

GEOGRAPHY OF CIKA CATTLE BREED ¹

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Geography of Cika cattle breed

The geography of Slovenian autochthonous Cika cattle breed was studied over a 140-year period of its development. The first literature reference regarding the dissemination range of original Cika cattle was found in the year 1872, when Schollmayr (1873) studied cattle breeds in Carniola. In the second half of the 19 century, cattle in Carniola were without their own names of breeds and were characterized by a large phenotypic diversity. A generic term "Carniolan cattle" was the most commonly used name and animals were grouped according to their colour. Povše (1893) reported that the red coloured Gorenjska cattle were to the fullest extent spread in the area which today belongs to Gorenjska statistical region. Under the influence of specific climate and breeding conditions in Bohinj area, the smallest in size and the most dairy type of Cika cattle was developed here. They named it as "Bohinj cattle" and this was the original form of Cika cattle. Breeding of Cika cattle maintained in the same area until the sixties of the past century. In the year 1964 a symposium took place in Kranj, where it was decided that Cika cattle was going to get upgraded by Simmental breed. Today, the breeding of Cika cattle is dispersed across a larger area of the Republic of Slovenia, however, it is the most widespread in the north part of Central Slovenian statistical region (Kamnik area) and Gorenjska, especially in the south-eastern part of Julian Alps (Bohinj area). In these two areas, Cika cattle breeding is still most concentrated.

Key words: cattle / autochthonous breeds /Cika cattle/geography /origin area/Slovenia

Geografija pasme cikastega goveda

Geografijo slovenske avtohtone pasme cikasto govedo smo proučevali v 140 letnem obdobju njenega razvoja. Prvo najdeno gradivo s tega področja izvira iz leta 1872, ko je Schollmayr (1873) raziskoval »goveja plemena« na Kranjskem. V drugi polovici 19. stoletja govedo na Kranjskem večinoma ni imelo imen za pasme in zanj je bila značilna velika fenotipska heterogenost. Za poimenovanje so največkrat uporabljali splošen izraz »kranjsko govedo«, živali pa so združevali v skupine po barvi. Povše (1893) piše, da je bilo rdeče pisano gorenjsko govedo v največjem obsegu razširjeno na območju, ki danes spada v Gorenjsko statistično regijo. V Bohinju se je pod vplivom specifičnih klimatskih in rejskih razmer oblikoval najmanjši in relativno najbolj mlečni tip cikastega goveda, ki so ga imenovali bohinjsko govedo in je izvorna oblika cikastega goveda. Reja cikastega goveda se je na območju, kjer so vsaj od druge polovice 19. stoletja naprej redili rdeče govedo, v podobnem geografskem obsegu ohranjala do 60. let 20. stoletja. Leta 1964 je v Kranju potekal simpozij, kjer so sprejeli sklep o pretopitvi cikaste pasme z lisasto. Danes je reja cikastega goveda geografsko razpršena po večjem območju republike Slovenije, številčno pa je najmočnejše zastopana v severnem delu Osrednjeslovenske statistične regije (območje Kamnika) in v Gorenjski statistični regiji, zlasti v jugovzhodnem delu Julijskih Alp (območje Bohinja). Na teh dveh območjih je reja cikastega goveda najbolj zgoščena.

Ključne besede: govedo / avtohtone pasme / cikasto govedo / geografija /izvorno območje/ Slovenija

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1 INTRODUCTION

In the 19th century, the cattle in Carniola were characterized by a large phenotypic diversity. On the one hand this was due to the fact that the small ruminants breeding (especially sheep breeding) was the main branch of animal husbandry (Stefančič, 1966), while there was a lack of selection work in cattle breeding, which would prevent the phenotypic diversity. The second reason was the import of foreign breeding animals by the lords of the land which did not take into account any basic professional and zootechnical measurements at all. According to the cattle diversity, animals were different from each other in body weight, skin or hair colour, etc. Therefore, there was no systematic description regarding the breeding standard. Domestic cattle were most often of white, grey or red skin colour (Bleiweis, 1871). Schollmayr (1873) studied cattle breeds in Carniola and wrote that animals significantly differed from each other in phenotyp, and were named according to the colour.

