

QUESTIONNAIRE RESULTS

ERFP Project

Current status of the Brachycerous cattle populations in the SE European countries and strategies for their sustainable conservation

Drago KOMPAN

University of Ljubljana

Dublin, august 24th , 2007

Participation countries

Country	Return questionnaire	Breed
Albania	<input checked="" type="checkbox"/>	Prespa cattle, Ilyric Dwarf Cattle
Bosnia and Herzegovina	<input checked="" type="checkbox"/>	Busha Gatacko
Bulgaria	<input checked="" type="checkbox"/>	Bulgarian brown cattle Bulgarian Rhodopean cattle Rhodopean shored-horned cattle
Croatia	<input checked="" type="checkbox"/>	Dalmatian grey cattle Busha
Greece	<input checked="" type="checkbox"/>	Brachykeratiki
FYR Macedonia	<input checked="" type="checkbox"/>	Busha
Serbia	<input checked="" type="checkbox"/>	Montafone and Busha
Slovenia	<input checked="" type="checkbox"/>	Cika cattle
Turkey	<input checked="" type="checkbox"/>	South Anatolian red Native Southern Yellow Eastern Anatolian red Anatolian black

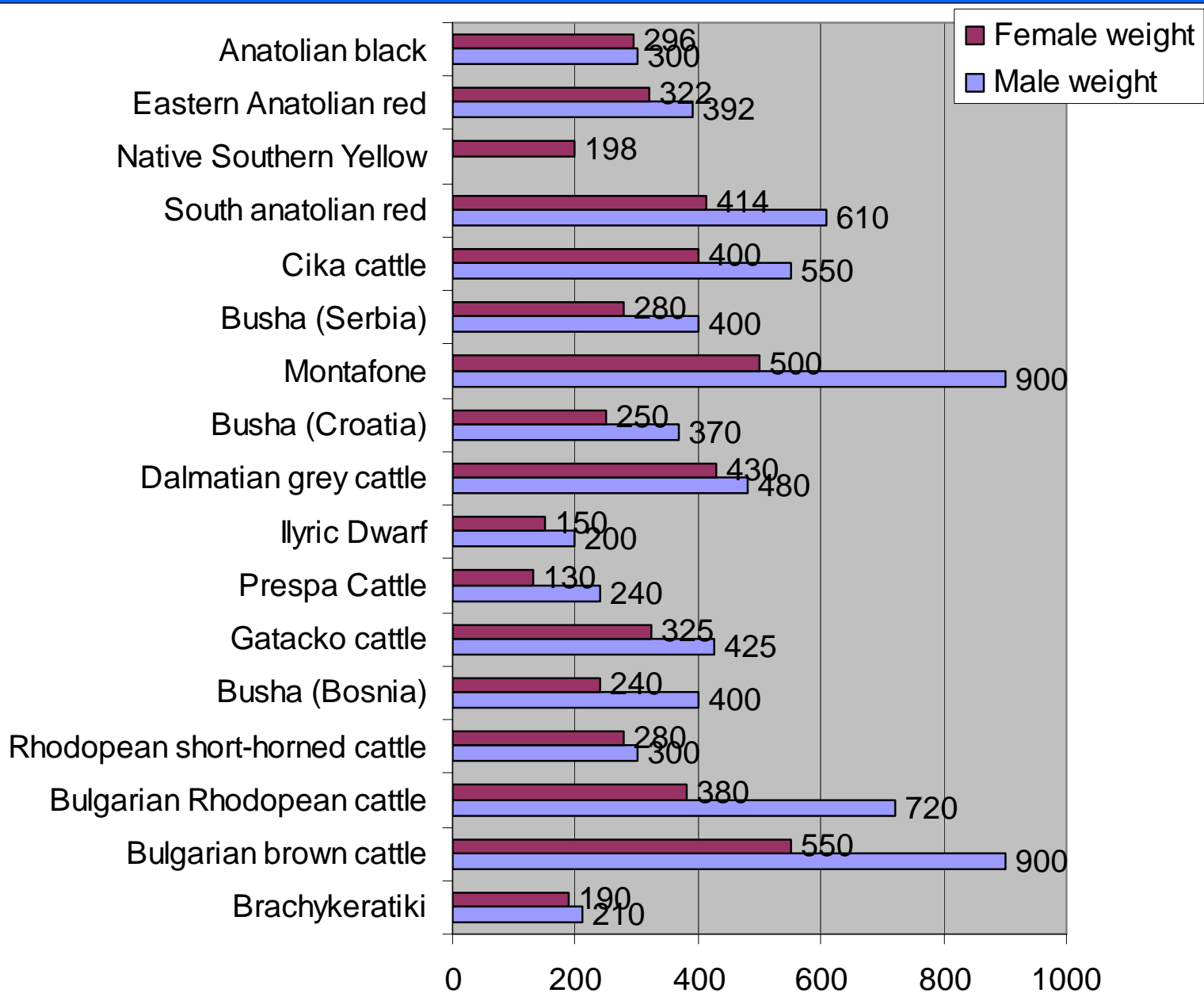
Basic data

Country	Breed	No. Animals	No. Female	No. Sires
Greece	Brachykeratiki	2150	1800	350
Bulgaria	Bulgarian brown cattle	44166	5234	68
	Bulgarian Rhodopean cattle	33187	1307	24
	Rhodopean short-horned cattle	247	151	5
Bosnia	Busha	100		
	Gatacko	100 ?		
Albania	Prespa Cattle	250	185	3
	Ilyric Dwarf Cattle	100-150		
Croatia	Dalmatian grey cattle	4000*		
	Busha	116	105	9
Serbia	Montafone	100	60	3
	Busha	350	240	20
Slovenia	Cika cattle	1350	540	27
FYROM	Busha	5000*		
Turkey's breed		No info	No info	No info

