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**Malopolski horse breeding development in the light of its
changes in the Lublin region**

Stan hodowli koni małopolskich w świetle zmian liczebności ich pogłowia na
Lubelszczyźnie

Summary. The population of Malopolski horse breeding in Lublin region between 1976 and 2008 has been analyzed in the study. The recorded changes were characterized in the aspect of events that had considerable effects. A gradual decrease of Malopolski horse heads was observed, which was split up only by short-term increases, while both political, social, and breeding reorganization did not result in any positive changes. A temporary increase of the breed population was attributed to the appearance of Polish noble half-bred breed (pksp) as well as including the Malopolski breed into a program of genetic resources protection, although the latter factor did not bring any expected achievements because of its short duration and relatively narrow-scale. It is supposed that maintaining the Malopolski horse in its old and nowadays completely unprofitable type cannot be successful for private breeders, whereas those breeders who prefer its modern and show-jumping type would need at least partial support due to significant competitiveness of the foreign ride horse breeds.

Key words: breeding, Malopolski horse, genetic resources protection

INTRODUCTION

Malopolski horse is a domestic breed well recognized by many breeders. The breed was created as a result of many factors, including breeders working creatively through ages and climatic conditions of eastern Poland [Sasimowski 1980]. Those reasons made that the breed individuals are characterized by economic maintenance, good health, and versatile performance. Some part of Malopolski horses find their application in various disciplines of riding sports, including mainly show-jumping and eventing. Agritourism, recreation, and organic farming are also common directions of the breed use [Janczarek and Zniszczyńska 2009].

Despite of numerous advantages, a decrease of Malopolski heads number has been recently observed, which can be hardly associated only with a worldwide or all-Polish regress in breeding and maintenance of the species [Krupiński and Jezierski 2009]. Frequent changes of breeding programs, breeder's and user's mentality, as well as current market's needs, contributed to many problems for Malopolski horse. Such situation makes that not only the pedigree structure, utility, and general conformation changes, but first of all, the population of Malopolski breed – the number of livestock heads of domestic horse breed that was the most abundant some time ago, became so low, that the breed has been announced as conservative [Program hodowlany... 2004]. The Malopolski horses were included into a detailed protecting program with guaranteed subsidies from European Union funds. However, the subsidy perspectives have not risen to expectations and the reasons for poorer interests in that breed have appeared to be very complex. According to many breeders and authorities, one of the main factors comprises in insufficient efforts in improving the Malopolski horses in a view of their usefulness for professional sports [Kaproń 2007]. Contemporary worldwide market prefers individuals specialized to a particular riding discipline, which requires premeditated and consequent concepts of the breed improvement [Lewczuk 2008].

Those reasons made that present research aimed at analyzing the Malopolski horse breed population in Lublin region during past 30 years, in a context of social and economic transformations, as well as obligatory breeding directives.

MATERIAL AND METHODS

The study material was composed of documents from Polish Association of Horse Breeders (PZHK) in Warsaw. A created database contained information on the population of the Malopolski horses bred in Lublin region. The livestock heads number within 1976–2008 was analyzed during the study. The totals refer to subsequent decades (1976–1986, 1986–1996, and 1996–2006). The trends were then determined [Sasiński 1985] and annual rate of changes was calculated according to the formula:

$$Z = 100 \times (w_1 - w_2) / 0,5(w_1 + w_2),$$

where: Z – annual rate of changes,
 w_1, w_2 – subsequent analyzed years.

The annual rates of changes served for calculating their average values for each of distinguished periods. Some factors that contributed (or could contribute) to the change of the Malopolski breed population, were also analyzed, as well as the appearance of Polish noble half-bred breed (1980), political transformations after 1989, reorganization of Training Centers (ZT) in 1997, cancellation of horse breeding regional assignment (1998), administration reform (1999), and creating the program for genetic resources protection in 2005 were taken into considerations. In order to analyze the changes of Malopolski breed population as a reaction against the appearance of pksp breed and cancellation of cold-bred breed regional assignment, diagrams illustrating the populations of all above mentioned breeds, were presented.