After the March revolution, opportunities to promote domestic cattle breeding increased and in the year 1868 Carniola Agricultural Society started with planned

purchasing of breeding animals of foreign breeds especially bulls of Bela, Pinzgauer, Marijadvor and Muricidol breed (Reja goveje živine ..., 1877).

An important basis for the conservation and sustainable use of animal genetic resources is to study the geography of livestock, which examines the prevalence of certain types of farming and primary distribution of breeds of farm animals. This is particularly important for the *in situ* conservation which means the conservation of *in vivo* agricultural genetic resources in the environment where they were created and where they developed their distinctive properties (Šalehar *et al.*, 2005).

In the area of Carniola where red colour cattle was widespread in the second half of the 19th century the only Slovenian autochthonous breed of cattle was evolved and conserved over several decades. In Bohinj, the original type of Cika cattle was kept for the longest time. The breeding aim of Cika cattle is associated with the social and market changes, which is shown in the present internal structure of the total population (distribution of animals into three types: Cika type, partly Cika type and Pinzgauer type). Only the animals of Cika type are presented as original Cika breed and they are an



Figure 1: Geography of differently coloured cattle by district in Carniola in 1872 (Schollmayr, 1873)

Slika 1: Geografija različno obarvanega goveda po posameznih okrajih Kranjske v letu 1872 (Schollmayr, 1873)

excellent base for the primary breeding aim (Žan Lotrič, 2012). In our study the geographic distribution of Cika cattle breeding has been investigated from 1872 onwards.

2 MATERIAL AND METHODS

In researching Cika cattle breed, numerous historical sources were found and studied. They all showed the development of this breed in the Republic of Slovenia. The main sources were found in the Contributions to Bibliography: Historical Sources of Slovenian Autochthon and Traditional Breeds of Domestic Animals – to the year 1945 (Šalehar, 2009), Contributions to Bibliography: Legislation on the Area of Cattle Breeding for Slovenia in the years 1740–1945 (Šalehar, 2011a) and Contributions to Bibliography: Slovenian Books and Prints on Cattle Breeding Area (Šalehar, 2011b), which includes the period to the year 1945. All mentioned references as well as some periodical publications and books in the field of animal husbandry used in this study are available on the website of Digital Library of Slovenia, DLIB.si. A review of these works gave us a starting base of bibliographic information, which guided our work in reviewing materials and sources that are stored in different libraries in Slovenia. Some references were also found in the Archives of the Republic of Slovenia.

The historical sources were also searched by means of COBIB.SI, the joint bibliographic-catalogue database of the National and University Library in Ljubljana, Catalogue 1774–1947, electronic catalogue Katnuk, and database of the National Museum of Slovenia, different catalogues and other library databases. A lot of books on cattle breeding and Alpine dairy farming were found in the library of the Zootechnical Department at Biotechnical Faculty, University of Ljubljana, in other Slovenian libraries, in the University Library in Graz and in the Library in Gorizia. Some materials were found on the web site ALEX – Historische Rechts und Gesetzestexte Online (Alex, 2011) and on the web site Sistory – History of Slovenia (Sistory, 2011). A web site browser Google-book and some others were also of great help.

Data for the presentation of Cika (Bohinj) cattle geography are mainly found in the material as follows: Schollmayr (1873), Povše (1893), Wenko (1933), Selan (1939), Ferčej (1947), Ferčej & Skušek (1990) and Jeretina (2011). The geography of Cika (Bohinj) cattle was studied in the time period 1872–2011.

First of all, the found data had to be unified and organized, and the old professional terms had to be replaced by the current ones.

3 RESULTS

3.1 FIRST DESCRIPTIONS OF CIKA CATTLE GEOGRAPHY

Kump and Ločniškar (1956) described the first found record of Cika cattle breeding geography, and presented it according to the report published in the year 1768. There it is noted that the west part of Kamnik and Ljubljana is the area of monochrome yellow-red small cattle. Furthermore, parallel with the improvement of transportation facilities the influence from other countries increased, associated with the introduction of foreign breeds of cattle. Only the most remote places of our country were not reached by the influence from abroad and thus the original cattle was conserved there for the longest time. Bohinj area was until the opening of the railway in 1906 the most isolated region of Julian Alps, therefore the original type of Cika cattle was kept there for the longest time (Žan Lotrič, 2012).

