



## BushaLive Kick-off meeting

*Sarajevo 18-19th April 2013*

### REPORT AND CONCLUSIONS



#### INTRODUCTION:

The BushaLive project will achieve the determination of different types and strains of Busha Cattle in the Balkans through collection of existing information from projects and meetings e.g. of ERFP and SAVE, phenotypical characterization of different types and strains and molecular genetic analysis including the estimation of the purity of distinct subpopulations. There is also a focus on the sustainable use of Busha cattle. A comprehensive overview in the field will be made including the collection of information about the situation, production, conservation and market possibilities of Busha cattle. Furthermore discussion and determination of best practice methods will take place. Finally, and importantly, the development of a crossborder in situ conservation and data management model is a main feature of the project. This reflects the need for information exchange, technology transfer and capacity building within the Balkans.

The Steering Committee of the BushaLive project met in Sarajevo on the 17-18<sup>th</sup> April 2013. The situation of Busha in each country in the Balkan region was discussed along with a systematic approach to monitoring, characterising and collecting samples for DNA analysis. A map of the area was marked with all known populations – black to show known populations, red for places that need to be verified.

The essence of the general discussion shows that:

Busha are frugal, fertile, robust, resistant to disease, agile in difficult landscapes and live into old age. They are also very rare – in some places critically endangered. The main factors of their endangerment are a) crossbreeding b) old-age of farmers c) migration of people away from poor rural areas.

Why keep Busha?

- a) use of grazing land that modern cattle can't survive on
- b) high production levels as 1 cow = 1 calf + 1 lactation per annum
- c) high fertility means that there are more calves per cow than with high performance breeds
- d) longevity - Busha will produce for many years, it is not unusual for them to reach 20.

One of the challenges of SAVE Foundation and the colleagues in this project face is to find ways of making Busha cattle economically viable. Or rather, showing that they are economically viable in order to show both farmers and consumers that keeping these animals alive and in agricultural production is important. Busha cattle are a very important factor in rural economies, for example, where there is only rough grazing available, Busha remain productive in a low in-put, extensive system. Indigenous breeds such as Busha are very important for the conservation of delicate eco-systems. These animals belong in the pastures and not in the history books!

## **SUMMARY OF GENERAL DISCUSSION:**

There are very few breeding organisations for Busha cattle breeders. Farms are unstable as, if anyone has a better opportunity, they give up farming and move away from rural areas. Without government support conservation is near to impossible. It is difficult to explain to the ministries why autochthonous breeds are important – breeding etc is often considered to be the “private business of farmers”. Where subsidies are paid Busha populations increase rapidly. Where subsidies are cut, autochthonous breeds, including Busha, are decreasing accordingly. Animals are often being slaughtered in order to raise money from meat. Many official statistics are not made in the field so may not be accurate.

Marketing of products needs to be improved. Milk quality in Busha is higher than with other breeds farmed in the Balkan region. Milking is mostly done by hand. There are often no adequate facilities for cooling and storing milk. There are massive tracts of land where commercial farming is not possible – Busha provide an economically viable alternative. Their rural development impact should be a subject of further investigation (possible future project.) Better milk analysis and collection of production statistics is needed.

Busha milk is good for cheese making (casein content). Better investigations are needed into the qualities etc of products. At present there is no special way for selling Busha products, there is no distinction between products.

## **FIELD VISIT CONCLUSIONS:**

A field visit was made to a small-holding so that the survey that had been prepared could be tested. It was concluded that only minor changes were needed. It was clear that the farm level data is a very important factor in this data collection. As many animals as possible should be recorded. The draft survey will be completed and sent to the members of the Steering Committee for use in the individual regions where Busha occur. The field information will be entered into a shared excel file (via Google docs). This means that the information will be usable for all of the main actors in this project.

## PROBLEMS OF EXPORTING BLOOD SAMPLES:

It was concluded that sending blood samples to the laboratory in Germany would be problematic. After discussion it was concluded that DNA extraction should be undertaken within the national borders. A kit and protocol will be sent to laboratories nominated by the Steering Committee members. A test of DNA extraction should be sent to Ludwig-Maximilians-Universität, Munich which will be tested for quality. Feedback for improvements will be given and implemented before the final DNA extractions from the proper samples are sent. Those who can send bloods without problem should send them by airmail to the Ludwig-Maximilians-Universität.

## CONCLUSIONS AND NEXT STEPS:

**Sampling:** about twenty representative animals should be sampled in each country. Sampled animals should be possible candidates for a crossborder programme therefore they should be:

- Young/fertile
- Purebred
- Breeding animal (i.e. not male going for slaughter)
- From as many different bloodlines as possible
- If possible from different breeders
- Phenotypically a wide range – it is not necessary to choose “perfect” animals as long as they meet the above requirements

If it is possible to sample more animals, then samples should be taken. If more tubes etc are needed they can be requested from SAVE.

As many surveys as possible should be filled in for as many animals as possible – with photos (mobile phone photos are ok). GPS data can be recorded if available but will not be published with the results due to risk of “collectors” removing important animals.

It should be remembered that “small cow” does not = Busha. The distinctive features of Busha will be sent as a checklist by SAVE.

### Steering Committee members will:

- Send, as soon as possible, an email to Dr. Ivica Medugorac (with cc to SAVE) with details of how they plan to do DNA extraction. He will send you protocols with technical details.
- A clear plan and budget for field and laboratory work will also be sent. This work has to be approved by SAVE before starting (payment when data/samples are delivered)
- Steering Committee members will provide a list of all the people/places visited/contacted via the project that there is a comprehensive list available.
- Members will make sure that when the extraction kit is sent, the laboratory has the right to pick up the kits from customs and send the address to Dr. Ivica Medugorac (with cc to SAVE). Then the kits will be posted.

### SAVE will:

- Prepare the corrected survey and an excel file (made available via Google docs).
- Budget changes for including the DNA extractions will be calculated.
- Send out the timetable of the project and the list of identified strains.
- Send a checklist of distinctive features of Busha cattle
- Provide a draft letter for contacting national governments in the area asking for long-term support for the database/breeding programme/herdbook.