

Current status of the Shorthorn Cattle in Albania Brachycerous type

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Origin of the breed

Illyrian dwarf cattle was known since Ancient Time to its characteristics. **Aristotel**, in its work, admirably mentioned the cows of Epire and Illyria . According to his notes, those cows produced a lot of milk. The person, who milked cow, stood up, slightly bent because sitting down, one didn't reach to milk them. **Adametz** (meeting of A. Kuhneman, 1922) wrote "...Albanian cattle is the closest decedent with Balkan cattle, which lived in those regions thousands year ago.... Study of cattle on the North of Albania has great importance also because the Dalmatian cattle (Bosnia-Herzegovina) may have been crossing of this cattle on the North Balkan cattle". In 1908 **Adametz**, wrote "Cattle in Albania is alive direct offspring of Balkan cattle, which lived thousands years ago"

Prof. Ogzizek A. in his book "Local cow- Busha" wrote "...In Illyria a cow has always lived that according to craniological and genetic characteristics belongs to Brachycerous Type. During their displacement to Illyria and Epire regions, after VII-the century, the barbers of north brought by themselves, a short horn and small body size cow. Perhaps, up to date cow, which is in Serbia may be a crossing between these two types of short horn, both derived by Bos Brachycerous"

Falaszini, A (1943) is one of authors, who has made a more detailed description of cattle in Albania. According to this author "Cattle in Albania is originated from two branches:

- (i) shorthorn Illyric or Balkan cattle (with short horns) and
- (ii) longhorn podolic cattle (with big horns).

Albanian cattle has small size body, big head, broad forehead, long-face, big and bulging eyes, medium size ears with a lot of hairs inside inward back, short horns and thick in basal part, front and above inward bent and sometimes back. Nose, the tips of horns, circles of anus and vulva as well hoofs are black or darkish color.

Average milk yield is 300-400, but in some cows, up to 600-700 kg/ lactation. Length of lactation is 4- 5 months".

Cela, T. 1960 wrote " In Albania the native cattle is a animal of small sized body, live weight 190-205 kg, withers height 90-105 cm, milk yield 750-1000 kg, 4 % fat".

Some of the comparing morpho-biometric datas

One of the most early information about the average values of different morpho-biometric traits of local Albanian cattle has published by Kuhneman,A.(1922) and Tartari,T (1965) (Tab.no.1)

Average values of morpho- biometric traits – local cattle in Albania

Trait (cm)	Kuhneman, A. (1922)	Tartari,T.(1965)
Wither height	96,29	98,90
Lengh of corp	110,37	113,52
Length of head	40,46	39,54
Length of forehead	17,80	17,33
Breadth of forehead	13,53	13,15
Length of horns	16,70	18,44

As seen, during this period of about 40 years, these morpho-biometric indicators have not changed. Comparing these values to the other corresponding average values of these traits, published by different authors we can see that local cattle in Albania is very close to other cattle of Brachycerous craniological type, that are kept during the last centuries in different countries of Balkan Peninsula.

Trait (cm)	Ilyric Cattle				Red cattle of Metohia		Busha Croatia	Busha Bosnja	Rodopi cattle
	Red cattle	Dark -grey cow	Black cattle	Dark-grey cow of Monte Negro	Type I	Type II			
					105,1	108,0			
Length of corp	120	128,5	120,6	114	116,7	122,3	130,4	117,9	111,23
Length of head	43,6	46,5	42,9	41,8	39,1	41,5	42,1	39,9	39,72
Length of forehead	18,7	19,6	17,9	18,1	18,8	19,3	20,3	18,4	18,8
Length of horns	22	20,5	18	17,4	20,2	20,3	23,4	23,6	15,5

Albanian Shorthorn Cattle – Evaluation of current status

Crossing of local cattle in Albania with other breeds in order to improve milk production began about 30's of XX-th century. First crossings were carried out with Jersey breed. After 1950's, cattle in Albania have been crossed with exotic breeds such us: Jersey, Black and White cattle, Holstein Friesian, Simmental, Norwegian Red Cattle, Tarantaise etc, During 70-90's of last century, the tend of extending AI more and more was accompanied to the disappearance almost completely of local cattle. In particular, this process was intensive in lowland and hilly areas of country.

