WHITEBACKS – THE NATIVE CATTLE OF THE POLESIE REGION

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Summary. Regarding the specificity of the conditions prevailing at Polesie the main aim of livestock rearing and breeding in this region should be production of high quality foods (milk, meat, eggs) based on the natural feed resources (so-called table food). Another and still important task for this region is the restitution and conservation of the genetic resource natural for the Polesie breeds and varieties of farm animal. The whitebacks, kept in the eastern part of Poland within the living memory, show some specific qualities, the main being their adaptation to the most popular cattle pedigree at Polesie. These characteristics appreciated so highly by farmers let maintain single animals of this breed at some small farms on the Bug river by now. In the 1990’s the Department of Cattle Breeding, University of Agriculture in Lublin established a project for this cattle restitution and its genetic resource protection and thanks to these efforts in 2003 the Ministry of Agriculture acknowledged whitebacks to be the Polish native cattle pedigree, which resulted in breeding registers opening. As a consequence, in 2004 FAO registered this cattle at the world list of breeds with genetic resource conserved. And so, there are no objections to the whitebacks re-breeding at their centuries-old grounds, that is the Polesie region.

Key words: Polesie Lubelskie, resources genetics animals, whitebacks

POLESIE SPECIFICITY AND QUALITIES

Polesie is a specific region as against the rest of this country. There are considerably more permanent grasslands, bogs and peat-lands, while less arable land. The present afforestation, corresponding with the Polish mean, has undisputable conditions for the potential growth due to substantial percentage of fallows and barren lands subjected to the natural plant succession. Attractiveness of the Polesie is also high due to numerous objects of special tourist-touring-cognitive qualities, among others the Poleski and Szczecin National Park, landscape parks, natural reserves, natural-didactic paths, natural monuments and peculiarities. Taking these facts into account, it should be assumed that this region is mainly predisposed to serve as a recreation and health resort, so the plant and animal production in the local farms should fall into this line and be appro-

Considering the specificity of the Polesie conditions, the dominant aim of the livestock raising and breeding in this region is expected to be production of high quality food products (milk, meat, eggs) based on natural feed resources (so called safe food). An equally important task for this region seems to be the restitution and protection of the genetic resources of the native Polesie breeds as well as other farm animals varieties, e.g. red cattle and whitebacks, kopezki podlaski horse, ostroucha and pulawska pig, green-legged hen, wrzasowka and Swiniarka sheep [Mocarski 1997, Malicki and Litwiniec 2002].

NATIVE BREEDS AS A CULTURAL HERITAGE ELEMENT

The English breeders say: „the power of nation is attested by a number of animal breeds accomplished”. They ensure maintenance of many valuable features like strong conformation, longevity, high fertility, easy parturitions, immunity to diseases, only few nutrient requirements, good adaptation to the local conditions, good quality of the products manufactured. At present this very last feature seems to be vital as the food obtained through the intensive breeding does not always appear to be safe and healthy. In Europe the local and regional products are in demand being healthy and the extensive local animal pedigrees provide such food [Nikowski 1904, Report 1935/36].

The works from the last decade [Sasinowski E. 1983, Wężyk and Cywa-Benko 1992, Nowacka 1993, Andrzejewski and Weigle 1994, FAO programme 1996, Litwiniec 2003a, b, Litwiniec et al. 2003] clearly emphasized the function of native breeds in the maintenance of biodiversity of the rural areas of high natural qualities (e.g. protected areas, park envelopes etc.) through the promotion of the local breeds grazing to protect habitats of great natural worth. A good example is The Grazing Animal Project commenced in 1998 in Great Britain and supported by The English Nature – a non-governmental organization engaged in nature protection. In numerous countries (including Poland) many organizations occupied with the nature conservation are the active partners in the animal native pedigrees protection, e.g. The Polish Ornithological Society, which supports (also financial aid) the breeding of Polish red cattle in the Narew river-basin, where the cattle is grazed at the meadows in the Narew overflow-arms that are valuable breeding grounds for birds.

One of the significant elements of the conservation is to use the native breeds in hard environmental conditions, e.g. poor pastures (mountain, wet areas) keeping traditional production systems. Return to the old production systems relinquished in the intensive animal breeding is likely to broaden the rural folklore and tourist values and as a result may be an important component of the economic development of the region, e.g. grey Hungarian cattle, buffaloes, Mangalica pigs at the Hungarian steppe. Many native breeds are characterized by great fertility and fecundity that can be used in the trade production as a really significant element (particularly females) at intercresses [Nowacka 1993, Litwiniec 2003b].

