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# ZBORNIK RADOVA





# An attempt to determine the zootechnical characterization for some old Slovenian horse breeds

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## INTRODUCTION

Throughout the animal husbandry historical development, new species and breeds of domestic animals have been created and the old ones were gradually disappearing. The development of animal husbandry just as any other economy has followed the development of man and his battle for survival from century to century, from culture to culture. Today our efforts are focused on the maintenance of biodiversity in animal and plant life. Unfortunately, we are not as successful as we wanted to be. In particular, animal husbandry requires its own development, which leads to the disappearance of certain breeds, and the emergence of new ones. History repeats it self. The old breeds will be disappearing, but the new ones will be created because of human ingenuity and desire for other, better and new. Slovenian animal husbandry development is particularly interesting due to the geographical characteristics and interaction of different cultures. In the past mainly cattle and sheep breeding prevailed and developed Slovenian territory. So, in the first centuries after the settling of Slavs, the population of horses was far behind the populations of other domestic animal species. Only later the horse breeding started to improve, but not for long. With the development of railways and other modern techniques, the horse breeding development in particular the development and the number of draught horses began to decline rapidly. Again because of the mentioned decline and decrease of their sustainable use, some breeds of horses were lost. In this paper we represent the historical sources (until 1945) on the old Slovenian local (autochthonous and traditional) horse breeds, their origins, uses and their importance (Šalehar, 2009). Again, we trigger the memory of some old Slovenian breeds of horses such as Kobarid, Bohinj and Posavinje horse and try to form a zootechnical characterization. Zootechnical characterization is a synonym for breed standard, which describes the origin and development of the breed, exterior, morphological and biological characteristics (Šalehar, 2009). So far we have discovered and acquired unknown but important cognitions about the origin and occurrence of Kobarid, Bohinj and Posavinje horse. The new knowledge will help in the attempt to determine the zootechnical characterization of these horse breeds.

## HISTORICAL DEVELOPMENT OF HORSE BREEDING ON SLOVENIAN TERRITORY

In general, the historical development of the Slovenian animal husbandry was combined with traditions of indigenous and Slavic elements. It was this kind of husbandry, where the impacts of the indigenous population were most expressive. Animal husbandry has conserved strong trails and remains of culture of the ancestors of Slavic population (Novak, 1970). In the 6th century the ancestors of present-day Slovenians lived mainly of animal husbandry as nomadic and pastoral people (Stefančič, 1966; Grafenauer, 1932, cit. after Novak, 1970). In particular, animal husbandry was very important in mountain areas (Bovec, Carniola). In the Middle Ages, mixed land-animal farming dominated. Sheep breeding was the main branch in the entire middle age period and even up to the 16th century (Stefančič, 1966). There also existed some specialized animal farms (livestock courts), which provided upper classes with animal products. In the 13th and 14th century the mountain farm-cheese-dairies developed. In the second half of the 15th century the cheese-dairies were starting to phase out or change into the independent mountain farms. Mountain pasture was very important, so the villages often fought for the grazing areas at the time of the 15th to 18th century. Such disagreements were particularly common in the Julian Alps. The development of animal husbandry in the 16th and 17th century is known through the first count of livestock number on individual farms or villages (Novak, 1970). At the end of the 19th century cattle breeding become a major branch in animal husbandry, followed by pig, sheep, horse and goat breeding (Stefančič, 1966).

Horse breeding lagged behind other livestock breeding. It reached the best development in the early 19th century. Slavs used the horse primarily for riding much less they used it for agricultural purposes. In the early Middle Ages horses were used as saddle animals especially by the aristocracy. Very slowly and latter in the middle ages the horse was adopted as pack-horse by provincial farmers much less as saddle or draught-horse. Pack-horses were then developed mainly in the Alpine regions from where the loads were transported to Venetian and the German regions. At this time the horse breeding was well developed in the villages due to dominion. The farmers became increasingly involved in transit trade. In the 16th century the export of horses was quite high. The prince of the province tried to ban those exports because horses were required for military purposes. The most developed horse breeding regions in the 16th and 17th century were Carinthia, Carniola and Karst (Novak, 1970). The strongest indicator of the development of horse breeding was undoubtedly the development of certain breeds, which would be difficult to conserve in such extent without