RESULTS

A decrease of Malopolski livestock population number by 2214 (79.2%) was observed within studied period (Fig. 1). In 1976, up to 2794 horses of the breed were registered in Lublin region and written into the main and preliminary books, while in 2000, the population size dropped to only 776 horses and as little as 580 Malopolski horses were reported by PZHK eight years later. The changes of the livestock number were different in each of discussed periods. The first one (1976–1986) was characterized by the 1563 decrease at mean annual decrease rate of 8.2%. The second period (1986–1996) was distinguished by the weakest regress amounting to 241 animals with mean annual decrease rate of 2.2%. The third decade – despite of some activities undertaken to protect the Malopolski breed – revealed the decrease of another 295 animals at mean annual decrease rate of 3.5%, whereas subsequent sudden drop (by 115 animals) occurred in 2006–2008.

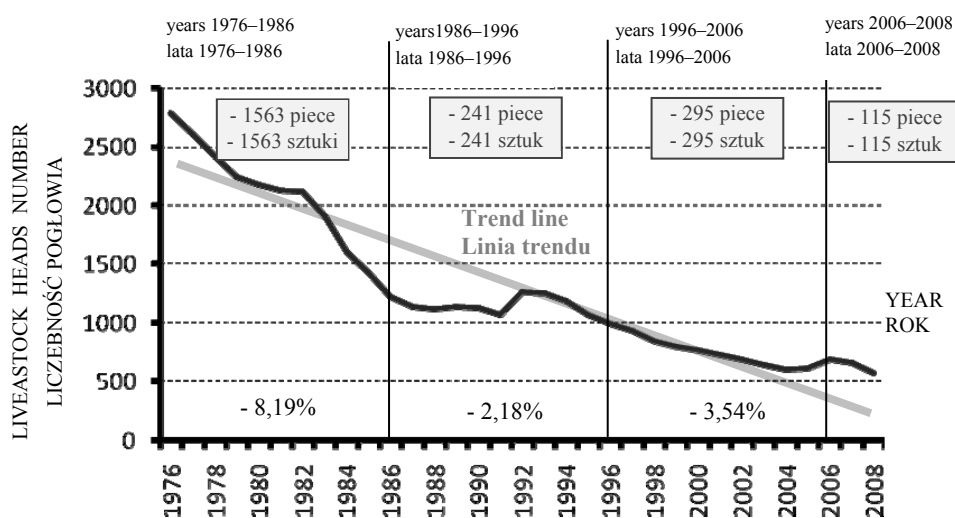


Fig. 1. Number of Malopolski breed livestock in Lublin region in 1976–2008

Ryc. 1. Liczebność pogłowia hodowlanych koni małopolskich na Lubelszczyźnie w latach 1976–2008

The political transformations (since 1989) and incorporating The Breeding Program for Malopolski Breed Genetic Resources Protection [Program hodowlany... 2004] had most probably the strongest positive impact on discussed horse breed population size (Fig. 2). In the case of the former, the development of a private breeding and horse recreation caused the increase of the Malopolski breed significance. Creating the preventing program made a short increase of the breed horse number in Lublin region; the population grew by 93 animals with subsequent decrease below initial level reaching 580 animals during two years of the program implementation. No prominent reaction towards analyzed factors was observed in other cases.