3.2 GEOGRAPHY OF CIKA CATTLE IN CARNIOLA IN THE SECOND HALF OF THE 19TH CENTURY

3.2.3 GEOGRAPHY OF CARNIOLA CATTLE IN THE YEAR 1872

Schollmayr (1873) studied cattle breeds in Carniola and he found a large phenotypic heterogeneity between animals, they were even without their own breed names. Carniola cattle was named according to the colour and the author has counted 21 common descriptive names (for example "mavra" was the name of cattle with full black or at least very dark colour, yellowish cattle was in Dolenjska called »volk« and in Notranjska »rmenka«, »plavka«). Therefore Schollmayr (1873) distributed them by colour. Geographical distribution of different colours of cattle in Carniola in the year 1872 is presented in Fig. 1.

In the second half of the 19th century there were six breeding areas of differently coloured cattle in Carniola (Fig. 1). In the area of former municipalities of Kranjska Gora, Radovljica and Tržič red cattle was bred already in the seventies of the 19 century. In the same period red cattle was also bred in the former municipalities of Brdo by Lukovica, Kamnik, Kranj, Škofja Loka, Idrija and in the small area of Vrhnika municipality. Pirc (1884) stated two main cattle types in Carniola. He called them:

- »white, white-yellow or grey breed«,
- »red, red-Cika breed«.



Figure 2: Geography of cattle breeds in Carniola in 1893 (Povše, 1893)
Slika 2: Geografija pasem goveda na Kranjskem leta 1893 (Povše, 1893)

3.2.2 GEOGRAPHY OF CARNIOLA CATTLE IN THE YEAR 1893

A similar study was published two decades later by Povše (1893) (Fig. 2). The cattle was still mainly named according to colour. The red coloured cattle which was widespread in Gorenjska was named “Red variable coloured Gorenjska cattle” (predominant red colour had sometimes white patches). It was the only breed kept in the areas of the former districts of Kranjska Gora, Radovljica (except in Bohinj), Tržič, Kranj, Škofja Loka and Kamnik. In Bohinj area, farmers bred red coloured Gorenjska cattle and yellow-grey Carniola provincial breed. The latter had been extended to Notranjska and to a lesser extent also to Dolenjska region. So called “Red variable coloured Gorenjska cattle” was bred, besides slightly coloured local forms of cattle, also in the area of the former Idrija municipality.

3.2.3 DISTRIBUTION OF CARNIOLA CATTLE INTO LIVESTOCK DISTRICTS ACCORDING TO BREEDS

At the meeting of the Carniolan Provincial Assembly on 28th April 1900, breed distribution of Carniola cattle in separate regions was highlighted (Govedoreja, 1900). One of the members suggested that in the whole country only one breed of cattle should be kept, namely Cika (Govedoreja, 1900b). Although present members believed that Cika could improve cattle breeding throughout the country, they felt that it was not a good time to vote for only one breed of cattle in Carniola.

In May of 1910 the provincial livestock inaugural gathering was held in Ljubljana where the provincial dairy and livestock division supervisor Legvart presented distribution of the whole Carniolan territory into three livestock districts (Gorenjska, Notranjska and Dolenjska), including their boundaries (Ustanovno ..., 1910). Within each district only certain breeds of cattle were allowed. In Gorenjska district, for instance, only the Pinzgauer sires could be used.

3.2.4 GEOGRAPHY OF CATTLE BREEDS IN DRAVA BANOVINI

3.2.4.1 BREED DISTRICT OF GORENJSKA

Breed district was an organization that combined the representatives of District livestock committees and representatives of Livestock cooperatives in Gorenjska (Burgar and Zupan, 1926). This organization was invoked by the realization that a good and rapid progress can only be achieved through the association. Ovsenik (1926a) wrote: »*The idea of livestock committees and livestock districts is to create a purebred line of Gorenjska breed, to gain the best possible milk yield. The same idea is present also in the livestock cooperatives*«.