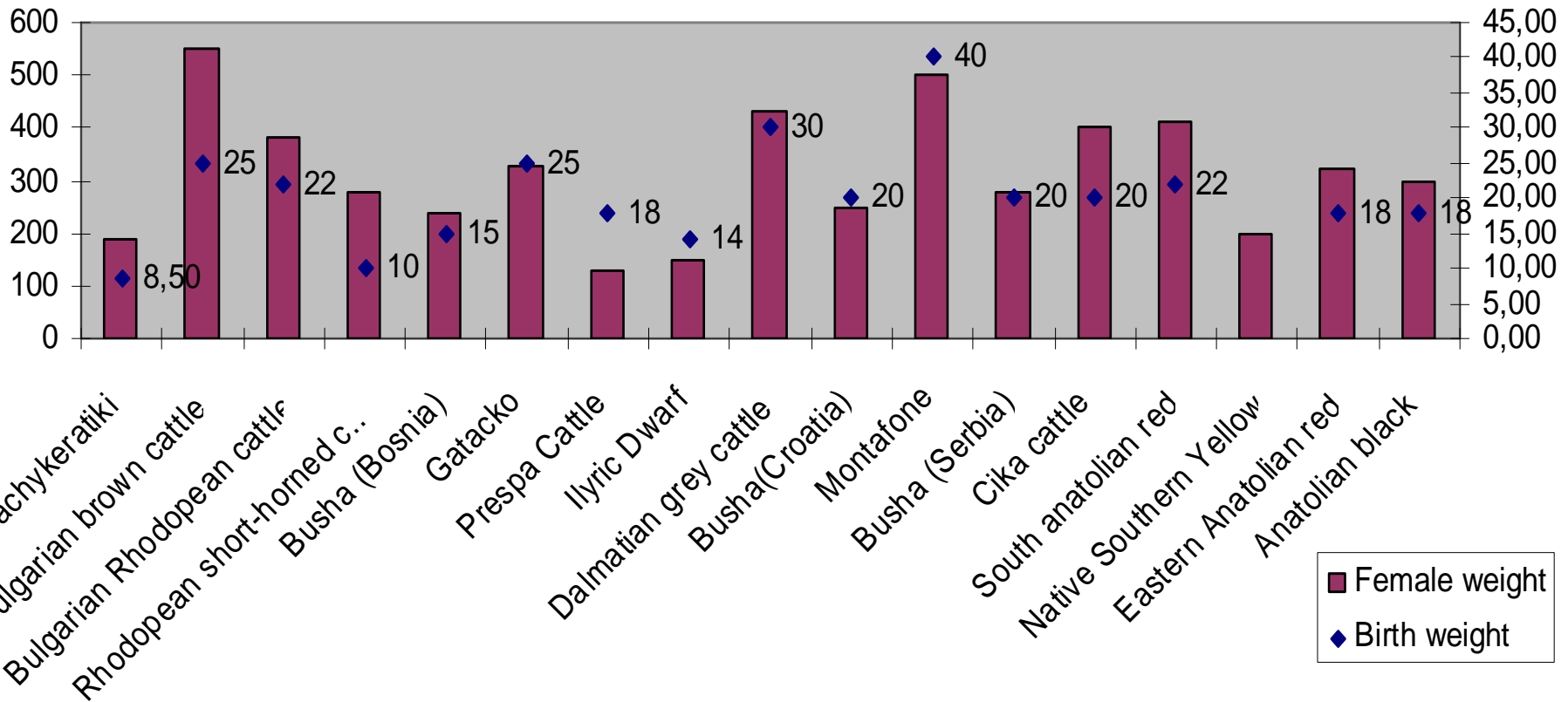
Basic data

Country	Breed	endargement	use	Gen. dist.	Pure or cross
Greece	Brachykeratiki	Not endang.	local	no	pure
Bulgaria	Bulgarian brown cattle	Not endang.	widely	no	pure
	Bulgarian Rhodopean	Not endang.	local	no	pure
	Rhodop. short horned	endangered	local	no	pure
Bosnia	Busha and Gatacko	Critical	Local	No	
Albania	Prespa Cattle and Ilyric Dwarf Cattle	critical	local	no	?
Croatia	Dalmatian grey cattle	at risk	local	no	
	Busha	critical	local	yes	pure
Serbia	Montafone	critical	local	no	
	Busha	critical	local	no	pure
Slovenia	Cika cattle	at risk	local	no	pure
FYROM	Busha	?	local	no	cross
Turkey	South Anatolian red	At risk	Local	No info	Pure
	Native Southern Yellow	At risk	Local	No info	No info
	Eastern Anatolian red	At risk	Local	No info	Cross, pure
	Anatolian black	At risk	widwly	No info	Cross, pure

