions can be formulated:

1. breeding of Friesian horses in Poland focuses mainly on the reproduction of individuals in the so-called baroque type. Extending the breeding with horses in the sport type or with the predispositions of the sport in the direction of sporting use may affect the development of this breed and the possibility of easier sale of horses abroad;
2. the level of Friesian horse breeding in Poland can be considered as satisfactory. This is evidenced by their origin, entries into the breeding books and participation in breeding events. Horses of the Friesian breed do not have different living requirements from domestic breed horses, which should be an encouragement to breed them in Poland. Their advantages also include a wide range of possibilities for their use and good psychological characteristics.

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CHARACTERISTICS OF FRIESIAN HORSES AND THEIR MAINTENANCE IN SELECTED CENTRES IN POLAND

Summary

Friesian breed originated from Dutch islands located on the North Sea and is considered to be one of the oldest horse breeds in Europe. Horses of this type, currently one of the most common breeds, are used in various branches of horse-riding sport. The aim of this study was to characterize Friesian horses in the context of activities in several national centres specializing in breeding and usage of animals belonging to this breed. Data was gathered in five national centres maintaining Friesian horses. Detailed characterization was made and it included information about their number, sex, age, type of usage, basic biometric measurements, character and temperament, possible vices and stereotypies, type of conformation and entry in the herd book. Moreover, the type of usage and maintenance of horses in the centres were described. Attention was drawn to breeding aspects (mating method, participation in breeding shows and positions in them), applied career (achievements in sports, type of usage) and the system of maintenance (type of stable, bedding, basic fodder, diet supplementation and other). Calculations were made in PQStat program. Arithmetic mean, standard deviation and extreme values were given. Differences between means were defined with Student's t-test. It was found that breeding of Friesian horses in Poland is concentrated mainly on reproduction of the so-called Baroque type. Extending the breeding of the horses of sport type or those with exterior predispositions can influence the development of this type of breeding and a possibility of easier disposal of these horses abroad. The standard of Friesian horses' breeding in Poland can be acknowledged as satisfactory. The evidence of that can be seen in their ancestry, entries in pedigree books and participation in breeding events. Another value is also a wide range of possibilities of their usage and good character traits.

Key words: Friesian horses, use, management, conformation type