On the meeting of Livestock cooperatives of Gorenjska breed district in 1924 held in Kranj, among other things, it was decided: »*All debates related to the breed for Gorenjska breed district are stopped. The only breed for this district is Pinzgauer breed (Gorenjsko ..., 1924). The main aim of Gorenjska breed district was written by its secretary Ovsenik (1926b): "The aim of our breed district is to equalize our Cika cattle, to gain the highest possible efficiency level and due to proper breeding facilities, selection work and exchange to get strong and well settled traits ...*«.

In Selce above the town of Škofja Loka, the first livestock organization which was named "Livestock Organization for Red Cika Cattle" was established in 1906 (Ovsenik, 1926c). The idea for a single breeding plan for the entire breed territory began to emerge, as well as the need to combine livestock organizations into the regional breed groups. On February 13, 1924, Gorenjska Livestock cooperatives established the Gorenjska breed district, which in 1926 consisted of 10 Livestock cooperatives and six District livestock committees. Ovsenik (1926a) stressed that only the united and good team work could achieve the target: »*To create a pure bred dairy line of Gorenjska cattle that will improve the entire breed*«.

On February 8th 1926 Gorenjska breed district had a special meeting in Kranj where the rules for breed district and an urgent need for the establishment of Livestock cooperatives where discussed. They accepted a decision for the immediate establishment of Livestock cooperatives, especially in bigger municipalities. Great emphasis was given to the proposal of dairy school establishment. They were of the opinion that the opening of a dairy school in Slovenia, especially due to profitable livestock and economy was of vital importance. Therefore the decision was taken to send the Resolution to the Minister of Agriculture and to the political clubs in the country (Burgar and Zupan, 1926).

Ovsenik (1930) mentioned the acceptance of the »Recommendations« on the meeting in Kranj on May 8th

1926 and summarized that the Gorenjska breed district is the central one for all the existing livestock organisations in the area where Gorenjska Cika cattle was bred. The author stressed that Gorenjska breed district is somehow the central livestock co-operative which needs to be slowly further developed and to become the breed cooperative association of Livestock cooperatives for Gorenjska Cika breed.

3.2.4.2 REGIONS OF SEPARATE CATTLE BREEDS

In December 1938, a conference of livestock experts from different regional managements and delegates of livestock cooperative unions was held in Belgrade (Rajoni ..., 1938). They discussed issues related to the improvement of cattle breeding, while the Ministry of Agriculture on the base of the Act on the improvement of livestock, determined the districts for the individual cattle breeds in the country. In Drava Banovina there was, among others, a fixed region for the Pinzgauer and local breed (gradually improved by Pinzgauer breed) in the following districts: Radovljica, Kranj, Škofja Loka, Kamnik, municipality of Žiri in the district of Ljubljana region. In addition to the Drava Banovina, the region of Pinzgauer cattle breed was specified also for the Sava, Vrbaska and Primorska Banovina. However, these were regions where farmers bred heavier breed types.

3.2.4.3 BREED DISTRICTS IN DRAVA BANOVINI

In Drava Banovina there were six breed districts, of which there were two for Cika cattle: Gorenjska and Ormož (Fig. 3). According to the decree of the Ministry of Agriculture Br. 662/III, dated January 3rd, 1938 (cit. by Oblak 1938a), the breeding of Pinzgauer (Cika) cattle was defined in "srez" or political districts: Radovljica, Kranj, Škofja Loka, Kamnik, Gorenjska part of Ljubljana district, municipality of Žiri, Logatec and Ptuj. Areas of cattle breeds in the Drava Banovina were presented by Selan (1939) similarly as was done by Wenko (1933).

Hinterlechner (1937) wrote that the main cattle breeds in Slovenia were the following: Marjadvor, Pomurje (Muricidol), Murboden, Pinzgauer, Bela, Simmental, Montafon as well as the provincial or land cattle. The latter was a "mixture" of mountain and lowland cattle. Author added that excellent dairy cows could be found among the land cattle and for this reason it would be necessary to conserve such animals and with selection consolidate characteristics of the animals in their genetic and good capabilities, especially when a unified type of provincial cattle is found prevalent in a particular place.