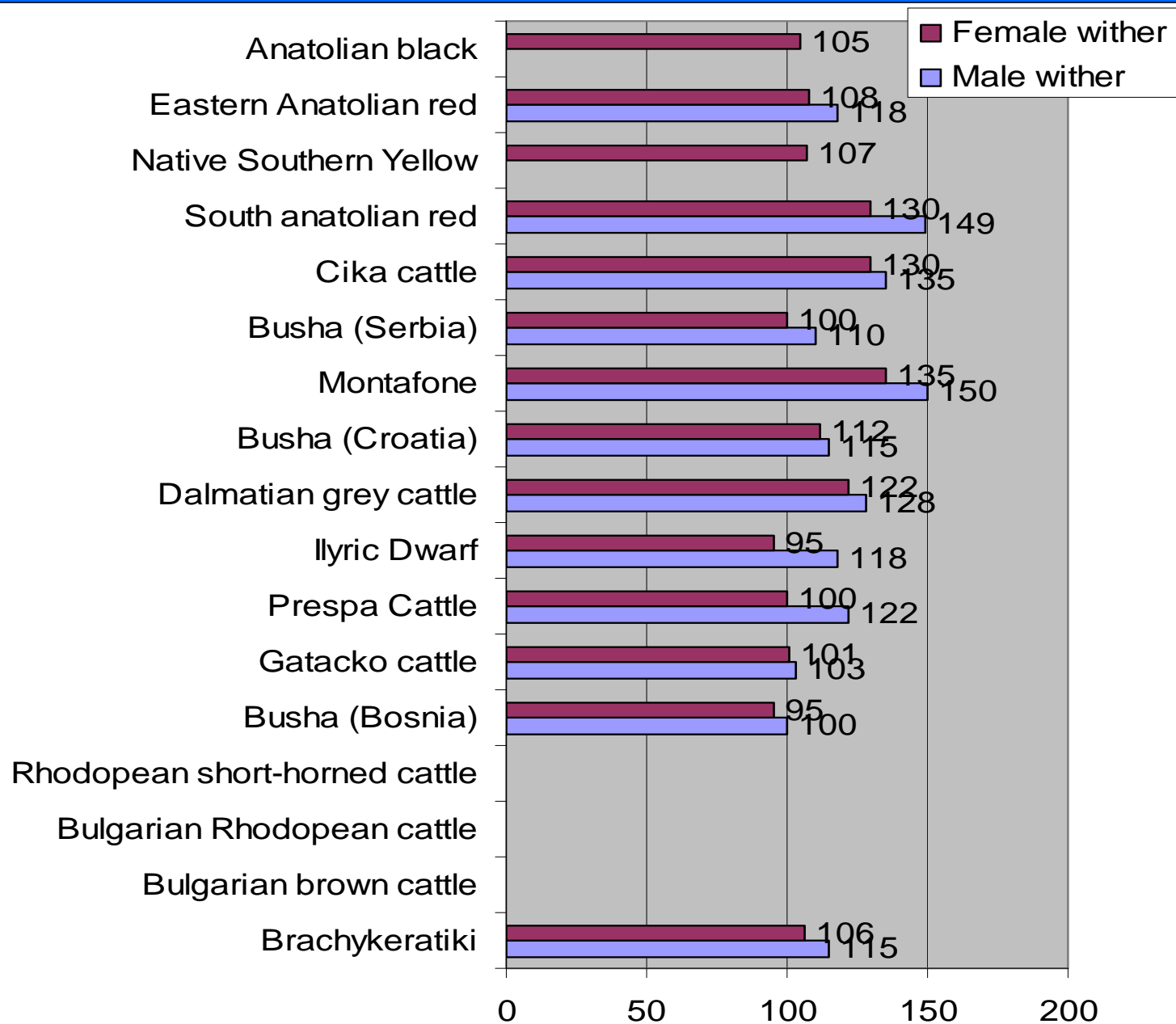
Morphology – body weight (kg)



Morphology-female weight and birth weight of calves (kg)



Morphology – wither (cm)



Production traits

Country	Breed	Milk Yield (kg)	Lactation (days)	Age at First Calving (month)
Greece	Brachykeratiki	Not milked	/	24
Bulgaria	Bulgarian brown	3041-8764	250-385	
	Bulgarian Rhodop.	2900-5900		
	Rhodop. shorthorned	800		
Bosnia	Busha	1000-2000	240	28-37
	Gatacko cattle	1600-2500	240	28-37
Albania	Prespa Cattle	900-1000*	280-310*	26-27*
	Ilyric Dwarf Cattle	600-800*	280-320*	28-30*
Croatia	Dalmatian grey cattle	2000-3000	280-320	24-28
	Busha	800-1500	250-300	25-30*
Serbia	Montafone	3800	305	
	Busha	1000	270	
Slovenia	Cika cattle	2500-3000*	300*	20-28*
FYROM	Busha			
Turkey	South anatolian red	1875	238	36
	Native Southern Yellow	633	188	No info
	Eastern Anatolian red	938	204	36
	Anatolian black	1061	257	31,5

Gene bank - *In situ*

Country	Breed	No. dams	No. sires
Greece	Brachykeratiki	1800	350
Bulgaria	Bulgarian brown cattle	44166	
	Bulgarian Rhodop. cattle	33187	
	Rhodop. short-horned	247	2
Bosnia	Busha		
	Gatacko cattle		
Albania	Prespa Cattle	150	3 (+1 jung)
	Ilyric Dwarf Cattle	130	5
Croatia	Dalmatian grey cattle	No herbook	No herdbook
	Busha	105	9
Serbia	Montafone		
	Busha	240	20
Slovenia	Cika cattle	300	
FYROM	Busha		
Turkey	South Anatolian red	93	34
	Native Southern Yellow	119	28
	Eastern Anatolian red	134	16
	Anatolian black	104	14

