Current status of the local brachycerous cattle breeds in Croatia

Ivanković, A., Caput, P., Ramljak, J.

Faculty of Agriculture, University of Zagreb
Department of Animal Production and Technology
Introduction

- middle of the twentieth century - cattle production in Croatia was based on brachycerous and podolian cattle breeds

- till the Second World War - brachycerous cattle participate with more than half of total cattle population in Croatia ≈ 2 million cows
beginning of XX. century – change in global animal production strategy

key point for change breed structure

- Breeders need more productive animals
- Selection in “Pure breed” or “Crossing”

start selection improvement of Busha

the law from the year 1908. regulate merging Busha with Oberintal cattle because the opinions were “similar crossing with similar”

in west continental area of Croatia, for selection improvement production traits was used Pinzgauer and latter was included Simmental breed
Actual state of Busha population in Croatia

- Status of critically endangered - list of autochthonous breeds
- Plan of preservation of Busha
  - Inventarisation
  - Breed standard
  - Establish Herd-book
  - 2007 - 125 cows + 16 bulls

On the area of Lika and Dalmatia few nucleus herds were establish
The sperm from several ‘busak’ bulls were collected (a.i.)
Breed standard of Busha

- small, resistant cattle
- wither height (103-108 cm)
- firm legs and hoofs
- small head
- long neck
- chest is small and quite deep
- pelvis is short,
- mucosa which can be seen and hoofs are darker color (black)
Breed standard of Busha

- one colored cattle with variations
  - white color
  - different tones of red and brown
  - almost completely black color
  - tigress colored
- bright *eely stripe* line on the back
- skin is elastic and soft
Breed standard of Busha

- udder is poorly developed,
- short lactation (50 to 150 days) – 600 to 1400 litters
- bulls usually have one half of lower part of testis in black colour
- body weight of calf is small (15 to 18 kg) - easy calving
Actual state of population of Grey Dalmatian cattle

- Gray Dalmatian cattle in Croatia was established by continuous breeding work on autochthonous genome of Busha (Bos brachyceros)

- beginning of XX century - improvement of brachycerous cattle type (Busha) with Austrian Tiroler Grauvieh
Actual state of population of Grey Dalmatian cattle

- 1956. - Center for Artificial Insemination was established which provides semen of Gray bulls on the Dalmatian area

- Herd-book of Gray bulls (1947.)
  - 119 bulls (24 bulls from Austria, 95 domestic bulls) was introduced

- Present number (estimate)
  - 3 000 - 5 000 individuals
Grey Dalmatian cattle

- medium body size
- relatively low production
- milk yield - 2 500 to 3 000 kg/lactation
Direction in developing brachycerous cattle type in Croatia

- Conservation programs of Busha are active
- Busha - include in subvention system
- Actual *in situ* conservation model includes several nucleus herds and several minor Busha breeders
- Stimulation for reanimation of Busha breed
  - semen from several bulls which are used in artificial insemination
  - New national breeding program gives directions to consolidation and reaffirmation Busha
Direction in developing brachycerous cattle type in Croatia

- Dalmatian Grey cattle - not on the list of autochthonous cattle breeds

- New national breeding program (2007) supports making breeding programs for Dalmatian Grey cattle

- New reactivating of Herd-book of Grey Dalmatian cattle

- Dalmatian Grey cattle can be useful in less intensive programs of milk and meat production
Reproductive active bulls
(natural admission, a.i.)

Central herd-book A
(individuals in conservation program)
exterior, family tree, production traits

Central herd-book B
(individuals in program of gene introduction)
unsuitable exterior and genotype

Fathers of bulls

Bulls mother selection

Bulls mother

Male calves
(pointed fertilization)

Performance field test

Young bulls
(bulls above-average)

Positive tested bulls
(a.i., natural admission)

Originality
Chosen production traits
Exterior

Development indices and pedigree
Exterior
Reproduction traits

Exterior
Fitness
Chosen production traits

Direction in developing brachycerous cattle type in Croatia
Direction in developing brachycerous cattle type in Croatia

- Breeders who have valid autochthonous cattle primary are motivated with government subventions

- Breeding strategy is consists of monitoring of habit with little active progress inside breeding situation

- Corrections of conservation strategy AnGR in Croatia
Direction in developing *brachycerous* cattle type in Croatia

- suggestion:
  - state subsides from government should be focused on exact number of individuals and on reproductive active individuals
  - establish Professional Services which lead conservation programs (Croatian Livestock Center)
  - Economic exploitations programs
Thank you for attention