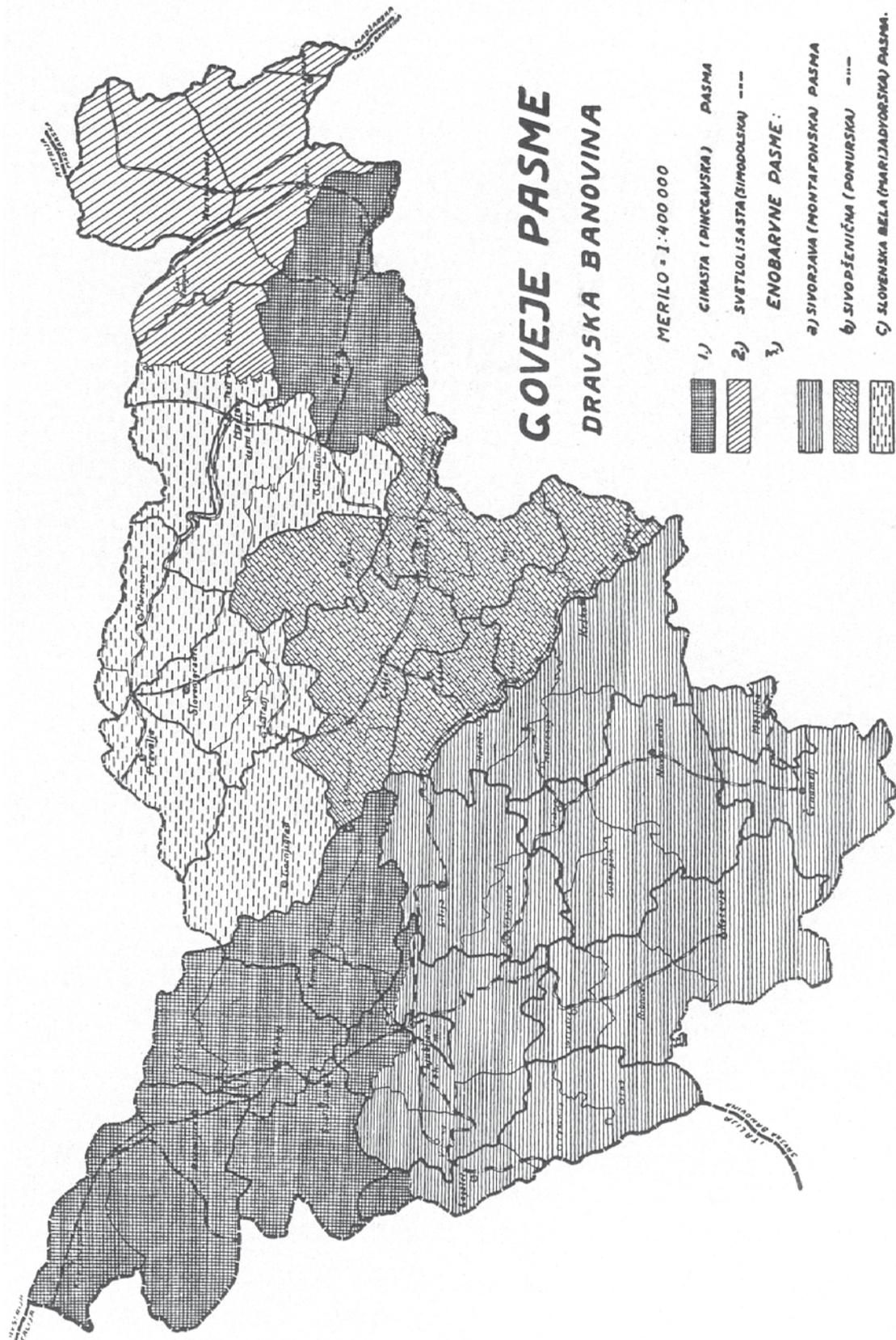


Figure 3. Areas of cattle breeds in the Drava Banovina (Wencko, 1933)
Slika 3: Pasemska področja goveda v Dravski Banovini (Wencko, 1933)