the indigenous population (Novak, 1970). Significant impact on horse breeding in Carinthia, Styria and Upper Carniola had Noriker horse, also historically known as the Pinzgauer horse. The origins of the Noriker horse are assumed to be the central Alpine region around the highest mountain of Austria, the Grossglockner. In early history this region was known as the Roman province Noricum. At the end of 19th century the original name Pinzgauer horse was changed to Noriker horse. This was due to the Romanophile attitude in this time. So, Noriker horse extended to Slovenian regions and had quite an impact on the origin of Kobarid, Bohinj and Posavinje horse as well as on some other old local breeds, which are mentioned in historical sources (eg Carinthian horse). Novak (1970) further describes that in Carinthia and Styria a special category of Pinzgauer was created (probably Carinthian and Posavinje horse), while in Upper Carniola the Bohinj horse has developed. Novak (1970) mentions Karst horses, which lived in the Karst region and after the establishment of stud farm in the Karst village Lipica this Karst horse took an active part in the origin of Lipizzaner horses. The Karst horses were also mentioned by Janez Vajkard Valvasor (1689), which states that Karst horses were known throughout Europe due to the inertia and flexibility. The stud farm Lipica had a strong influence on horse breeding at the end of 18th century in Notranjska and Primorska (Stefančič, 1951). The special commissions were organized for the external estimation of horses which had a strong positive effect on horse breeding. The origin of examined animals had to derive from licensed stallions. All this provisions and a ban of mating unknown mares with unlicensed stallions made an interest in horse breeding and improved the quality of breeding animals. Stefančič (1951) estimated that at the end of the 19th century the same breed of horses were represented as at the beginning of the 19th century.

## KOBARID HORSE

The main records of Kobarid horse were found in four historical sources: "Soča", "Primorski gospodar", "Gospodarski list" and "Gospodarski vestnik" from the years 1907 to 1927. In some issues of the newspaper "Soča", which was published in Gorizia, we can find different reporting on the various events in connection with Kobarid horse breeding in that area. The oldest issue of the newspaper Soča reported about horses from Tolmin area, where the name of the horse breed had still not been mentioned (Gabršček, 1907). Gabršček (1907) reported about exhibitions and rewarding of best horses in Tolmin. The paper stressed that the exhibition in year 1907 included more horses which were well bred and prepared for the exhibition than the previous year. The preference of more balanced type of horses improved horse breeding in general. Such improvement in horse breeding Gabršček (1907) connects with grazing horses on the mountain pastures in summer, especially on steep locations. Horses become more durable (stronger and well developed hooves), which also contributed to the sale of these horses to Carniola, Carinthia and Italy. Gabršček (1907) also points out that grazing could continue improving horse breeding, despite the reduction of grazing land due to the division of municipal land in the years before. Nevertheless, Gabršček (1907) maintains that the distribution of municipal pastures could even be beneficial. He believes that each division of land into small parts improves its quality. He reports that grazing on pastures was especially economical in the area of Zatolmin, Volče and Idrija. Further on, the author notes that the impact of the omission of common pastures in general decreased horse breeding everywhere (Czech-stud Kladrub) as well as in the Tolmin area. Gabršček (1907) specifies that prior to the distribution of municipal pastures the horses were higher and had stronger body constitution. The split of municipal pastures definitely changed horse's body constitution. During this time breeders started with improving local horses with other breeds (English heavy breed, Norman and Wallonia horses), in order to improve breeding stock. Soon, the breeders found out that crossbreeding of horses was not a good solution. They developed individual horse breeding counties. For the purpose of improving domestic horses the Pinzgauer (Noriker horse) and Walloon stallions were brought to Tolmin County (mating station Tolmin). Based on data from the contribution of Gabršček (1907) we can summarize that the Kobarid horse originated from domestic mares crossbred with Noriker and Walloon stallions. We found the name of "Kobarid horse breed" in the journal "Primorski gospodar" (1909) for the first time. The contribution entitled "Kobarid horses in Italy" (1909) evidenced that the stud in Udine was founded for the purpose of rearing draught horses. In this stud Kobarid, Carinthia and Pinzgauer mares and the Belgian breed stallions were adopted (Ardennes horse breed). In 1909, the Regional Agricultural Society ("Assoziiazione agraria friulana") issued a brochure "Il Cavallo caporetano" (Kobarid horse), in which they praised and recommended the horses from Kobarid County (Deželno ..., 1909). At the meeting of Gorizia Agricultural Society, on 14th January 1909, the requirement for improved horse breeding, especially in mountainous and hilly parts of the Slovenian lands was stressed. Shortly afterwards, on 28th April 1909, the breeding section within the society was set up, which developed the breeding rules. In April and May 1909 the brochure "Kobarid horse" was translated into Slovene language and was published in the newspaper "Primorski gospodar" (Selan, 1909). In this brochure the Kobarid horse was described as an individual breed, having its origin in Pinzgauer breed (Noriker horse). That brochure confirms the origin of the Kobarid horse, as previously described by Gabršček (1907). Selan (1909) described Kobarid horse as moderately heavy draught horse breed. The breed was reputed to be alert and intelligent. Further on, it is described as a horse of