Process of collectivization also extended to mountainous areas of Albania was accompanied by the application of selection schemes aimed to improve milk production in cattle by crossing with exotic breeds. Nevertheless, this process was not carried out at the same intensity in different areas of countries. As a consequence, local cattle are present in marginal rural areas.

Expeditions for investigating and identifying this genetic fund, carried out during three last years, have evidenced the isolated population of local cattle. Comparing morpho-biometric, phenotypic and productive traits, adaptability and resistance to poor conditions of environment etc, with those described in literature for Albanian cattle on last centuries, the hypothesis that the cattle of these the isolated populations are decedents of Illyrian cattle, native cattle of Balkan is likely to be proved.

Prespa Cattle

In "Mason's World Dictionary of Livestock Breeds..." Prespa Cattle is not mentioned but a "Western Macedonian Cattle described as follows:

West Macedonian: (Greece)/dwarf/variation of Greek Shorthorn/cf. Macedonian Blue, Rodopi
 Besides information received by local farmers, for identifying this genetic fund, as a promotion served the fact that- several hints were received about the existence of "dwarf cattle" in Prespa region and according to personal information of Dr. Th. Schultze-Westrum "...in mountainous terren of Prespa region show the cows moved "like goats" .

Hypothesis: *The Prespa Cattle are one of the last (still living) representatives of Neolithic Cattle (Stone Age Cattle, according to Rutimeyer Torfrin.; Bos brachycerous palustris). These animals were found until the end of the 19th century in some remote Alpine areas*

Prespa cattle population is mainly occurred in Liqenas village, in the region of Big Prespa Lake.

Local cattle breed “Lopa e Prespes”



Size of population	520 - 580
- Bulls	8
- Cows	380 - 430
Trend of the population	decreasing
Risk status	Endangered
Prospects for the population	<i>In-situ</i> conservation

Phenotypic traits	Male	Female
Birth weight	18kg	15 kg
Body weight – adult animal	230-250 kg	120-150 kg
Wither height - adult animal	120-125 cm	95-105 cm
Milk production	Lak. I 850-900 kg Lakt III 950-1100 kg	
Average length of lactation	280 -310 days	
Age at first calving	800 – 850 days	
Weight at first calving	100- 110 kg	
% of fertility	80-85	



Production system

Extensiv. Animal are kept on pasture during all the day. On the night, they are housed in simple stable. Cows stay in stable only in very cold days of winter. In total 2-3 months. Concentrated feed (maize or bran) is especially used during the first 5 months of lactation. Selected bulls are used for natural matching, avoiding close inbreeding.

Need for action

In-situ conservation: First phase 32 farms, 53 cows which have formed “Breeding nucleus herd” The program anticipates the implementation of *In-situ* conservation in a population of 200-250 cows.

Objectives: (i) To prevent the reduction of population size and crossbreeding with the exotic breeds. (ii) To establish organizational structures for implementation of *In-situ* program and the selection of 10 lines of male reproducers (iii) To promote the local cattle “Lopa e Prespes” (iv) To increase knowledge of farmers

Lekbibaj Cattle – Ilyric dwarf cattle (Busha type)

Dr. Berthold TRAXLER in SAVE foundation magazine , autumn 2001 "...It would be worth to examine if the Busha is related to the Illyric Dwarf Cattle (in neighboring Albania). A small excursion on the subject : During two trips to Northern Albania which led from Kukes to Shkodra, I could find Illyric Dwarf Cattle in the same frequency as during my trip in 1996. Obviously no changes occurred with regard to cross-breeding with other breed because of the continuous isolation of Albania".