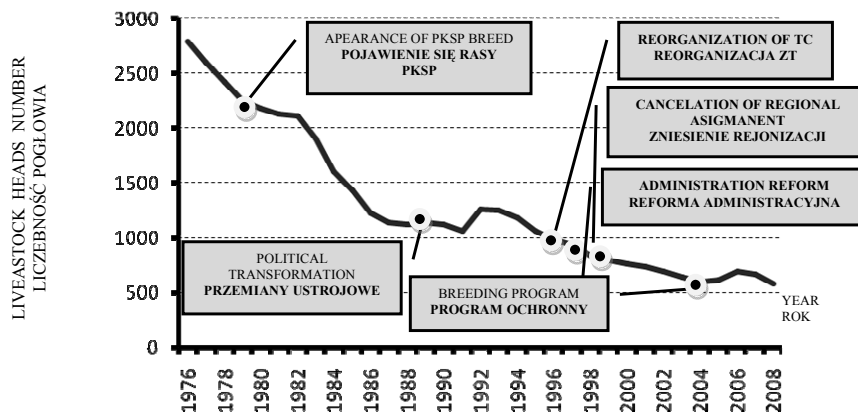


Fig. 2. Influence of some factors on changes in the Malopolski breed population in Lublin region
Ryc. 2. Wpływ niektórych czynników na zmiany liczebności hodowlanych koni małopolskich na Lubelszczyźnie

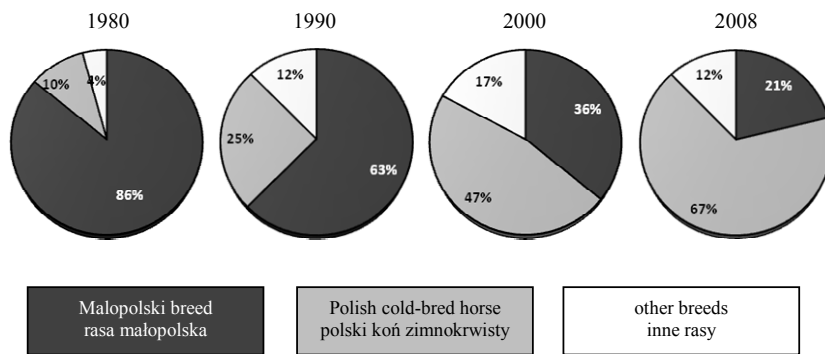


Fig. 3. Breed structure of breeding horses in Lublin region
Ryc. 3. Struktura rasowa koni hodowlanych na Lubelszczyźnie

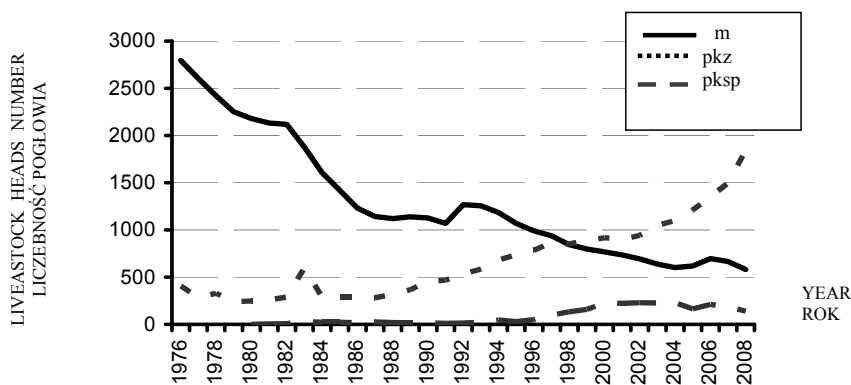


Fig. 4. Changes in populations of Malopolski breed on a background of selected breeds
Ryc. 4. Zmiany liczebności pogłowia hodowlanych koni małopolskich na tle wybranych ras