Gene bank - *Ex situ*

Country	Breed	No. dams	No. sires	Semen doses
Greece	Brachykeratiki			
Bulgaria	Bulgarian brown cattle		68	
	Bulgarian Rhodopean cattle		24	
	Rhodop. short-horned cattle		3	
Bosnia	Busha Gatacko cattle			
Albania	Prespa Cattle and Iliryc			
Croatia	Dalmatian grey cattle Busha		6	3600
Serbia	Montafone		3	
	Busha		1	5000
Slovenia	Cika cattle	30		3500
Macedonia	Busha			
Turkey	South Anatolian red	53	30	Non
	Native Southern Yellow	Non	Non	Non
	Eastern Anatolian red	84	39	Non
	Anatolian black	15	10	30 (experiment)

Gene bank - *Ex situ*

- 9 samples of tissue from Cika cattle
(Slovenia)
 - (TISSUE DEPOSITORY)

Data in international farm animal genetic resources databases

- **EFABIS: 11 breeds recorded**

(Brachikeratiki, Bulg. Brown cattle, Bulgarian rhodopean cattle, Rhodopean short-horned cattle, Montafone, Busha-Serbia, Cika cattle, Busha-Croatia, South Anatolian red-Turkey, Native Southern Yellow-Turkey, Eastern Anatolian red-Turkey, Anatolian black-Turkey)

- **OKLAHOMA BREEDS: 5 breeds recorded**

(Busha-Serbia, Cika cattle, South Anatolian red-Turkey, Eastern Anatolian red-Turkey, Anatolian black)

Breeding programme

Breed	Breeding prog.	Goals	Individual identification
Brachykeratiki	no		✓
Bulgarian brown cattle	✓ Approval ??	✓	✓
Bulgarian Rhodop. cattle	✓ Approval ??	✓	✓
Rhodop. short-horned	✓ Approval ??	✓	✓
Busha and Gatacko – Bosnia	No		No
Prespa Cattle	✓ 1.10.2006	✓	✓
Ilyric Dwarf Cattle	no		Just started
Dalmatian grey cattle	✓ 2007	✓	✓
Busha - Croatia	✓ 2007	✓	✓
Montafone	no		✓
Busha - Serbia	no	✓	✓
Cika cattle		✓	✓
Busha-FYROM	no		✓
South anatolian red	No		No
Native Southern Yellow	No		No
Eastern Anatolian red	No		No
Anatolian black	No		No

Breeding programme

Breed	Production measurement	Recording schemes
Brachykeratiki	no	
Bulgarian brown cattle	Growth and body conformation; milk production	Performance test at a station and on farm; progeny test; test in lab.
Bulgarian Rhodop. cattle	Milk production	Performance test at a station and on farm; progeny test; test in lab.
Rhodop. short-horned	no	no
Busha – Bosnia + Gatacko	No	no
Prespa Cattle and Iliryc	Just started	Not yet
Dalmatian grey cattle Busha - Croatia	no Fertility; Growth and body conformation; Milk production	no Performance test on farm; biological and genetic tests
Montafone	no	no
Busha - Serbia	no	Biological and genetic tests
Cika cattle	Fertility; Milk production	Performance test at a station and on farm; progeny test; biological and gen. tests; tests in lab.
Busha-FYROM	no	no
Turkey's breeds	No	No

Breeding program

Breed	Exterior	Breeding Value (BV)
Brachykeratiki	no	no
Bulgarian brown cattle	✓	✓
Bulgarian Rhodopean cattle	✓	no
Rhodop. short-horned cattle	no	no
Busha – Bosnia and Gatacko	no	no
Prespa Cattle Ilyric Dwarf Cattle	no	Not yet
Dalmatian grey cattle	no	no
Busha - Croatia	✓	no
Montafone	✓	no
Busha - Serbia	✓	no
Cika cattle	✓	✓
Busha-Macedonia	no	no
Turkey's breeds	no	no