Tropoja Region, which lies in North East of Albania and confined from Kosova, is one of the most isolated areas of Albania. Management of small ruminants, mainly local breeds, is prevalent in this area. Although cattle have low performance, 1-2 cows are managed / family under the condition of extensive system, which is characteristic of small family farms. Due to poor conditions of environment and the lack of investments for implementing breeding programs, the cattle, which is chiefly managed in this area is local one. In order to identify this genetic fund, during the summer time of 2006-7's, investigative expeditions were carried out in Nikaj-Mertur (Lekbibaj), Salce, Brise, Curraj and Betash villages.

Ilyric Dwarf Cattle “Lopa e Lekbibajt”



Size of population	600-650
- Bulls	10
- Cows	500-550
Trend of the population	stable
Risk status	Endangered
Prospects for the population	<i>In-situ</i> conservation

Description

Short body, strong skeleton, narrow rump and well developed udder, very developed orbit of eyes, mantle colored reddish, brown or brown opened to grey. Short, thin and tip and back bent horns. Lips are big and extremities paled. Black colored vulva.

Phenotypic traits	Male	Female
Birth weight	18kg	13 kg
Body weight – adult animal	200-250 kg	105-115 kg
Wither height - adult animal	125-135 cm	90-100 cm
Milk production	Lak. I 700-800 kg Lakt III 1000-1200 kg	
Average length of lactation	280 -300 days	
Age at first calving	800 – 850 days	
Weight at first calving	105-115 kg	
% of fertility	80-85	

Production system

Cows are managed in small herds 1-2 heads /family, low input production system is characteristic. Cows are housed in simple stable built near home. From March to November pasture cows are mainly kept in pasture, using very small intake of concentrated feed to cows at first months of lactation. They are kept in stable during the wintertime. They are fed with hay and 2-3 kg maize or bran / day. Natural mating is applied. circling bulls every year.

Need for action

In-situ conservation: 30 farms in Salce, Plac, Brise, Curraj and Betash villages. First phase 55- 60 cows which have formed “Breeding nucleus herd” Objectives: (i) To increasing the population size (ii) To establish organizational structures for implementation of *In-situ* program, identification of animals and herdbook. (iii) To increase knowledge of farmers (iv) Capacity building to support the marketing

Perspective of the population

Until now, this cattle is only maintained due to farmer's interest. As a consequence, the main risk for the extinction of this genetic fund is only linked with the intensity of migration phenomenon of people to urban regions. The area, where this cattle continue to be managed is one of the most isolated one in Albania. As a consequence, the community of this area has lowest living standard. Under these conditions, *In situ* conservation program, which has begun to be applied, has as main component the promotion of mechanisms that will make possible realization of added value.

Lekbibaj cattle, can be considered as one of alive offspring of Ilyric Dwarf cattle. Evaluation of genetic relation with Busha cattle in Kosovo, Monte Negro and Macedonia will make possible to undertake joint actions in the framework of cross border programs for the conservation of biodiversity in farm animals.

Shorthorn Cattle – Busha type

About 200-250 cows “Busha type ” are identified in the mountain area of Gjergjan-Kukes and 150-200 cows “Busha” are identified in Cajes area. According to farmers of this areas, the tradition of management of this cow, as family one, goes back at the earlier time. The care for cow is almost the same to member of family. Cow is sheltered next to home. Cows are grazed during all the year, except very cold and snow months. Feeds used for winter time are spontaneous flora hay and very small intake of hay prepared by cultivated forages. Very small amount of the concentrated feed are only used one month before and 2-3 months after calving. There are seasonal calving. Animals are very resistant. There are no problems to health and medicaments are not almost used. Cows are matched by the bulls. As a rule, cows calve every year. Calf of third or fourth calving is kept to replacement. Milk yield is low, but enough to meet family needs. Calves are sold for slaughtering. They are rarely used for family consumption.

Estimation of some morpho-bimetrics of Busha cattle in two Albanian populations traits give in following table.