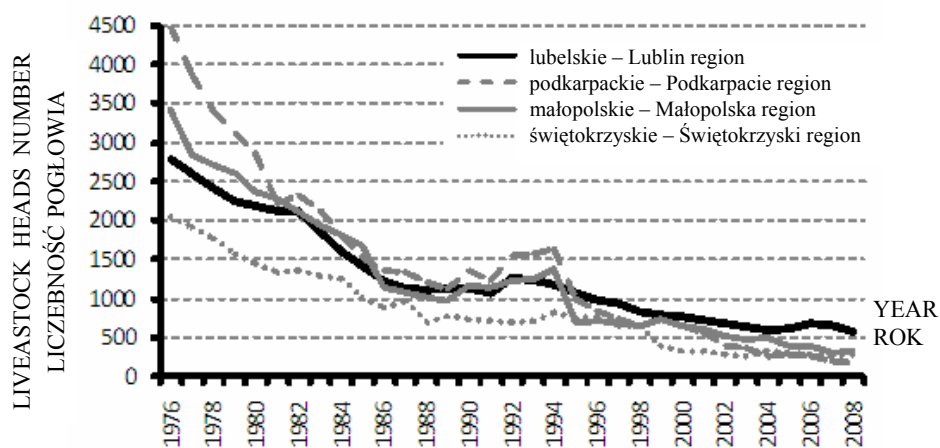
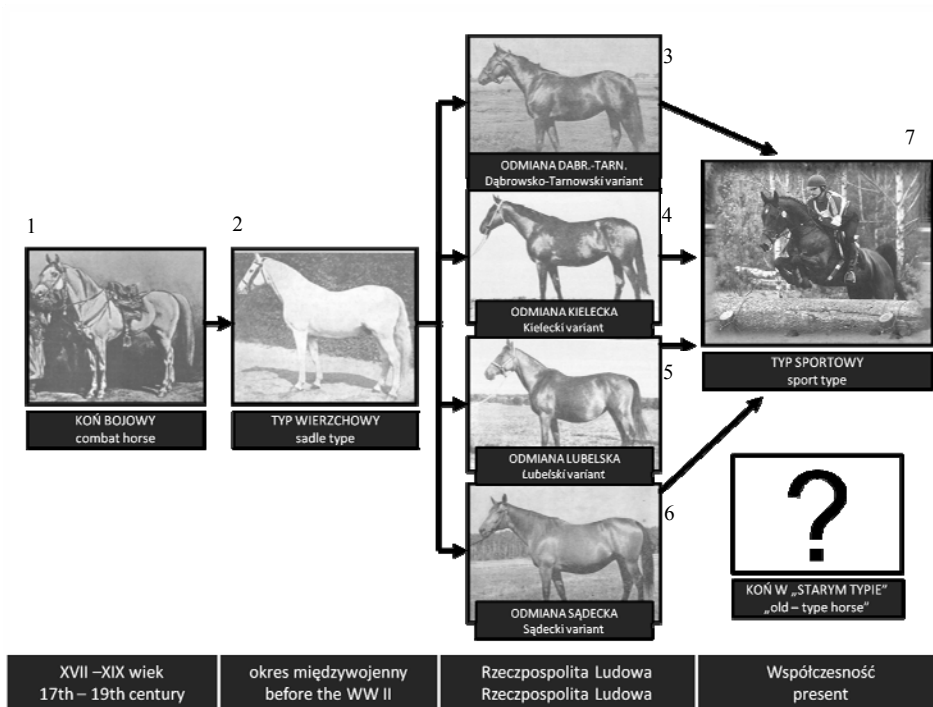


Fig. 5. Number of the Malopolski horses in regions where the breed formerly prevailed
Ryc. 5. Liczebność hodowlanych koni małopolskich na terenie byłego rejonu konia małopolskiego



Phot. – Fot. 1 – W. Pruski, Dwa wieki polskiej hodowli koni arabskich (1778-1978) i jej sukcesy na świecie.

PWRiL, Warszawa 1983

Phot. – Fot. 2–6 – W. Pruski, Hodowla koni, t. 1. PWRiL, Warszawa 1960

Phot. – Fot. 7 – T. Próchniak

Fig. 6. Evolution of the usable type of Malopolski breed

Ryc. 6. Ewolucja typu użytkowego koni małopolskich

Figure 3 presents the changes in breed structure of the Malopolski breed in Lublin region over subsequent decades. In 1980, the share of Malopolski breed made up 86.0%, cold-bred horses – 10.0%, while other breeds – 4.0%. That situation changed in following decades to the disadvantage of Malopolski horses resulting in the decrease of the breed population size to the level of 21.0% in 2008.

