

SUMMARY OF THE THESIS

TECHNOLOGY RESEARCH OF USE AND IMPROVEMENT IN RAISING BUFFALOES AROUND TRANSYLVANIA AREA

This work likes to be a presentation of buffaloes status in our country, seen by our experts in this field. Lately the number of animal decreased constantly , because of the structure movements and particularly by passing animals from state property to individuals and also because of bad climaterical conditions or technological issues.

In the world and mostly in states with market economy from Europe for ensuring high average per capita consumption of animal products, numbers of animals increases a lot so that breeding grounds guidelines , improving technologies and using animals or their products are strongly motivated.

Raising buffaloes in Romania is a traditional activity with duble direction, milk-meat, but this species are used also for traction in some agrarian and transport activities. Status of buffaloes and their areas of growth are discussed in Chapter one of this work. In 2009, they found that from the number of existing national buffaloes respectively 24.246 units , 22.188 units, meaning 91.5 % , are raised and exploited in counties from center or north-west of Transilvania, mostly in Salaj (20,8 %), Cluj (16,8 %), Maramures (11,2%), Braşov (10,4%), Bihor (9,6%), Satu Mare (8,5%), Arad (5,2%), Sibiu (4,9%) and Bistriţa (4,1%). In Romania we also have a unit for research and development in raising buffaloes field named SDCB Sercaia in Brasov county where in this moment are 275 buffaloes, 114 of them being female buffaloes.

Specific behavioral aspects of buffaloes, morphophysiological and their ecology are discussed in Chapter II. Knowledge of the specific behavior

(ethologically) buffaloes the premise is possible to create optimal conditions for maintenance, feeding and care, to ensure the best use of their productive potential. Stress must not exceed physiological limits of adaptation of animal body and create a comfort technology, stress agencies should be avoided : cold, heat, radiation, strong air currents, poor feeding, congestion, noise, noxious gases and more.

State of research on the origin, phenotype, genotype, improvement and operation of buffaloes is subject in chapter III of the work. Buffaloes raised in Romania, being adapted to specific natural environment, with a population large enough (~ 230 000 heads), with morphological characters and their productive and reproductive isolation increased, were approved in 1987 as a race, called the race The Romanian Buffaloes, then continuing evolution from a genetical structure part.

Chapter IV highlights the purpose and location of research, biological material and working methodology. The theme chosen aims at achieving the following objectives:

- herd of buffaloes situation analysis by gender, age and growth areas - green growth technology study (nutritional requirements, specific rations, character behavior, maintenance, milking, fattening, etc..)

- improve grasping buffaloes of growth area;

- analysis of technology to exploit the SCPCB Sercaia buffaloes

- active population study of morphological characters within SCPCB Sercaia

- research on reproduction skills and mechanical milking buffaloes;

- research on the character selection for milk production and also genetic determinism and phenotypic correlations for milk production characteristics

- biological and productive longevity of buffaloes,
- analysis of the physico-chemical, organoleptic and nutritional buffaloes milk.

There are estimated the following results:

- forecasting the evolution of staff in Romania
- development of optimized mining technology, environmental, buffaloes
- to develop parameters in order to improve the local buffaloes- drafting this plan genetic resources conservation, endangered species.

The research was focused on the population of buffaloes in the SCPCB Sercaia also being used the information in ANARZ and farm records. The data were used as such or, where appropriate, have been processed. As a methodology of work , for each objective individually specific methods were used, as follows:

- to analyze animal herds : data from census, survey area, information from ANARZ etc.

- for the study of morphological characters: biometrics, gravimetry, corporeal signs used in specific mathematical relationships, the method points

- for ecological character, breeding and production: data collection, statistical and mathematical adjustment and processing of data

- operating environmental technology: analyze in detail the specific processes of maintenance, feeding, milking, etc..

- to know the characteristics of milk: the analysis of the percentage of fat, protein etc.,

- for improvement: correlation parameter selection for improvement plans .

Analysis of maintenance technology buffaloes in Brasov County is the Fifth Chapter theme. Technical solutions buffaloes maintenance must meet the requirements of comfort and hygiene of their discipline to impose appropriate conditions for maintenance of behavior-operation and facilitate the conduct of all manual or mechanical processes that are performed related to work, feeding, milking, etc. . Buffaloes feeding technology growth in Transilvania area reveals the fact that female buffaloes have some particularities comparing with cows.

For the analysis of milking technology buffaloes in Brasov County (Chapter VII), it was found that buffalo eliminates milk harder, especially in the presence of calf . Following observations and results of research conducted following conclusion: buffaloes can be used to milking machine, especially if it is selected and this species after the udder for milking production and mechanical skills and adopted the best technology growth. For the mechanical milking to have high performances it is necessary to ensure the optimal conditions for yielding milk.

The study of phenotypic characters buffaloes, subject detail in Chapter VIII, examines both general and udder morphology and breeding characters. Values found in body size of the population of buffaloes from Fagaras area is characterized by a large, 132 cm, height at rump below the waist by 1 cm, length reduced trunk, 135 cm, chest depth and width reduced to 66 cm and 48 cm respectively, and chest area whistle had high values of 203 and 22 cm.

Buffaloes, as otherwise the species, breed, have certain features in process improvement, to be known and controlled, so that people develop the requisite human. Chapter IX deals with the study of buffaloes genotypic characteristics with respect to selection and heritability of the main

characters genotypic correlations between them. Correlations between characters are levers that can be directed evolution of race, of a line, in order to get usefull results as fast as possible.

Characteristics of buffalo milk, look in chapter tenth of the work, have a special importance, because the animal and human body, milk is a food almost completely. It contains a wide range of nutrients and proportions are in different states in the liquid phase of secretion. Issues are dealt with organoleptic characteristics (color, taste, smell, consistency), the physical properties of milk (density, acidity, freezing point, surface tension, electrical conductivity), and its chemical and microbiological composition.

Improvement program of buffaloes updated, the subject discussed in Chapter XI of the thesis presented is one that gives hope to species in its future development in our country. Do not forget, Romania has no milk quota imposed for buffalo milk, so here's an area that should fully exploit it.

In these circumstances, we believe that a better organization of buffalo growth and operation, ensuring reproductive cycles using artificial insemination and breeding performance of official control expansion in this species, which is an ecological alternative Romanian livestock. In this direction, a particular concern should be given to improving buffaloes objectives in our country, aimed at obtaining a biological material with high productive performance, both for the production of milk and meat production.

Practical application of basic links in this buffaloes species breeding program will create material and technical and methodological assumptions that each generation to be superior in terms of genetic potential and previous generations while ensuring a continuous genetic progress.

The last thing we want to highlight is a closer specialists concern towards this species, on all levels, because buffaloes in the current situation of our country, has a real economic potential, socially as they can capitalize on Romanian traditions, default eco-tourism, bio diversity and everything related to the environmental aspects of farming.