Many old pedigrees recognized even for centuries, are markedly inferior to the „modern breeds” with respect to numerous utility attributes, like milk quantity, daily body weight gain or earlier slaughter maturity. Yet, they have advantages over the new
breeds concerning milk and meat quality as well as frequently just a few needs concerning the climatic conditions or feed and their resistance to diseases. At the same time these old pedigrees constitute important cultural heritage of some region and a valuable "gene bank" [Goszczyński et al. 1994, Kośmicki 1998].

HISTORY OF WHITEBACKS

The name "Whitebacks" appeared as early as in Günther's work from 1853 (Remarks on the cattle breeding – Tarnów). Kiecki [1903] mentioned the term „powiślańskie” and „nadwiślańskie” cattle. In the account of the survey made in 1899 by the Agricultural Division to check the state of cattle breeding in the Poland Kingdom and elaborated by St. Chaniowski, in the description of the Polish cattle of the Warsaw Province we find a mention about the „powiślańskie” cattle. In the Agricultural Encyclopaedia issued in 1972 in Warsaw owing to the endeavours and outlay of the Ministry of Industry and Agriculture, T. Chlapiowski in his paper „The Cattle” writes: „on the Powiśle between the Prussian boundary and Warsaw you can meet a cattle breed reminding some żółwiska breed, milk cattle of splendid exterior” [Nikowski 1904, Pruski 1967, Liwiniuc 2003b]. The name nadwiślańskie cattle or nadwiślańskie whitebacks appear in the years 1903-1906 in the works by Nikowski [Liwiniuc et al. 2003].

It follows from Slowińska's work published in 1919 that whitebacks and żółwiska were also kept occasionally in Lithuania and The White Russia, where they constituted about 10% of stock [Pajak 1968].

WHITEBACKS AT POLESIE

The Reports of the Agricultural Chamber [1935/36] show that in 1936 at the Polesie region there existed a breeding stock of the local whiteback cattle, which made around 6% of stock heads. The proceedings of the conference on the breeding problems held in 1937 indicate that the Brest and Kobryn districts had a striking number of whitebacks recorded. This cattle was used subject to the rearing conditions. In the north-western part of Polesie, a drier one, they were used rather as milk cattle, whereas in the south-east, a boggy region, they grazed on the wet pastures and were reared for meat.

Alfred Sachs' master's thesis [1935] written at the Faculty of Agriculture, the University of Agriculture in Warsaw in 1935 mentions that in the Brest district in 1931 over 75 of cattle was maintained, over 66 sheep, over 34 horses, about 58 pigs and 300 goats. So the typical herbivorous animals prevailed among the farm animals. The author holds that 5.18 ha of arable land fell on one horse, then 3.83 ha total area (in that about 0.9 ha meadows and pastures/cow and 2.5 ha/sheep. Summing up, the author says that: assuming that one mature cow needs for the whole summer at average 0.5-1.0 ha depending on pasture fertility, we know that the number of pastures and meadows is absolutely sufficient, the more so as woods were not considered here and they are often used as pastures. Sheep, as not demanding animals, graze together with cows, often at wet pastures. They are mainly bred for sheepskin coats for local people or for sale in a town. (...) Pig breeding is situated particularly close to towns and is a good source of income for
small holders, where the pigs fed household refuse for a relatively short time can be well cashed."

This characterization shows explicitly that in Polesie over the interwar period there dominated an extensive system of herbivores raising (cattle and sheep) using mainly natural feed resources, in that wet pastures and forest meadows in summer, whereas in winter – hay, poor in mineral components coming from wet, acid peaty meadows. The cattle heads were predominated with cows (65% of total), calves aged up to 1 year (nearly 15%) and heifers – 2 and 3 years old (12%). There were many oxen – over 4 (in that 1.6% aged 3 years and over), that according to the author „are often used as beasts of draught, especially at the south-eastern part of the district, most similar to the wet Polesie, where horses are rare and oxen are used as draft animals. On the other hand, oxen fattened readily so farmers perceive them as a good income source“.

![Image of a cow](archives)

Phot. 1. Whitebacks cow – Polesie, 1935 year (archives)

A. Sachs' analysis of breed structure (performed on the basis of animals' hair color and exterior structure) of the cattle kept in the Brest district area exhibited that „various types of crosses (55%) resulting from merged breeds, mainly pied individuals of awkward structure“ prevailed in the stock heads. In the population of animals some were recognized as „typically purebred“. The first place was taken by whitebacks – 18.67%, in that blackales – 11.69% and redsides – 6.98% (Phot. 1).