Figure 4 illustrates the population of Malopolski, pksp, and cold-bred horses. The livestock size amounted to about 2100 animals at the end of 70's with a slight decreasing tendency, while at a constant level of cold-bred horses number. Polish noble half-bred breed (pksp) appeared in Lublin region in 1980, and its population gradually increased in subsequent years reaching its maximum level in 2000 (436 horses). At the same time, the increase of cold-bred breed population at constant decrease of Malopolski livestock size was observed. In 1998, the number of cold-bred horses appeared to be higher than the Malopolski breed.

The situation of Malopolski breed was similar in all regions, where the Malopolski breed prevailed in the past: Malopolska, Podkarpackie, and Świętokrzyski (Fig. 5). It was interesting that no increase of interests in Malopolski horse breeding was recorded in the latter after 1989, which was characteristic for other regions.

The evolution of the usable type of Malopolski breed was also quoted (Fig. 6) to present the issue more clearly. In 17th century, there were saddle horses (combat) of oriental semi-bred type, while strong saddle horses produced for cavalry after the World War I. After the Second World War, the breed was represented by common-purpose type and occurred in four regional variants (Lubelski, Kielecki, Sądecki, and Dąbrowsko-Tarnowski) [Grabowski 1982]. At present, the breeding program worked out by PZHK [Program hodowli... 2005] obliges to produce the Malopolski breed for the purpose of various aspects of the saddle utilization.

DISCUSSION

Changes of Malopolski breed population in every particular period analyzed, appeared in different ways, although the most dramatic decrease was observed within the first one. Second period – during the political and economic transformations in Poland – was characterized by the least regress of the heads number. Malopolski horses found their most common application in widely developing horse-ride tourism, recreation, and organic farming [Janczarek and Zniszczyńska 2009]. Since 1996 till 2006 – despite of activities aiming at protecting the Malopolski breed – its population has been further decreasing.

It should be underlined that not every event, that would affect the Malopolski horses breeding, reflected in their population number. Thus, it can be concluded that the response of the breeding markets towards changes within Malopolski breed population is hardly predictable, because any outer stimulus is no doubt composed of a set of factors. Reorganization of Training Centers, cancellation of horse breeding regional assignment, and administration reform had no impact on the progressing decrease of Malopolski breed population in Lublin region, though their number slightly increased in several years from pksp breed appearance. It therefore seems that such situation could be a response of fanatic breeders of Malopolski horses to – as it is now known – excessive

competitiveness of the new breed. Another sudden drop of the Malopolski breed population was experienced during several last years, which should be a basis for discussing on possible organizational and breeding changes aiming at maintaining the breed. Among a spectrum of factors causing these changes, six ones that are highlighted below, are particularly important to be considered.

Appearance of Polish noble half-bred (pksp) breed in 1980 [www.pzhk.pl]. The pksp horses are the first Polish breed that was specialized for riding sports and became competitive for the Malopolski breed. Many breeders switched to breeding of typically sport horses that find their sales on contemporary markets.

Economic and political transformations after 1989. Polish conversion from central-control economy to a free-market system as well as still processing liquidation and privatization of national centers for horse breeding, became a stimulus for developing the private breeding farms. At present, a majority of valuable breeding material is in private breeders' hands and horses coming from these breedings are equal to those from former national centers. The political transformations made possible to arise centers that promote horse-riding, horse tourism and recreation, as well as many sport and recreation equestrian clubs were founded in Lublin region, where people employed in nearest cities can spend their free time horseback [Pietrzak *et al.* 2000]. The Malopolski horses found their application also in this form of activity, which contributed to at least partial reducing the rate of their population decrease. Therefore, the increase of horse number of considered breed was prominent after 1990. However, it does not apply to Świętokrzyskie region, which could result from a difficult financial situation of inhabitants.