Morphology traits of Shorthorn Cattle – Busha type *

No.	Trait	unit	Busha - Gjegjan	Busha - Cajë
1	Birth weight	kg	14 - 16	16 - 18
2	Body weight (m)	“	210-260	230-250
3	Body weight (f)	“	150-200	180-210
4	Wither height (m)	cm	110-120	115-125
5	Wither height (f)	“	96-105	100-110
6	Milk yield	kg	1000 -1200	1400 -2000
7	Lactation length	days	270 - 300	270 - 300
8	Age at first calving	“	860 - 920	850-930
9	Age at first calving	kg	90-100	110-130

*Estimated data

The animals has fine, upward and forward curving horns. Its color is not uniform and depending on it there are several varieties: black, red, grey , tiger. It is an extremely small cattle. Albanian Busha is low productive, but fertile breed.

Illyric Dwarf Cattle –Lopa Gurgucka

In the Sinanaj's and Dhemblan's villages, in the mountain area of Kendrevices, Tepelena Region, a other local cattle breed have been identified. Their phenotypic profile and body size are indicators that support the hypothesis that this population may be classified in local cattle – *Illyric Dwarf Cattle*. Local synonym of this population is *Gurgucke(Flintstone)*. That expresses the fact that it is an animal grazing on rough ground with a lot of pebble. The cattle is distinguished to very strong hooves and agility in movement. The population size is about 120-150 cows. Cows are managed under the natural condition, almost in wild state. During all the day they are grazing. Ones have developed the reflection of coming back, staying in sheltering place (shack), roughly built shed, during all the night. Most cows are only kept to produce suckling calves. Cows are not milked and calves suck milk of their mothers during all the lactation. The bull is kept together with cows in herd during all the time. The farmer takes care of keeping bull only one year in his herd. As a rule, calves sold to meat are 16-18 months old and average live weight is 150 kg (m) and 130 kg (f)

Illyric Dwraf Cattle “Lopa Gurgucke”



Size of population	160-180
- Bulls	3
- Cows	100-120
Trend of the population	increasing
Risk status	Critical
Prospects for the population	<i>In-situ</i> conservation

Description

Short body, narrow rump, undeveloped udder, short legs, shin girth 13-14 cm. Medium size head, developed mandibles, small eyes to developed orbits one Colour of coat: Brawn - yellowish colored mantle, brown colored head. Short horns, bent front inwards or bent up-inwards, black colored short horns, white colored lip, whitened extremities

Phenotypic traits	Male	Female
Birth weight	14kg	13 kg
Body weight – adult animal	150-250 kg	140-160 kg
Wither height - adult animal	110-125 cm	90-100 cm
Milk production	Lak. I	600-800 kg
	Lakt III	1000-1200 kg
Average length of lactation	280 -320 days	
Age at first calving	800 – 850 days	
Weight at first calving	100-110 kg	
% of fertility	80-85	

Although cattle population is a small one, it is not risked to be disappeared. On the contrary, concern of farmers is increasing. That is a result of demands increased to veal from calves produced by this population. Meanwhile, the management of this breed under entirely natural conditions, half- wild, creates possibility of keeping calves of very low costs



Local cattle population *Illyric Dwarf Cattle* known with the name “Lopa Gurgucke” is one of the least alive relics of this native breed that in the past populated South Western Balkan.

More detailed, completed study using more scientific methods, assessment of polymorphism – at the molecular, DNA level , estimation of genetic distances from other cattle population are actions planned to be carried out. Organizing farmers that manage this genetic fund, promoting them to be involved into a program for the management of this fund, and the implementation of a project for in –situ conservation are part of Program and National Action Plan for FAnGR Conservation in Albania



Need for action

In-situ conservation: 3 farms in Sinanj and Dhemblani villages. First phase 120-140 cows which have formed “Breeding nucleus herd” Objectives: (i) To increasing the population size (ii) To establish organizational structures for implementation of *In-situ* program, identification of animals and herdbook. (iii) To increase knowledge of farmers (iv) Capacity building to support the marketing