At some communes in the southern part of the district, this breed percentage was substantially higher, e.g. Oltusz (34% of heads), Moloryta (30.4% of heads), Domuczewo (28.6%), Miedno (28.4%), Wielkoryte (27.9%). The second numerical force cattle breed maintained in the Brest district during the interwar period was lowland black-white (14.9%). A considerably lower number of the Polish red cattle was recorded (7.9%) and
a few animals of szwyc pedigree. The conference organized in Brest, February 1931 concerning the establishment of the breeding regions settled that the following districts: whole Kobryński, Brest (with two communes exclusion) and the communes Bruszenice and Woławał from the Drohiczyński district were assigned for the whitebacks breeding. These resolutions had been valid till the Second World War, while in the postwar Poland and Woławał from the Drohiczyński district, were assigned for the whitebacks breeding. These resolutions had been valid till the Second World War, while in postwar Poland the whitebacks did not find any approval as our native cattle breed as late as 2003.

WHITEBACKS FATE AFTER THE SECOND WORLD WAR

Pajak [1968] from was one of last who was interested in the whitebacks cattle during the 1960’s. In his handbook published in 1968 he states: “some number of this cattle still occurs in the Białystok region and Radom and Ostrow districts of the Kielce region, then in the northern part of Lublin region and north-eastern Warsaw region”. Sasimowski [1983] claims that “white backs in Poland were not appreciated or regionalized, yet in the central and north-eastern part of the country they are still found in the mass cattle heads”.

Photo 2. Whitebacks black cow, owner Department of Breeding Cattle, Agriculture University of Lublin (Połaniec 2003; photo: Przemysław Jankowski)

Fot. 2. Czarna-biała białogębiata, własność Katedry Hodowli Bydła AR w Lublinie

Quite recently people presumed the whitebacks bred in the fork of the Vistula and Bug rivers to have been died out in the 1970’s. During the studies on beef cattle performed by the Department of Cattle Breeding, AU in Lublin we detected a whiteback type of cows described in handbooks in the Połaniec area in 1999. From this time on in the
region on the Bug river, Polesie and on the Biebrza river there have been fixed and recorded over 100 individuals of cattle of this pedigree. On the evaluation of the listed animals' color it was stated that the majority (87.1%) was of black-white color (Phot. 2) and only a few individuals (12.9%) red-white (Phot. 3).

Phot. 3. Whitebacks red cow, owner Department of Breeding Cattle, Agriculture University of Lublin (Polesie 2003; phot. Przemysław Jankowski)

Phot. 3. Czerwono-biała bialogrubie, własność Katedry Hodowli Bydła AR w Lublinie

The present color structure of „the remainder” whitebacks stock differs significantly from the one presented by A. Saals for the interwar period at the Brest district. At that time the red sides made over 1/3 of whole whitebacks heads. Currently, however, the animals of this color are encountered occasionally. The red side color is connected (from the genetic point of view) with a recessive gene conditioning this red color and so at various types of random matings it was difficult to retain it.

The cytogenetic examinations [Grzybowski et al. 2003] demonstrated that in the studied whitebacks stock there were identified totally 193 alleles of DNA microsatellites. The number of alleles in locus was differentiated and ranged from 2 to (locus ILS005) to 13 alleles (locus TGLA53 and HEL9). There appeared 7.4 alleles in locus at average. As to allele number of DNA microsatellites, the examined stock of the whiteback cattle was characterized by great differentiation. This fact indicates that the remaining animals are distinguishable by high genetic variation and can constitute the initial base for the national project undertaken to restitute this breed as it is conspicuous by some distinct character. In the case of four analysed loci there were identified 8 microsatellite alleles whose size (in basic pairs) were not found within the intervals for literature data. The
following alleles: 109 bp and 115 bp in locus ETH3, 139 bp in locus ETH225, 114 bp
and 148 bp in locus INRA037 and 168 bp, 170 bp and 178 bp in locus TGLA122, are the
new alleles referring to the data enclosed in the world data base and concerning other
cattle breeds. It may be assumed on these grounds that these alleles are „characteristic”
of the whitebacks cattle breed.

REALIZATION OF BREED RESTITUTION PROJECT

These well-grounded facts afforded Litwińczuk [2003a] the possibilities for the
elaboration of „The breeding project for whiteback cattle genetic resource conservation”
in 2002, which was confirmed on 30.06.2003 by the Working Group for the Conserva-
tion of Cattle Genetic Resources acting for the Ministry of Agriculture. Getting ahead of
the Project execution the Department of Cattle Breeding, Agricultural University of
Lublin commenced purchasing the most valuable individuals for the parent stock located
in Polesie, in the Experimental Station AU in Ulbrusk, Włodawa district.