broad and muscled body with a stripe on the back, having short and strong neck with wavy mane sometimes double, short loin, torn back, broad and deep chest, not too big hooves, strong and short tibia with mop of hair on the fetlock and heavy head. Colour varieties were also mentioned. The most frequent being chestnut coloured horses, brown ones (Fuks) and white horses with some red hair. Infrequent were wheat coloured horses. Very rare were tiger and spotted horses which were already in the disappearance. This brochure also lists the average body measurements of Kobarid horse referred into Table 1 (Selan, 1909). For measuring the height of the horse today we use the term wither height. The brochure mentions just the height of the horse and unfortunately, the details of the method of measurement (start and end point of measurement) were not described.

Table 1: Average body measurements of Kobarid horse (Selan, 1909)

	Height (m)	Chest girth (m)	Tibia girth (cm)	Relation Hoof girth : Chest girth
Stallion	1.99	2.10	26	1:8
Mare	1.55	1.98	23	1:8.2

Selan (1909) describes the Kobarid horse to be lighter than the Belgian, Dutch and the French horse and slightly lower than the Carinthia horse. Because the Kobarid horse was lighter and lower than the other breeds it was better suited for mountain and hill areas of Kobarid and Tolmin county at Gorizia-Gradisca region. Kobarid horse was reputed to be an Alpine horse type used for trading and transport through the Alps. Nevertheless, statistical data from 1904 to 1906 shows that the population of Kobarid horse was in decline. In 1904 there were 597 mares, 14 stallions, 138 foals and 489 castrated horses in Tolmin county. In 1906 there were just 501 mares, 5 stallions, 98 foals and 369 castrated horses in Tolmin county. Decreased number of Kobarid horses was clearly influenced by the infection with equine glanders in the Kobarid and Tolmin area in the years from 1902 to 1904. The stallions were not allocated to Kobarid and Tolmin area at that time. The population of Kobarid horses was reduced also because quite a number of mares was sold (mostly to Carinthian horse breeders) and because of the division of communal pastures. The development of horse breeding, as well as other agricultural branches was conducted by the government. In each area, breeding stallions were allocated. Each year the state allocated its local and Belgian stallions (especially Ardenes horse breed) to the Kobarid stud. Farmers breeding the Kobarid horse usually had one mare, rarely two or three. Foals aged from 1 to 2.5 years were taken to the mountain pastures together with cattle and sheep due to the opinion that such grazing made young foals well developed. In winter, foals were fed with hay in the stable together with cattle and sheep. The Kobarid horse was readily adapted to varying climate and conditions. At two and a half years of age foals have been started to draught for transporting agricultural and craft products through the Alps (to Udine, Gorizia, Trieste). Kobarid horse was reputed as extremely prompt and agile in the heavy draught (Selan, 1909). In the year 1910 Gorizia Agricultural Society expressed the wish and need to set up special breeding associations, to improve the breeding of Kobarid horse (Kmetijsko ..., 1910; Ustanovitev ..., 1910), since the population of Kobarid horse decreased. In Friuli the horse breeders had a great interest for breeding Kobarid horse (50 let ..., 1911). The importance and popularity of Kobarid horse made the Friuli horse breeding society in Gradisce to invite the Slovenian Kobarid horse breeders in their Society (Za povzdigo ..., 1909). As reported by the Primorski gospodar (Za povzdigo ..., 1909), the Livestock section of the Gorizia Agricultural Society did not accept these intentions but decided to establish a special horse breeding section. Within their association this decision was realised on May 7th 1911 (Zapisnik ..., 1911). In Gospodarski list from 1925, we observed that in Kobarid the exhibition of Kobarid foals was organized where a Kobarid horse was praised (Juretic, 1925; Razstava goveje ..., 1925). A total of 34 foals of Kobarid breed were exhibited (17 foals aged less than one year and 17 older than one year). The evaluation committee of foals exterior found that foals had strong bones and were lively enough and concluded that horse breeding should be directed to the Noriker breed using medium growth stallions (Potek, 1925). A year later the journal Gospodarski list cited a contribution entitled "Friulian Horses" (Furlanski konji, 1926), which describes that almost all Kobarid horses disappeared during the First World War. Many of the horses took the Italian army. In Friuli, only horses of the Austrian army remained, belonging to all kinds of breeds (horses arrived to Italy from all parts of the Austro-Hungarian monarchy, as well as from Russia, Germany and the Balkans). In Friuli, horses of the French and English armies also remained. Consequently, in 1926 in Friuli there were Pinzgauer horses to be found, light-Croatian Dalmatian mares, small but sustained Huzul horses, heavy French Percheron and mares of English breeds. Despite all these breeds in Friuli it has been decided to renew the known Kobarid horse breed (Furlanski konji, 1926).