From a point of view of a horse utility value control system, reorganization of Training Centers (ZT) should be mentioned, which consisted in dividing the use trial into saddle and draught, but it did not lead to the increase of the interests in Malopolski breed neither. However, negligible needs for draught horses and a competition on saddle horses market did not invoke any positive reaction of versatile Malopolski horse breeders. The reorganization resulted in a support for horse breeding specialized in producing the animals for purposes of equestrian sports, which is nowadays the main branch of the „equine industry” [Kaproń 2007].

Cancellation of cold-bred breed regional assignment is also worth of discussing. The horse breeding regionalization was in force between 1949 through 1988. Decrees of Agriculture Minister announced which breeds and types of horses could-bred be bred in particular country regions [Hroboni 1966]. The regional assignment aimed at protecting the uncontrolled crossbreeding of different horse breeds and types as well as promoting the regional horse breeds, breeding of which brought the best effects. Borders of regionalization areas changes several times: the range of Malopolski breed covering about 21% of Polish area, included present Lublin, Podkarpacie, Małopolska, and Świętokrzyskie regions. The obligatory regional assignment for noble breeds was cancelled in 1973, when the Malopolski breed (besides other noble horse breeds) was acknowledged as useful within the whole Poland. The horse breeding regionalization was finally cancelled in 1998 and at the same time, breeding of cold-bred horses was permitted in all country. Profitability of equine livestock production made that many breeders in Lublin region – despite of the lack of meaty horse use tradition – converted their activity profile. Year 1998 appeared to be a turning point, because the population of cold-bred horses size became more numerous than that of autochthonic Malopolski breed.

It could be supposed that the administration reform in 1999 should have had a considerable effects on the population of majority of horse breeds bred in Poland; however, that fact seems to be of a negligible importance for Malopolski horse. Furthermore, that period, popularity of cold-bred breeds increased, which could result from the fact that small fragment of Siedlce region, where mainly cold-bred horses were always maintained, was attached into the Lublin region after 1999 becoming its integral part.

Formulation of the breeding program for protecting the equine genetic resources should be considered as extremely important. A continuous drop of domestic animal breeds populations caused such programs founding along with EU subsidies for breeders [Program hodowlany... 2004]. Although observations of the changes in particular breeds populations allow for concluding that no doubt the program did contribute to popularization of primitive horse breeds (Hucul pony, Konik), the number of Malopolski horses still decreases [Szewczyk 2010]. The perspectives of UE subsidies arose only a short-term enthusiasm among breeders, which made a temporary, slight increase of the Malopolski breed population. However, horses covered by the protection program did not cope with the market's requirements, which produced some surplus of the breeding material and sudden drop of prices for them. The protection program became an alternative for breeders of slightly weaker breeding material [Kordalski 2008], which is in contradiction with the breed improvement assuming the compensation of losses due to maintenance of such horse type [Krupiński and Jezierski 2009]. Some breeders maintain Malopolski horses of exclusively saddle type that are selected mainly in a view of their usefulness for various equestrian disciplines. In opinion of experts, it is the only way to promote this breed on worldwide markets that needs specialized professional horses [Cuber 2007]. Moreover many breeders claim that the subsidies contributed to the decrease of general quality of breeding material by supporting small – often unprofessional – horse breeding centers.

Unspecified protection program, that was moreover a subject to often changes, is another problem related to discussed factor. Different conditions to register into the program makes breeders much difficulties and frequently invoke paradoxical situations; disputes seem to be endless, because they have no substantial backgrounds on the origin of registered horses – the Malopolski breed (mainly Anglo-Arabian half-bred), that is assumed to be a combination of many components, requires continuous improvement and it is not possible to perform breeding works within hermetic and gradually decreasing population [Pruski 1960]. Nowadays, only such horse breed is going to remain on markets that is able to „self-protection” and is competitive towards other breeds. Therefore, it is aimless to refuse these opportunities to the Malopolski horses that are characterized by unique utility and can be the basis of all exploitation equine features that are desired in our country.