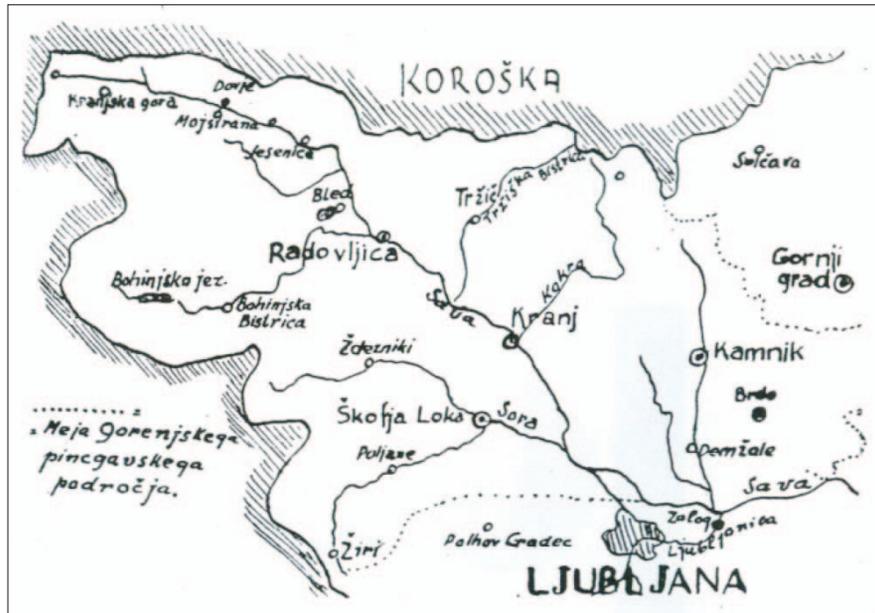


Figure 4: Geography of Gorenjska Pinzgauer cattle breeding (Ferčej, 1947)

Slika 4: Razširjenost reje gorenjske pinzgavske pasme goveda leta 1947 (Ferčej, 1947)

The author stresses that the provincial cattle are usually very resistant, with good feed conversion, and are generally very modest.

For each breed district in Drava Banovina there was one Breed association which was at the same time a subsidiary body of Banovina royal administration (Oblak, 1938b). For Gorenjska breed district Breed association was held in Predoslje close to the town Kranj. Breed associations combined all Livestock selection organizations of a particular Breed district. In 1937 Kranj association included 30 livestock selection organizations with 1.344 members and 1.256 cows included in herd books. In Drava Banovina there were five Livestock selection associations for Gorenjska Cika cattle (Kranj, Trzin and Oviše, Srednja vas in Bohinj, Gorje, Brezje) (Oblak, 1938b).

3.2.5 GEOGRAPHY OF CIKA CATTLE AFTER THE SECOND WORLD WAR

3.2.5.1 GEOGRAPHY OF CIKA CATTLE – FERČEJ (1947)

In the study of Cika cattle by Ferčej (1947) the term Gorenjska Pinzgauer cattle was used as breed name. Author divided this breed in two groups: lowland and mountain (Bohinj) cattle according to the agricultural management distribution of Gorenjska. For the cattle in lowland the author used name “lowland Pinzgauer cattle” and in addition he stated the following districts: Kranj,

Kamnik, Škofja Loka and the northern part of Ljubljana district, while as mountain areas he stated Jesenice district, Škofja Loka mountains, a mountain belt along Karavanke and Kamnik mountain districts, Kranj and Kamnik (Fig. 4). Author associated the name “mountain” with the alpine dairy farming in this area.

3.2.5.2 GEOGRAPHY OF CIKA CATTLE FROM 1950 TO THE END OF THE SEVENTIES OF THE 20TH CENTURY

In 1950 five cattle breeds were present in the area of the Republic of Slovenia: White Slovenian (Marijadvor or Lavantal), Pomurje (wheat colour), Brown, Simmental and Cika breed. The latter was bred in Gorenjska and Tolmin areas, a larger and heavier type in Ptuj and Ormož and in part of Ljutomer (Ferčej and Skušek, 1990) (Fig. 5).

Podjavoršek (1959) wrote that breeding of Gorenjska Cika cattle was extended in the following three districts of Slovenia: in Kranj with breeding capacities, in Gorica (Municipal Committee Tolmin) and in Ljubljana district (Municipal Committee Kamnik). Author added that a large part of population was found in Kranj district.