**BOHINJ HORSE**

Very few but still noteworthy records were found for an old Bohinj horse breed. For the first time this breed is mentioned in the booklet "History of Carniola Agricultural Society with the Statistical Agricultural



Census in Carniola" (Bleiweis, 1855). According to the statistical data from 1851 there were 20269 horses; 6480 mares, 13234 horses, 88 stallions and 467 foals in Carniola. Furthermore, Bleiweis described that the best horses were kept in Carniola and mentioned Bled and Bohinj horse breed to be very similar to the heavy Carinthian and Salzburg horse breeds (Bleiweis, 1855). In the journal "Kmetijske in rokodelske novice" ('Agricultural and handicraft news') (iz Bohinja ..., 1872) Bohinj horse breeders expressed special thanks to Bohinj Provincial Commission for taking care of the horse breeding progress. Good work of Provincial Commission played an important role in the exterior of Bohinj horse, which was described as a tall, broad and strong horse, a pleasure to look at. With the establishment of a stud the phase of refinement with Pinzgauer stallions began, which exerted their influence on the Bohinj horse breed (Iz Bohinja ..., 1873). However, the data of this record indicate that an old Bohinj horse originated from Noriker breed. The paper titled 'Old Bohinj horse' from Farmer magazine interprets the origin of Bohinj horse (Pirc, 1920). Pirc (1920) does note that the old horses from Bohinj (beginning of the 18th century) were not originated by the refinement of local mares with Noriker stallions but with Nonius stallions. Nonius breed was developed at the Imperial Stud at Mezöhegyes, Hungary by careful line breeding. The stallions from the Mezöhegyes were exported to the stud at Bled (Pirc, 1920; Hinterlechner, 1937). The influence of those Nonius stallions was visible in the conformation of the old Bohinj horse from the 18th century (Pirc, 1920). The old Bohinj breed exhibits traits common to heavy-boned driving and light draft horses: powerful and arched high-set neck, broad and muscular back, open but powerful loin, deep and sloping hindquarters. It was expected to be a good temperament and very suitable for steep Bohinj mountains (Pirc, 1920). The old Bohinj horse was grazing at the top of the high mountains and Pirc (1920) describes it as "mountain climber", which is contrary to the characteristics of the heavy Noriker horse. On the other hand, Pirc (1920) reported that primarily Noriker breed was spread in the Julian Alps (also in Bohinj and Gorizia region). Appropriate to the local conditions, particularly in terms of quantity and quality of forage, the formations of two types of Noriker horse were established. According to this theory, we can conclude that initially there were two types of Bohinj horse. An old Bohinj horse lived somewhere at the end of the 17th and in the early 18th century and was probably created by the refinement of local mares with Nonius stallions. Later, in the second half of the 18th century and in the first half of the 19th century very heavy Noriker horse had greater influence and so the heavy Bohinj horse breed was created. The stud in Bohinj began receiving heavy Noriker stallions and therefore the original old Bohinj horse has disappeared (Pirc, 1920).