When considering the „type” of the Malopolski breed, it is justifiable to put the question on the notion "the old-type Malopolski breed". This term is often associated with "The Breeding Program for Malopolski Breed Genetic Resources Protection" that assumes maintaining and promoting these horses. The „old-type horse” standard is not defined nor described at all hence nobody knows if it should be associated with combat horses in 17th century, cavalry horses before the WWII, or horses bred during the Polska Rzeczpospolita Ludowa. Defining the performance and directed improvement of Malopolski breed is also important.

According to The Breeding Program for Malopolski Breed Genetic Resources Protection [Program hodowlany... 2004] , „Malopolski horses should be used for saddle with their alternative utilization for draught, although they should play their particular roles in tourism and recreation, where the spectrum of performance forms is the widest including both horse-ride and drive teaching, walking ride, as well as several-days horse-back crosses. The Malopolski horses should find their application also in qualified sports, namely eventing and driving”. The Program for Malopolski Horse Breeding indicating the production of horses for different saddle applications is more unilateral, although less precise [Program hodowli... 2004]. Leading worldwide horse breeding centers had given up the attempts to breed an individual animal that would come true in such extreme performance forms. Strictly unilateral selection was undertaken in relevance to only two leading breeds: Dutch warm-bred and Hanoverian. Referring to the former, there are associations of jumping and breaking horses, for which separate performance tests are conducted. Considering Hanoverian breed, a sub-population of jumpers was distinguished, for which a specialized breeding program was set up and jumping tests of "recognizing" character for colts are conducted as well [Lewczuk 2008]. Therefore, the performance versatility is not preferred breed advantage at horses these days.

It can be said that breeding of Malopolski horses is somehow at the crossroads, thus taking into consideration below conclusions seems to be reasonable.

CONCLUSIONS

1. A gradual decrease of the Malopolski breed population occurred in analyzed period, which was separated only short increases, while reorganization – both political, social, and breeding – did not bring any positive changes in that situation.

2. It seems that contemporary Malopolski breed needs well organized and stable support in a form of a long-term program for genetic resources protection that would not be reduced only to a single subsidy that could not give any background for profitability of breeding and at the same time making particular difficulties in finding the markets. In other case, such formulation of the program for breeding the Malopolski horse being also a gene bank and meeting the present markets requirements, may be a solution.

3. It can be supposed that Malopolski breed cannot cope with these dangerous problems, which may lead to a narrowing of its population or even its progressive disappearance. Therefore, it seems that maintaining the Malopolski breed in its old „type”, that is at present unprofitable at all, will not develop within private breeding sector, while breeders preferring a modern and sporty type of Malopolski horse need at least a partial organizational-breeding support due to a considerable competitiveness of foreign saddle breeds.

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Streszczenie. Przeanalizowana została liczebność pogłowia hodowlanych koni małopolskich na Lubelszczyźnie w okresie od 1976 do 2008 r. Odnotowane zmiany charakteryzowano w aspekcie występujących w tym okresie zdarzeń, które wywarły na nie zasadniczy wpływ. Odnotowano stopniowy spadek liczebności koni małopolskich, który był przedzielony jedynie krótkotrwałymi jej wzrostami, zaś prowadzona reorganizacja – zarówno ustrojowa, jak i społeczna i hodowlana – nie przyniosła pozytywnych zmian. Chwilowy wzrost liczebności wiązał się z pojawieniem się rasy polski koń szlachetny półkrwi oraz objęciem koni małopolskich programem ochrony zasobów genetycznych, przy czym ostatni z wymienionych czynników nie przyniósł zamierzonych efektów, gdyż był krótkotrwały i stosunkowo niewielki. Można przypuszczać, iż utrzymanie konia małopolskiego w starym i obecnie zupełnie nieopłacalnym typie nie powiedzie się w sektorze hodowli prywatnej, zaś hodowcom preferującym nowoczesny sportowy jego typ potrzebne jest przynajmniej częściowe wsparcie ze względu na znaczną konkurencyjność zagranicznych ras koni wierzchowych.

Słowa kluczowe: hodowla, konie małopolskie, ochrona zasobów genetycznych