The year 1952 we can consider as a starting year of artificial insemination in Gorenjska. During this period differences between the veterinary and animal husbandry services were increasing. The latter recommended Bohinj type of Cika cattle, while at the insemination center in

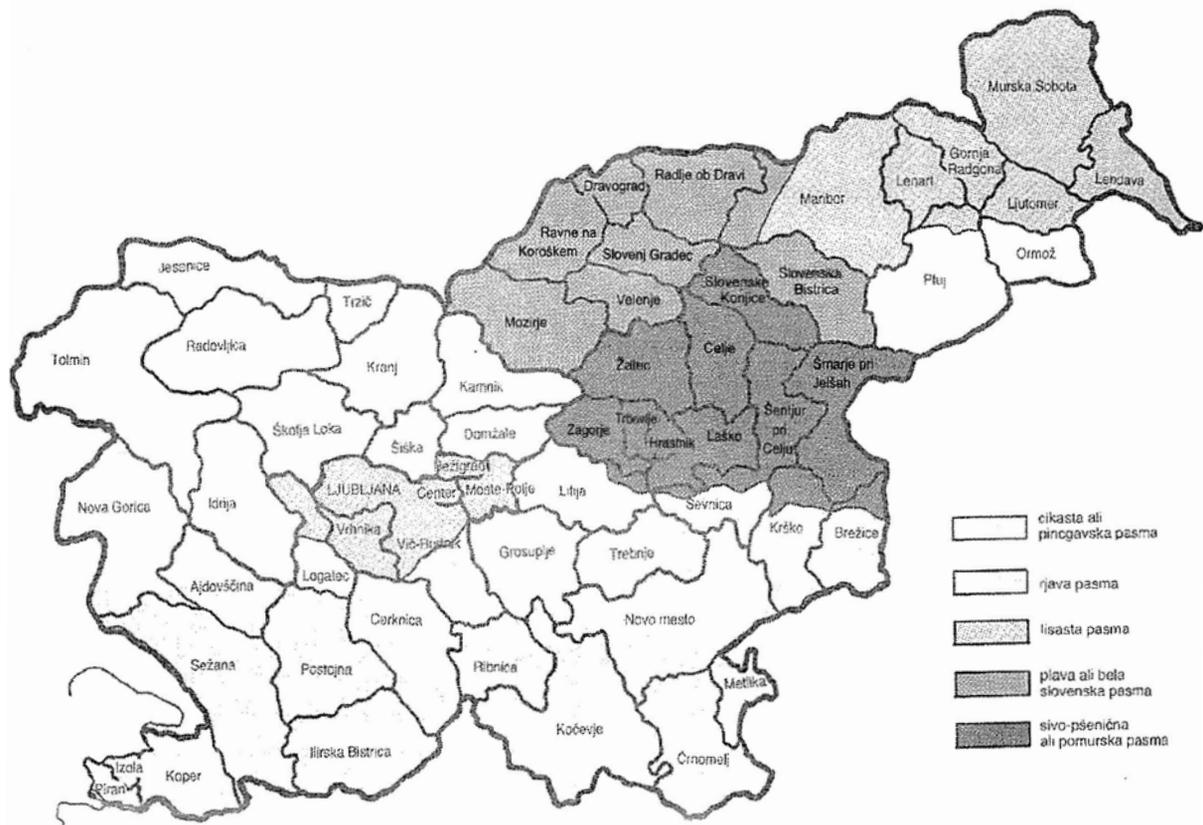


Figure 5: Geography of cattle breeds in Slovenia in 1950 (Ferčej in Skušek, 1990)
Slika 5: Razširjenost pasem goveda v Sloveniji leta 1950 (Ferčej in Skušek, 1990)

Ljubljana only the semen of imported heavier bulls (Kunstelj, 1977) was available. Author did not specify whether it was Pinzgauer or of any other breed. At the end of the fifties of previous century, insemination was practiced in the large part of lowland areas of Gorenjska. In areas where artificial insemination has not been introduced yet bulls of Simmental breed were used. Only in Bohinj bulls of Cika cattle were still used for natural service. In 1958 they inseminated 5.453 females of Cika cattle with the semen of Cika bulls, in 1962 only 458, in 1963 and 1964 they did not inseminate females with the semen of Cika bulls anymore (Kunstelj, 1977). In the professional journal entitled "Socialistično kmetijstvo in gozdarstvo" an article named "Cika Cattle Must Be Replaced" was published (Cikasto ..., 1964), where it was written that cattle breeding in the area where Cika cattle dominated had very favourable conditions for its development and that the structure of the current herd presented an obstacle for faster development. It was suggested that instead of Cika cattle the introduction of more productive breeds should be used, which would more intensively exploit the

production conditions and thus significantly increase the production results.