Breeding program

Breed	Artificial Insemination	Ex-situ reserve
Brachykeratiki	no	no
Bulgarian brown cattle	✓	semen
Bulgarian Rhodopean cattle	✓	semen
Rhodop. short-horned cattle	✓	semen
Busha and Gatacko- Bosnia	no	no
Prespa Cattle	No	No
Ilyric Dwarf Cattle	no	no
Dalmatian grey cattle	no	no
Busha - Croatia	✓	semen
Montafone	✓	semen
Busha - Serbia	no	semen
Cika cattle	✓	semen
Busha-Macedonia	no	no
Turkey's breeds	no	no

Breeding program

- Embryo transfer

is not in practical use in any country

The most frequent special characteristics

- Adaptability to the local extensive conditions
- Longevity
- Disease resistance

The most frequent special adaptability

- Adapted to environment in high mountains
- Adapted to harsh conditions (low quality vegetation and feeds)
- Adapted to climatic conditions
- Adapted to extensive breeding

Conservation: short-terms

- Monitoring, subsidy of method in- and ex situ
- Support of the reputation of breeders
- Establishment of a breeding organization
- Financial support for keeping pure-breed bulls
- Introduction of a herdbook
- Establish nucleus herds
- Activate the breeding scheme
- Development of sustainable programs, economical exploitation
- Reproduction of the selected animals
- Breed restoration on the basis of origin assessment with genetic molecular methods
- Identification and registration of farmers

Conservation: long-terms

- Monitoring, subsidy of method in- and ex situ, cryoconservation, promotion of typical products
- Development of sustainable programs, economical exploitation
- Using A.I. and semen of licensed bulls
- Breed restoration on the basis of origin assessment with genetic molecular methods
- Sustainable on farm conservation programme

Production system

Breed	Main use	Reared as	Housing	Pasture
Brachykeratiki	Meat	suckler	Loose	✓
Bulgarian brown cattle	Dual		Tied-up	✓
Bulgarian Rhod. cattle	Milk		Tied-up	✓
Rhodop. short-horned	Dual		Loose	✓
Busha – Bosnia + Gatacko	Dual	Dairy,suckler	Tied-up	✓
Prespa Cattle	Milk	Dairy	Loose	✓
Ilyric Dwarf Cattle	dual	dairy	loose	✓
Dalmatian grey cattle	Dual	Dairy,suckler	Tied-up and	✓
Busha - Croatia	dual	Dairy,suckler	loose	✓
Montafone	Dual			✓
Busha - Serbia	Dual	Suckler		✓
Cika cattle	Dual	Dairy,suckler	Tied-up	✓
Busha-Macedonia	dual	suckler	loose	No?
South anatolian red	Dual	Dairy	Loose	✓
Native Southern Yellow	Dual	Dairy	Loose	✓
Eastern Anatolian red	Dual, draft	Dairy	Loose	✓
Anatolian black	dual	dairy	loose	✓

Production system

Breed	Feed	Feed during grazing	Place of slaughter
Brachykeratiki	Forage +	Grazing +	Slaughter h.
Bulgarian brown cattle	Forage +	Grazing +	Slaughter h.
Bulgarian Rhodopean cattle	Forage +	Grazing +	Slaughter h.
Rhodop. short-horned cattle	Forage	Only grazing	Slaughter h.
Busha and Gatacko - Bosnia	Forage	Only grazing	Slaughter h.+
Prespa Cattle and Iliryc	Forage	Only grazing	On farm
Dalmatian grey cattle	Forage +	Only grazing	Slaughter h.
Busha - Croatia	Forage	Only grazing	Slaughter h.
Montafone	Forage +		
Busha - Serbia	Forage +	Only grazing	On farm
Cika cattle	Forage +	Only grazing	Slaughter h.
Busha-Macedonia	Forage	Only grazing	
Turkey's breeds	Forage	Only grazing	Slaughter h.

Typical products

- **Cheese** (Prespa cattle-Albania, Busha-Croatia, Dalmatian grey cattle-Croatia, Cika cattle-Slovenia, Bosnia –busha, Serbian busha)
- **Yoghurt** (Prespa cattle-Albania)
- **Dry meat** (Busha-Bosnia)

Milk, beef meat

**Thank you
for your attention !**