## POSAVINJE HORSE

The name of Posavinje horse was first observed in 1886 (Gajza, 1886). The paper entitled "Posavinje horse" deals with the horse breed from Savinja valley. This horse breed was of great importance for Styria. For the refinement of this breed they used the Ardennes stallions and also other Belgian stallion. Gajza (1886) describes Posavinje horse as a broad, strong horse with short legs, and lively temperament. Posavinje stallions were used for mating mares in Posavinje and elsewhere in Styria. Posavinje mares were used in the army in the artillery as draft mares. Posavinje horse was wanted also in Dolenjska region. In 1897 a lot of horse breeders agreed with the import of lighter Noriker horses to Dolenjska region. They decided to breed purebred Posavinje horse from Sevnica, Jurjev kloster and Planina (Konjereja, 1897). In 1910 at the Vienna horse exhibition the Posavinje horses or Savinja horses were presented (Štajerski konji ..., 1910). The group of draft horses (10 cold-blooded mares and 2 Posavinje mares) received a national diploma at the exhibition. In 1912 a contribution entitled "Horse or Cattle" the author expresses the preference to cattle breeding, saying that the cow is the animal which can give you the highest profit (JS ml., 1912). Furthermore, he says that the reduction in the number of horses at the expense of cattle will not be harmful due to modern technology (the introduction of railways, bicycle). Nevertheless, the author considers that rearing both species, horses and cattle, may be more successful farming, where none of them suffer. He pays a particular praise to Posavinje horse breed but points out that the Posavinje horse breeding does not progress as much as it should. He blames horse breeders, who were selling the most beautiful horses abroad. Even more he blames the evaluation commissions, which contributed a greater economic weight to fleshiness than to body constitution. In 1937 we found again the name of Posavinje horse and got the confirmation about the origin of Posavinje horse by Hinterlechner (1937). Again, Hinterlechner (1937) describes that Posavinje horses were improved with Ardennes stallions, as we have observed already in the record of Gajza (1886). However, Hinterlechner (1937) in addition describes that Posavinje horses were crossbred with Noriker and Ardennes breed. In conclusion, the Posavinje breed was much desired because of its good characteristics and adaptability (Hinterlechner, 1937; Gajza, 1886; Konjereja, 1897).

## CONCLUSIONS

The survey on historic resources of the old Slovenian breeds of horses confirmed our assumptions that on the territory of present-day Slovenia there lived certain breeds of horses. Many sources testify about the origin of the old local breeds. Many sources confirmed the formation of Kobarid horse in the area of



Kobarid and Tolmin where the local mares were improved by Pinzgauer (Noriker) horse breed (Gabršček, 1907; Kobariški konj ..., 1909; Deželno ..., 1909; Selan, 1909). The evolution of Bohinj horse was quite similarly to the Kobarid ones. Bohinj horse originated from the refinement of local mares with Pinzgauer (Noriker) breed (Iz Bohinja, 1873). Later, Pirc (1920) even mentions two versions of Bohinj horse. The first was formed in early the 18th century by the improved mares with Nonius stallions and referred to as the old breed of Bohinj horse. With the arrival of Pinzgauer horse, the old Bohinj horses changed their characteristics and more draught type of Bohinj horse was formed. The Noriker breed played an important role again in the formation of Posavinje horse where an influence of the Ardennes stallions has to be mentioned (Gajza, 1886; Hinterlechner, 1937). Over the years the early history of the Kobarid, Bohinj and Posavinje horse breed has always been reported as a link with Noriker horse. The establishment of the stud farms in late 18th and early 19th century represents the beginning of refinement by Pinzgauer, Nonius and Ardennes stallions, which exerted their influence on the Kobarid, Bohinj and Posavinje horse until 1937. The Noriker ancestor was a Celtic alpine horse type which was used for trading and transport through the Alps. Until 19th century the influence of heavy mountain draught horses was visible in the conformation of old Kobarid, Bohinj and Posavinje horse. Still the differences between those old breeds were reported by Pirc, 1920; Gajza, 1886; Hinterlechner, 1937. Kobarid horse was smaller and lighter than Bohinj and Posavinje horse. Furthermore, the old Bohinj horse was affected mainly by Nonius breed and had the characteristics of a heavy-boned driving and light draft horse, suitable for steep Bohinj mountains (Pirc, 1920). Posavinje horse was a broad, strong horse with short legs, and lively temperament used in the army in the artillery as a draft horse (Gajza, 1886). With reviewing of the historical resources about old local breeds of horses we particularly confirmed the existence of Kobarid, Bohinj and Posavinje horse, being extinct now. Furthermore, with some reported descriptions on phenotypic characteristics we manage to obtain some data which helped to determine the zootechnical characteristics of Kobarid, Bohinj and Posavinje horse.

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