The following year was a historic moment for this pedigree restitution as on
20.01.2003 the Ministry of Agriculture and Rural Development passed a decision No
16/2003 about the opening and registration of the whiteback cattle managed by the
Department of Cattle Breeding, Agricultural University of Lublin. In summer 2003 the
next group of whitebacks was purchased for the parent stock, this time in the Biebrza
region, where about 50 animals of this breed were recorded and described. On
31.07.2003 the Minister of Agriculture and Rural Development published a decision No.
210/2003 on „The opening and registration of cows whiteback breed”, this register is
kept by the Department of Cattle Breeding, Agricultural University of Lublin. From
11.09.2003 in compliance with the Minister’s decision this breed has been included into
The Breeding Project of Genetic Resources Conservation, which means it is entitled to be
subsidized, among others, from the EU funds for agricultural-environmental projects.

In autumn 2003 the cattle of this breed was presented for the first time at the breeding
shows (regional and national), where it attracted great interest of both breeders and
the mass media. In January 2004 the whitebacks were enrolled into the world list of cattle
breeds managed by the FAO. The year 2004 marked the beginning of the actual intro-
duction of the whitebacks restitution project delivering 16 whiteback cows to chosen
breeders from the Polesie and Podlaskie regions. The project consists in the gratuitous
turning a cow over a farmer, who is in turn obliged to give a pregnant heifer to another
breeder. This is a way to propagate this breed in the region. The Project accepted and
being realized at present provides for the development of 2 breeding regions of this
cattle, i.e. at Polesie and in the Biebrza area with ultimate population of minimum 500
cows. At the agricultural structure of small-sized farms situated in the regions with the
natural environmental conditions unfavourable for the intensive agricultural production,
e.g. the protective zones (The Poleski, Biebrzański and Narwiński National Parks) the
whitebacks may be competitive for high-production breeds. Under such conditions the
intensive breeds are not likely to show their high utility qualities and as a consequence,
do not yield more profitability.
CONCLUSION

The whitebacks maintained at all times in the east Poland region characterized by specific qualities, mainly their adaptation to hard environmental conditions, used to be the most common cattle pedigrees in Polesie. These features appreciated highly by farmers let conserve only a few animals of this breed in small farms situated on the Bug river area up till now. The project of this breed restitution and its genetic resources conservation undertaken in the 1990’s by the Department of Cattle Breeding, Agricultural University of Lublin accomplished the acknowledgement of the whitebacks by the Ministry of Agriculture the Polish native cattle breed. Then the breeding registers were opened that provided the grounds for this breed enrollment into the world list of breeds with this genetic resources conserved by the FAO in 2003. Therefore, no objections exist to the whitebacks reintroduction into the breeding at their centuries-long grounds, that is Polesie.

REFERENCES


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BIALOGRZBIETY – RODZIME BYDŁO POLESIA

Streszczenie. Biorąc pod uwagę specyfikę warunków panujących w rejonie Polesia, głównym celem hodowli zwierząt domowych powinna być wysokiej jakości żywność (mięso, mleko, jajka), której podstawą są naturalne zasoby paszowe (tzw. bezpieczna żywność). Innym ważnym zadaniem dla tego regionu jest rezygnowanie i zachowanie ras zwierząt genetycznych naturalnych dla polskich rolników i odmian zasób gospodarskich. Bialogrzbiet, hodowany we wschodniej części Polski od niepamiętnych czasów, wykazuje pewne specyficzne cechy, głównie odpowiadające najpopularniejszej rasy na Polesiu. Cechy te, wyspecjalizowane przez rolników, pozwoliły na utrzymanie pojedynczych przedstawicieli tej rasy w małych gospodarstwach na Buglu aż do chwili obecnej.

Podjęty w latach dziewięćdziesiątych ubiegłego stulecia przez Katedrę Hodowli Bydła Akademii Rolniczej w Lublinie program rezygnowania i zachowania zwierząt genetycznych tego bydła doprowadził do uznania przez Ministerstwo Rolnictwa w 2003 roku bialogrziety jako polskiej rodzimiej rasy bydła i ustanowienia księg żródłowych, co było podstawą wpisania ich w 2004 roku przez FAO na światową listę ras podlegających ochronie ras genetycznych. Nie więc nie są w przyszłości, aby bialogrziety pozwoląły po kilkadziesięciu latach do hodowli na ich odtworzonych terenach, tzn. na Polesiu.

Słowa kluczowe: Polesie Lubelskie, rezygnowanie ras domowych zwierząt, bialogrziety