In autumn of 1964 a symposium was held in Kranj mainly to discuss the question of cattle breed in Gorenjska, where the following conclusion was accepted: "In the area with prevailing Cika cattle there are approximately 25.000 heifers, of which two thirds belong to the Central part of Gorenjska. Due to the characteristics of this breed, calves are not suitable for intensive beef production. Therefore the change of breed in the entire Gorenjska region is appropriate. Cika cattle will be replaced by a light Simmental breed, which is most suitable for milk and meat production. This intention would be reached by planned crossbreeding of Cika cattle with light Simmental sires and with the purchase of purebred breeding animals of light Simmental breed". Very few professionals were still "fighting" for the conservation of Cika, respectively, the Bohinj cattle breed. They kept asking what to do with the small type of Cika Bohinj cattle, whose territory was also threatened from the south by Brown breed that was being introduced in Tolmin area. They also kept emphasizing that it was not wise to introduce any other breed that was

bigger and heavier than Cika, due to the specific breeding conditions in Bohinj area. One of the suggestions was to experimentally crossbreed Cika cattle with specially chosen Simmental bulls, mainly to create a new type of animals, a better dairy type compared to the present one in Gorenjska region (Lovšin, 1964).

For similar reasons as were given in Kranj in 1964, also the representatives of Agrokombinat Emona, Domžale and Kamnik municipality and Agricultural Unit accepted a decision in 1968 to upgrade Cika cattle with Brown breed in Domžale region and with Simmental breed in Kamnik municipality (Govedoreja ..., 1968).

In the sixties of the 20th century Gorenjska red Cika breed dominated in Gorenjska region, the percentage of this breed was 73% in 1965 (Kunstelj, 1977).

3.2.5.3 GEOGRAPHY OF CIKA CATTLE TODAY

In the recent decade the population of Cika cattle has been increased. The total population of 2.430 animals by 736 breeders was reported by Gorjanc *at al.*, 2012. These data are based on the records which cover all of the farms which had at least one pure-bred animal of Cika cattle in 2011. The total number of farms that bred Cika cattle cows was 512; breeders kept 1.115 cows. These cows represented a base for breeding, reproduction and long-term conservation of Cika cattle breed.

Today, Cika cattle is used mainly in the alpine and sub-alpine parts of Slovenia (Jeretina, 2011). Most of such farms are located north of Ljubljana, in administrative units of Kamnik and Radovljica. Some of them are also in Nova Gorica area and on Posavje Hills. Recently, more and more animals of Cika cattle are also found in Logarska dolina. Due to the missing data on the type of animals, especially for the years 2010 and 2011, we cannot demonstrate the prevalence of Cika type of Cika cattle.

4 CONCLUSION

In 1872 the red coloured cattle was bred in a wider region of Gorenjska, in the region of Idrija and in a smaller part of Vrhnika and Logatec region. Such a range of Cika (Bohinj) cattle breed was mostly preserved in the fifties of the previous century. Bohinj is a remote and rather closed region of Slovenia, therefore Bohinj farmers resisted the introduction of other breeds and crossbreeding of Bohinj cattle. Remoteness of Bohinj also influenced the fact that among cattle some blood of the original cattle breed still remained even during the fifties of the 20th century. Cika cattle research showed that dur-

ing its development, different names were used for this breed in different places and by different authors (Cika cattle, Pinzgauer breed ...). Given the fact that Cika cattle during its development has not significantly expanded outside the place of its formation, we can determine the central area of the breed. Cika breeding has remained in Gorenjska, especially in the south-eastern part of the Julian Alps for more than 140 years of its development. In addition, it is quite widespread in the northern part of the Central Slovenian statistical region. These two statistical regions present more than half of the total population of Cika breed today. In recent years the breed has been purchased even in areas that are not known as traditional Cika cattle breeding areas. This is the reason why the geographical distribution of today population is spread throughout the larger part of the Republic of Slovenia.

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